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THE FULFILLMENT OF PROMISE: 40-YEAR FOLLOW-UP
OF THE TERMAN GIFTED GROUP*

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The researches reported in this monograph represent the culmination of 40 years of continuous study from 1921 to 1961. Credit should go first of all to Lewis M. Terman who had the vision to conceive a program of such magnitude and the genius to carry it forward with unabated interest and devotion until his death 35 years later.

The Terman Study, however, could not have succeeded without the generous cooperation of the subjects and their families. Their sustained interest and their willingness to supply the information called for in the original survey and each of the seven follow-up studies made possible the collection of an unequalled reservoir of knowledge about intellectually gifted persons and their development from childhood to middle age.

The financial assistance which made the study possible has come from various sources. For grants-in-aid, the Terman Study is indebted to the Commonwealth Fund, the Carnegie Corporation, the Thomas Welton Stanford Fund, the National Research Council, the Rockefeller Corporation, the Marsden Foundation, the Columbia Foundation, the Office of Naval Research, the Ford Foundation Fund for the Advancement of Education, and the United States Public Health Service. Further financial assistance has come from gifts by individual donors including the generous contributions of Dr. Terman himself, as well as gifts from a few subjects in the study. Most recently, funds provided from the estate of Dr. Terman have supported the continuation of the study.

Finally, credit for the success of the project must go also to the staff of researchers, whose competent and devoted service not only in the collection of data but also in the forging of ties with the subjects and the fostering of their interest in the investigation has been so essential in bringing the study to fruition.

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I. HISTORY AND BACKGROUND, 1921—1960

It was more than 40 years ago that Dr. Lewis M. Terman undertook his monumental study of gifted children, and scattered rather widely throughout the world today are close to 1400 more or less middle-aged people who have one thing in common: in 1921-22 they were selected as subjects in the Terman Study of the Gifted. The only requisite for inclusion in this group was an intelligence rating that placed the student in the top 1 per cent of the school population as measured by a standardized test of intelligence. The purpose of the study was to discover what gifted children are like as children, what sort of adults they become, and what some of the factors are that influence their development.

The search for subjects was confined chiefly to the public schools of the larger and medium-sized urban areas of California. A total of 1528 subjects (857 boys and 671 girls) were selected. For children below high school age the requirement was a Stanford-Binet *IQ* of 140 or higher. This group who made up 70 per cent of the total had a mean *IQ* of 151 with 77 subjects testing at *IQ* 170 or higher. Because of the lack of top in the 1916 Stanford-Binet, students of high school age were given the Terman Group Test of Mental Ability. The requirement for this test was a score within the top 1 per cent of the general school population on which the norms were established. Later follow-up tests indicated that the older subjects were as highly selected for mental ability as the Binet-tested group. The subjects averaged about 11 years of age (boys, 11.5 years; girls, 10.8 years) when originally tested and ranged in age from 3 to 19 years. The range of age by year of birth, however, is more than 20 years; this is accounted for by the inclusion of a small number who had been tested in a preliminary study (1917-20) and a group of 58 siblings added as a result of the testing program in the 1927-28 follow-up study of the original group. No subjects except siblings of the original group were added after 1923 and none at all after 1928.

At the time of the original investigation, in addition to the intelligence score on which the selection of the subjects was based, a large amount of case data was collected including developmental record, health history and medical examinations, home and family background, school history, trait ratings and personality evaluations by parents and teachers, tests of interests, character and personality, and a battery of school achievement tests. In the 40 years that the group has been under observation, their development has been followed closely through follow-up surveys at fairly regular intervals. Three of these surveys have been field studies in which the subjects and their families

were interviewed, tests of both intelligence and personality administered, and questionnaire data of various kinds secured. The field follow-ups were made in 1927-28, 1939-40, and 1950-52. Surveys by mail were made in 1936, 1945, 1955, and, most recently, in 1960.

The extent to which contact with the subjects has been maintained is unequalled for longitudinal studies. In the course of the investigation only 26 subjects (10 men and 16 women) have been lost track of entirely. For these persons no information has been obtained at least since 1928 and in some cases not since 1922. Although the subjects have not all been equally cooperative, in the field studies approximately 95 per cent have participated actively and for another 3 per cent some, though often fragmentary, information has been obtained. As might be expected, in the follow-ups by mail the proportion of cooperating subjects dropped slightly to about 90 per cent in 1936, 1945, and 1955. However, except for the 26 lost cases, some information, even if only a confirmation of address, has been obtained in every survey for all but a very few members of the group. The findings to 1955 of this long-term research program have been presented in detail in the following four volumes published by the Stanford University Press: *Mental and Physical Traits of a Thousand Gifted Children* (5), *The Promise of Youth* (1), *The Gifted Child Grows Up* (6), and *The Gifted Group at Mid-Life* (7).

The present report is in two parts. The first part gives the findings of the 1960 follow-up for the total group with the data reported separately for men and women. The second part is a study of success among gifted men based on an analysis of the total case history data in order to identify the correlates of vocational achievement.

II. THE TERMAN GIFTED GROUP IN 1960

Although the pattern of follow-up procedure called for a field study of the group in 1960, such a program was not feasible. Instead it was decided to canvass the subjects once again by mail. In the spring of 1960 a four-page Information Blank was mailed to the members of the group and by mid-1961 current data had been obtained for 87 per cent of the 1398 subjects still living. For an additional 5 per cent, information on most of the items of a demographic nature was available from other sources.

Because it was a mail follow-up the 1960 questionnaire was comparatively brief in order to insure as many replies as possible. Approximately two-thirds of the blank was concerned with bringing the records up to date on such items as education, occupation and income, marital status and children, health and general adjustment, avocational and other interests, and political and economic attitudes. Whatever changes there have been in these areas have followed the trends indicated in the extensive report of the data obtained in the preceding follow-ups of 1950 and 1955 (7). In the present interim report the information on these variables will be brought up to date (1960) and, except for a few points that call for elaboration, discussed only briefly.

The remainder of the 1960 Information Blank was devoted to eliciting from the group some subjective opinions about the Terman Study and its effect on them, self-appraisals of their accomplishments, a rating of the extent to which they are characterized by certain motivational factors, and their opinions on the most satisfying aspects of their lives. Although information along these lines has been brought out informally in field worker interviews in the past, the inclusion of these items in the 1960 questionnaire makes it possible to tabulate and analyze the data.

For most items of information that will be reported in this section, the data are based on the replies of 664 men and 524 women to the items in the 1960 Information Blank; however, for a few kinds of information where the longitudinal record is needed and the information is available from the case records—e.g., mortality, general adjustment, education, occupation, marriage, and fertility—the figures are given as nearly as possible for the total group of subjects. The median age of the subjects at the time of filling out the questionnaire was 49.6 years for men and 49.0 years for women. Approximately 80 per cent were born in the 10-year interval 1905-1914, close to 9 per cent of men and 4 per cent of women were born before 1905, and 11 per cent of men and 13 per cent of women were born in 1915 or later.

A. MORTALITY

By 1960 there had been 130 deaths, 83 males and 47 females. This is a mortality rate of 9.8 per cent for males and 7.2 per cent for females—8.6 per cent for the total group. These figures indicate a continuing favorable mortality situation in the Terman group as compared to the generality of like age. According to the life tables of Dublin (3), 13.9 per cent of white males, 10.1 per cent of white females, and 12 per cent of a total cohort who survive to age 11 will have died before age 50. For 61 per cent of the deceased, death was due to natural causes; the cardiovascular diseases ranked first with males and cancer first with females. Accidents took a heavy toll among the males, accounting for 19 or close to one-fourth of the deaths, while only five females died in accidents. Five men lost their lives in World War II. Suicide was responsible for the deaths of 14 men and eight women.

B. HEALTH AND GENERAL ADJUSTMENT

1. *Physical Health*

Asked to rate their general physical health in recent years, on a five-point scale from very good to very poor, 92 per cent of men and 89 per cent of women reported their health as "good" or "very good," 6 per cent of men and 10 per cent of women said "fair," and 2 per cent of men and 1 per cent of women rated their health "poor" or "very poor." The self-ratings on health were also compared according to age and showed no significant differences for either sex between those under age 50 and those age 50 and over.

2. *Mental Health and General Adjustment*

The subjects have been rated on mental health and general adjustment following each of the follow-up investigations since 1940. Information for the ratings was gleaned from all available sources: personal conferences with the subject or members of his family by the research staff, responses by the subjects to questionnaire inquiry, reports by parents and spouses of the subjects, and letters or other personal communications from the subjects or other qualified informants. On the basis of the total cumulative data to 1960, the mental health and general adjustment of 747 men and 597 women was assessed and the subjects classified according to three categories: (a) satisfactory adjustment, (b) some difficulty in adjustment, and (c) serious difficulty in adjustment. The ratings were distributed as follows: *satisfactory*, 69 per cent of men and 64 per cent of women; *some difficulty*, 23 per cent of men and 26 per cent of women; *serious difficulty*, 9 per cent of men and 10 per

cent of women. Included in the third category are 19 men and 25 women who at some time in their lives have been hospitalized for mental illness. When the deceased subjects are added to the *Ns* for each sex, those among the deceased who had been hospitalized for mental illness bring the proportion of subjects ever hospitalized in a mental institution to 3.2 per cent for men and 4.3 per cent for women, or 3.7 per cent of the total. The sex difference is not statistically significant. For the great majority of those who developed mental illness, the period of hospitalization was brief, sometimes just a few weeks, and in only a small number of cases more than a year.

Attention is called to the fact that the ratings do not always represent the present condition of the subjects who are classified as having some, or serious, adjustment problems. For example, because of the historical character of the classifications, if a person has ever been seriously maladjusted the (*c*) rating continues to be used even though he may now be greatly improved or relatively free from difficulty. It is important, therefore, to view the 1960 ratings in the light of the estimates of "present condition" called for in the Information Blank as a supplement to the question regarding nervous and emotional difficulties. Of those rated as having or having had some, or serious, adjustment problems, 30 per cent of men and 38 per cent of women say they are free from difficulty, 54 per cent of each sex say their condition is improved, 14 per cent of men and 7 per cent of women indicate no change, and 2 per cent of men and 1 per cent of women report their condition worse.

3. *Suicide*

There have been 22 cases of suicide, including 14 men and eight women. Of these, two men and four women had a history of confinement in a mental hospital; none of the others had been recognized as having mental problems serious enough to require hospitalization.

4. *Use of Liquor*

According to the 1960 reports on the use of liquor, alcohol is considered a problem by only a small minority of the subjects. About 17 per cent of men and 29 per cent of women say they never or rarely take a drink. These figures include 12 men and five women who formerly drank to excess but no longer use alcoholic drinks. Fifty per cent of men and 54 per cent of women say they drink moderately, while 27 per cent of men and 16 per cent of women describe themselves as moderate to heavy drinkers. At the lower end of the scale are 6 per cent of men who say they drink fairly heavily and 1 per cent for whom alcohol is a serious problem. Only 1 per cent of women are in the

fairly heavy drinker category, and one woman considers alcohol a serious problem. Among those (including the deceased) for whom the use of liquor has presented difficulty, the relationship to mental health is marked. In the case of 10 of the 27 men hospitalized for mental illness, alcohol was the precipitating cause, and three women have been admitted to a mental hospital for the treatment of alcoholism. Two additional men and one additional woman among those with a history of mental illness also had drinking problems even though alcoholism was not the primary reason for hospitalization.

5. *Crime and Delinquency*

The incidence of crime and delinquency has remained extremely low. Prior to 1940 one man had served a prison term for forgery and three boys had been sent to reformatories briefly. Two women in their youth were arrested for misdemeanors. So far as known, there have been no further serious breaches of the law.

6. *Problems of Sex*

No new information was brought out in 1960 regarding sex problems as related to homosexuality. The number for whom heterosexual adjustment is known to have been difficult or impossible still stands at 17 men (2 per cent) and 11 women (1.7 per cent). These figures include two men and one woman, all homosexuals, who have died.

C. EDUCATION

The educational record is an outstanding one, far surpassing not only that of their contemporaries of the early 1920's but also the youth of today in amount of schooling and scholastic record. In high school approximately 84 per cent of boys and 93 per cent of girls earned the required number of recommending units for admission to top-ranking universities. The mean age at high school graduation was 16.9 years for boys and 16.8 years for girls. A study made of the effects of school acceleration in this group led to the conclusion that in general gifted children benefit from rapid promotion (6). Seventy-one per cent of men and 67 per cent of women are college graduates, and 40 per cent of men and 24 per cent of women hold one or more graduate degrees. The proportion of college graduates who continued for graduate study is 68 per cent of men and 60 per cent of women. The Ph.D. or similar doctorate has been taken by 87 men and 20 women. The most frequent graduate degree among men is the LL.B. ($N = 91$) and among women the Master's ($N = 76$).

D. THE MAINTENANCE OF INTELLECTUAL ABILITY

The intelligence of the Terman group has been measured twice in their adult years with the Concept Mastery Test (CMT). Scores on Form A given in the 1940 follow-up are available for 527 men and 427 women. In the follow-up of 1950-52, Form T was taken by 551 men and 453 women. Since the tests were administered under supervision, only those subjects personally interviewed by the field worker were tested. A comparison of the CMT scores of the gifted subjects with those obtained for five groups of college graduates, most of whom had obtained or were candidates for advanced degrees, shows that the Terman group, regardless of amount of schooling, far outdistance all the other groups in mean score. This is true even though there is a general increase in CMT score among the gifted with an increase in educational level. Striking evidence of the superiority of the gifted is shown in the scores of 146 subjects who did not go beyond high school but who earned exactly the same mean CMT score as that of a group of advanced graduate students at a leading university. The evidence from all the available comparative data indicates that as adults the Terman group on the average rank about as far above the mean of the general population in mental ability as measured by intelligence tests as they did in childhood.

No further testing has been done, but such an investigation within the next few years should yield extremely valuable information on the maintenance of intellectual ability in later maturity of persons of high intelligence in childhood.

E. MARRIAGE AND CHILDREN

1. *Incidence of Marriage and Divorce*

By 1960, the proportion of subjects who had married was 94 per cent of men and 91 per cent of women. These figures represent a slight increase over the 1955 figures for both sexes due to the first marriage of four men and six women in the five-year interval. Although only a small minority of the group have remained single, the difference between the sexes in the proportion who are unmarried is statistically reliable. The average age at marriage (first marriage, if more than one) was 23 years for women and 25 years for men. Twenty-three men and 71 women married before the age of 21; of these, nine men married at 18 years of age and 19 women married between ages 16 to 18. On the other hand, 12 men and 15 women did not marry until after age 40; the oldest age at first marriage was 54 years for men and 53 years for women.

The incidence of divorce in the gifted group is practically the same for both men and women; approximately 23 per cent of those who married have a history of one or more divorces. Most divorced persons remarry and the gifted are no exception; however, the men are especially likely to remarry: of the 166 men with a history of divorce, 83 per cent remarried. Fewer of the divorced women remarry: of the 124 who have been divorced, 70 per cent have remarried. A similar situation in regard to remarriage holds for the widowed. Of 17 men who were widowed, 14 remarried, but of the 33 women who were widowed, only eight remarried. The 1960 marital status for the 755 men and 607 women for whom current data are available is given in Table 1.

TABLE 1
1960 MARITAL STATUS OF GIFTED MEN AND WOMEN

Marital status	Men ($N = 755$) %	Women ($N = 607$) %	CR
Single	5.7	9.2	2.5
Are, or have been married	94.3	90.8	
Per cent of N ever married who have been divorced	23.3	22.5	

2. Education and Marriage

Among men, marriage is not related to extent of schooling; men college graduates, including those with graduate degrees, are as likely to marry as those who either did not complete or did not enter college. Divorce, however, is associated with education; of the college men who married, 19 per cent have been divorced as compared to 33 per cent of the nongraduates who married ($CR = 3.9$). There are no significant differences in divorce rate between men with a Bachelor's degree only and those who continued for graduate study.

In the case of women, both marriage and divorce are reliably related to amount of education. Fewer college graduates than nongraduates marry; close to 12 per cent of women with a college degree are single, while only 4 per cent of those who did not complete college are single ($CR = 3.0$). It is the women who continued for graduate study, however, who are responsible for the lower incidence of marriage among college graduates; 96 per cent of women with a Bachelor's degree have married as compared to 79 per cent of those with a graduate degree ($CR = 4.7$).

The highest divorce rates among women are found for those who did not

graduate from college, and especially among those who had no college work. The difference in divorce rate between the college graduates and nongraduates is statistically significant ($CR = 4.2$). Although college women with a Bachelor's degree are less likely to become divorced than those with graduate work, the difference is not very reliable ($CR = 2.1$). The relationship of education to marriage and divorce among women is shown in Table 2.

TABLE 2
EDUCATION AND MARITAL STATUS—WOMEN

Marital status	Highest educational level					
	Graduate degree(s) ($N = 144$) %	Graduate study, no degree ($N = 104$) %	Bachelor's degree ($N = 167$) %	All college graduates ($N = 415$) %	Some college ($N = 97$) %	No college ($N = 96$) %
Single	21.5	10.6	4.2	11.8	5.2	3.1
Are, or have been married	78.5	89.4	95.8	88.2	94.8	96.9
Per cent of N ever married who have been divorced	21.2	21.5	11.9	17.2	28.3	37.6

3. Fertility

The subjects who married (including those later deceased or whose marriage was terminated by divorce or death of spouse) have produced approximately 2600 children. Family size ranges from no children to nine, with a median of 2.5 children for the ever-married subjects. When the computation of median family size is limited to those who have produced one or more children (omitting the "nones"), the median number of children per *gifted parent* is 2.7. The men tend to have larger families than the women; the median for men ever-married is 2.6 children as compared with a corresponding median of 2.3 for women; or, if only the subjects who have produced one or more children are used, the median family size is 2.8 for men and 2.6 for women. The differences in family size between the men and women of the gifted group are more striking when reported in terms of percentages. Especially notable are the proportions with no children and those with three or more children. Almost one-fourth of the women and only 16 per cent of the men who married have no children ($CR = 3.7$). Families of three or more

children include 36 per cent of men and 27 per cent of women, again a reliable difference ($CR = 3.4$). Although the proportion with three, four, or five children is greater for men than for women, the women exceed in the number with six or more offspring. The two largest families are a man with nine children and a woman with eight children. The offspring of the gifted include 38 pairs of twins; of these one family has three sets and another family has two sets of twins. The sex ratio among the offspring is approximately 108 boys to 100 girls. This represents a slightly greater excess of boys than that found in the total United States white population; Dublin (2) gives the sex ratio for the generality as 106 boys to 100 girls.

The figures on family size indicate that the fertility rate is only slightly lower than that needed for replacement (2). The families in this study appear to be near completion with little likelihood of more than a few additional births. This is especially true for the gifted women, of whom only 11 per cent were under the age of 45 in 1960. The wives of the gifted men are somewhat younger: 33 per cent were under 45 years of age in 1960 and 11 per cent were under age 40. Table 3 gives the distribution of family size for all subjects ever married and includes the children of deceased subjects as well as deceased children.

TABLE 3
DISTRIBUTION OF FAMILY SIZE FOR ALL SUBJECTS EVER MARRIED
(Deceased included)

Number of children per family	Gifted men ($N = 755$) %	Gifted women ($N = 573$) %	Men and women ($N = 1328$) %
Five or more	4.4	3.1	3.8
Four	10.7	6.8	9.0
Three	20.4	16.8	18.8
Two	32.1	30.9	31.6
One	16.2	18.1	17.0
None	16.2	24.3	19.7

4. *Their Children*

Stanford-Binet tests have been given to 1571 children of the gifted subjects (813 boys and 758 girls). The mean *IQ* was almost exactly the same for boys and girls: 133.3 and 133.1, respectively. The standard deviations differed only slightly in the direction of greater variability among girls. *IQ*s of 150 or higher were found for 16 per cent of the offspring and 34 per cent tested at *IQ* 140 or higher. Slightly less than one-fifth were below *IQ* 120. Table 4 gives the *IQ* distribution with means and standard deviations for all

the offspring tested. Not included in this table are 14 children (seven boys and seven girls) for whom no test score was available but who were known to be mentally defective. Of these, four died in infancy, six are in schools or institutions for the mentally retarded, and four are being cared for at home. These 14 constitute only about one-half of 1 per cent of the total number of offspring of the gifted subjects. In the general population the proportion of the mentally defective, defined as below *IQ* 70, is estimated at 3 per cent.

TABLE 4
STANFORD BINET *IQ*s OF OFFSPRING

Binet <i>IQ</i>	Boys <i>N</i>	Girls <i>N</i>	Boys and girls <i>N</i>
200—209	1		1
190—199	1	3	4
180—189	5	7	12
170—179	15	10	25
160—169	24	35	59
150—159	87	68	155
140—149	147	129	276
130—139	193	184	377
120—129	185	170	355
110—119	86	85	171
100—109	51	48	99
90—99	13	11	24
80—89	4	2	6
70—79	1	6	7
Total	813	758	1571
Mean <i>IQ</i>	133.3	133.1	133.2
<i>SD</i>	17.5	18.2	17.8

By 1960, approximately 60 per cent of the children were age 16 or older, with 10 per cent over age 25. Twenty-five per cent of the offspring were in the 11 to 15 years bracket and 15 per cent were age 10 or younger. Some 400 were undergraduate students in college and 50 were graduate students. Approximately 100 of the boys and 200 of the girls had married, with the result that a considerable number of the original group of gifted subjects have reached grandparent status. At last report the number of grandchildren exceeded 400; one 55-year-old gifted woman, herself the mother of five, had 15 grandchildren.

F. VOCATIONAL CAREERS OF MEN

The 1960 reports indicate that for most men their vocational careers continue to be marked by promotions and advances in position with corresponding increases in earned income. The 1960 occupations, as were those of 1940,

1950, and 1955, were classified according to the Minnesota Occupational Scale (7). The proportion of employed men in the various occupational groups of the Minnesota Scale has remained practically unchanged since 1950, and in the case of the professions the percentage representation has been almost the same since 1940 when the average age of the men was just under 30 years.

1. Occupational Status

The 1960 occupational status is shown in Table 5. Part A of Table 5 gives the classification of occupations according to the Minnesota Occupational Scale of the men employed full-time, while Part B accounts for the remainder of the total of 759 men for whom information was available. The great majority (86 per cent) of the employed are engaged in either the professions of Group I or the higher business and semiprofessional occupations of Group II. Group III, which includes the retail business, clerical, skilled trades, protective service, and similar occupations, accounts for 11 per cent of the employed. The remainder of less than 3 per cent are divided between occupations related to agriculture, including large-scale farm and ranch owners, and semiskilled occupations. No gifted men fall in either Group VI (slightly skilled) or Group VII (unskilled) of the Minnesota Scale.

The status of the men who were employed less than full-time is given in Part B of Table 5. Included here are six men between the ages of 45 and 53 who describe themselves as "retired." These men have either accumulated or inherited sufficient means to enable them to discontinue regular employ-

TABLE 5
OCCUPATIONAL STATUS OF MEN—1960

Status	N	% of employed
A. Occupational classification (Minnesota Scale)		
Group I: Professional	344	46.6
Group II: Official, managerial, and semiprofessional	294	39.8
Group III: Retail business, clerical, skilled trades, and kindred	80	10.8
Group IV: Agricultural and related occupations	12	1.6
Group V: Semiskilled occupations	8	1.1
All occupational groups	738	
	N	% of total
B. Not employed, or less than full-time employment		
1. Retired	6	.8
2. Not regularly employed, or part-time only	8	1.1
3. Incapacitated by reasons of health	7	1.0
Total with information	759	

ment and devote their time to their avocational interests. Eight men who are either not regularly employed or working only part-time all have problems of personal adjustment that have interrupted their careers. Of the seven men incapacitated by reasons of health, one suffers from multiple sclerosis, one from a coronary condition, one from tuberculosis, and one from a spinal disorder. The other three men among the incapacitated of 1960 are recovering from mental breakdowns that had required hospitalization. Although no longer needing hospital care, they are not ready to resume work.

The occupations included in each of the five groups of the Minnesota Scale are listed in Table 6 together with the percentage of employed men in each. The most frequent occupation continues to be law, followed by the engineers and the college faculty. Some of the professions are not fully represented in Table 6 because a number of men, especially in the sciences, have joined university or college faculties and are classified under that heading. The faculty are fairly evenly divided among the various fields of learning; the physical sciences are in first place with 15 men and the humanities and arts second with 14. The biological sciences with 13 and social and behavioral sciences with 12 faculty members follow closely.

TABLE 6
OCCUPATIONS OF EMPLOYED MEN—1960

Occupation	N	%
I. Professional		
Lawyers (includes judges)	77	10.4
Engineers	56	7.6
Members of college or university faculties	54	7.3
Physical and biological scientists (includes geological sciences)	41	5.6
Physicians (private practice)	39	5.3
Educational administration or teaching below four-year college level	32	4.3
Authors or journalists	17	2.3
Architects	10	1.4
Economists or political scientists	7	1.0
Clergymen	4	.5
Psychologists (private or institutional practice)	3	.4
Other professions	4	.5
II. Official, managerial, semiprofessional		
1. Higher business		
Business and industry: managers and supervisors (middle management)	48	6.5
Banking and finance, insurance, land development, investments (executives and owners)	45	6.1

TABLE 6 (continued)

Occupation	N	%
Business and industry: officials and executives at policy-making level. Top or near-top management	31	4.2
Accountants, tax consultants, statisticians, and kindred	28	3.8
Sales: sales manager, sales engineer, technical representative	24	3.3
Office workers at supervisory and managerial levels	24	3.3
Advertising promotion, public relations (executives and owners)	15	2.0
Building and construction (owners or officials)	5	.7
2. Arts and entertainment		
Motion pictures, radio or television: writers, artists, producers, directors	16	2.2
Performing arts: musicians or actors	5	.7
3. Officials or managers in administration, public or private. Includes public utilities, research institutions, philanthropic organizations, social security administration, local or state government	15	2.0
4. Army, Navy, or Air Force officers	12	1.6
5. Officials in federal government: State Department, Defense Department, Foreign Service officers	6	.8
6. Miscellaneous business owners	6	.8
7. Miscellaneous semiprofessional	14	1.9
III. Retail business, clerical and sales, skilled trades		
Clerical, sales, and related	33	4.5
Skilled trades and crafts (includes foremen and supervisors)	25	3.4
Retail business (small): owners or managers	10	1.4
Protective service	6	.8
Professional service	6	.8
IV. Agriculture and related occupations		
Rancher or orchardist	9	1.2
Dairy farmer	2	.3
Landscape gardener and horticulturist	1	.1
V. Minor business or clerical, and semiskilled occupations	8	1.1
Total employed	738	

2. Income

The 1960 information schedule asked for a report of annual earned income for the four preceding years, 1956 to 1959. Information was supplied by 617 fully employed men and showed, with few exceptions, consistent increases from year to year. By 1959 the median earned income (all ages) had reached \$13,464. Earnings tended to increase with age from a median of \$12,237 for

those under age 45 to a median of \$14,590 for the 50-and-over age bracket. The 1959 earned income ranged from around \$5000 to more than \$300,000. Four per cent earned \$50,000 or more including seven men with incomes of more than \$100,000, and 20 per cent earned \$25,000 or more. The slightly more than 2 per cent of men at the lower end of the scale who earned incomes of approximately \$5000 include four carpenters, three owners of small businesses, two clergymen, two office clerks, a dean in a small denominational college, a lawyer, an electrician, and a decorator. Although earned income is an important reward for achievement, there is considerable disparity in the significance of income in the various occupations. For example, approximately one-fourth of the most distinguished men in the Terman group are on college and university faculties, but this subgroup ranks twelfth in earned income and is below the median for the total group of men. On the other hand, financial reward is an important criterion of success in the field of business; thus it is not surprising that the upper echelon executives in business and industry rank highest in income.

The median total family income in 1959 including not only the earnings of the subject but also of his wife, if employed, as well as supplementary income from other sources, such as investments, royalties, trust funds, income property, or inheritance, was \$16,140.

The gifted men on the whole have been highly successful vocationally. No composite portrait can be drawn of their vocational careers, for it is in this area that their many talents and great versatility are most evident. The men range from top-ranking members of university faculties, famed scientists, men distinguished in the arts and humanities, high level corporate officials and executives, to semiskilled occupations. The group is pretty well concentrated on the upper rungs of the vocational ladder with only a few on the lower steps. There is no evidence that the men with fewer vocational achievements are any less able intellectually than those who have reached high places. In some instances their vocation was determined by educational or occupational opportunities, in others by health, and in still others it was a matter of deliberate choice of a simple, less competitive way of life.

The list of distinctions and honors that have been won is a long one. Three men have been elected to the National Academy of Sciences and two to the American Philosophical Society. Six are included in *International Who's Who*, 46 in *Who's Who in America*, 10 in *The Dictionary of American Scholars*, and 81 in *American Men of Science*. There are many additional listings in regional and other specialized biographical volumes. The achievements of these men also include an impressive number of publications. Some

2500 articles and papers and more than 200 books and monographs in the sciences, arts, and humanities have been published and at least 350 patents granted. Miscellaneous articles (technical, travel, hobby, etc.) number around 350. Other publications include close to 400 short stories, 55 essays and critiques, and a small amount of poetry and several musical compositions. Not included in the foregoing count are the professional output of editors and journalists or the many radio, TV, and motion picture scripts that have been authored. Both architects and artists as well as several avocational photographers have had their work chosen for exhibit. In addition to two men, one of whom is a professor and chairman of the art department of a large university and also an artist of considerable distinction, and the other a painter and teacher of private classes in art, 10 men employed in other fields are also gifted painters who devote their leisure time to art. Several of these men, most notably two high school teachers, have produced some distinguished works which have been shown in galleries and won prizes and sales for the artists. Musicians are less frequent than artists among the men; there are, however, three musicians on university faculties, two as heads of the department of music. Four men are performers or choral directors in the field of entertainment.

3. *Public Service Activities*

In spite of their vocational achievements, the majority of gifted men have found time to participate in civic and community affairs. The most frequent activity for men, reported by 31 per cent, has been participation in youth welfare programs including Boy Scouts, Little League, "Y" recreational activities, Big Brother, and similar groups. Close to 20 per cent have served on school boards, city or county planning commissions, city councils, Grand Juries, boards of directors of philanthropic and welfare organizations, and in various capacities including fund-raising in other community and philanthropic programs. A number of men have won public recognition and honor for their contributions. Among these are 21 men who have received such citations as Citizen of the Year or Man of the Year, Distinguished Civilian Service Award, Distinguished Service to Boyhood medal. At least four men have been appointed at the state level to a Governor's Advisory Board and eight men have served on national advisory committees or councils.

Although many of the men have manifested considerable interest and activity in political as well as civic affairs and community life, the number who have sought election to public office is not very great. One man formerly in the state legislature was later elected to a high office in the executive branch

of the state government. Five men have been elected to judgeships—four Superior Court and one Appellate Court. At the local level, at least three men have been elected mayor of their cities. The list of political offices held includes 15 to 20 men who have been elected to county or state central committees of the Republican or Democratic party, as well as several delegates to the national conventions of their party. Others have held office in local Democratic or Republican clubs. Among other political activities are a hundred or more men who report service as precinct workers, election board officers, and a great deal of miscellaneous party work on behalf of the candidate or party of their choice at election time. In addition to the men who have held elective public office, there are also several who have been unsuccessful candidates for office. These include one who ran for a seat in the United States Senate, one candidate for a Superior Court judgeship, and one who ran for the position of District Attorney. Three men have competed unsuccessfully for election to their state legislature, and several others have been defeated in a try for election to local office.

The most outstanding positions in public service held by the gifted men are appointive. Among these is the head of one of the most important departments, next to cabinet level, in the federal government. Others holding high level appointive positions in the federal government include two ambassadors and five men in executive positions in various divisions of the State Department. Still others are officials in the Federal Reserve Board, Department of Justice, Atomic Energy Commission, National Aeronautical Space Administration, and Veterans Administration. Three men are assigned to the United Nations in charge of programs in foreign countries and two men are on the staffs of United States senators as special advisers.

Further data related to careers are given in the section on Reflections and Evaluations (p. 35). Of special interest are reports of the men on ambition and motivational attitudes and sources of satisfaction in life. In *The Correlates of Vocational Success* (the third part of this report), the case history records of the 100 most successful and 100 least successful men are examined in order to discover the factors and circumstances that are correlated with the adult achievement of gifted men.

G. WOMEN AND CAREERS

Of the total group of women for whom 1960 data are available, 45 per cent are housewives with no outside employment, 42 per cent are employed full-time, and approximately 11 per cent are working either in part-time jobs or are associated with their husbands in a family business on a less than full-

time basis. A few single women of independent means who are not regularly employed are occupied with volunteer work in civic and community welfare projects and various creative activities, such as painting, applied arts, and writing. Three women were incapacitated by reasons of health in 1960.

1. *Occupations of Employed Women*

The women who work are engaged in a wide range of occupations that do not fit into such a classification as the Minnesota Occupational Scale that was used for men. Instead their occupations have been grouped into two broad categories: (a) professional and semiprofessional, and (b) office and business. The professional and semiprofessional occupations include 63 per cent of the employed women, and the office and other business positions include 37 per cent. Of all occupations, teaching at the elementary or secondary level is the most frequent, accounting for almost one-quarter of the employed. The total engaged in the field of education, including college faculties, constitute 35 per cent of the employed women. Secretarial, bookkeeping, and clerical work is the next most frequent occupation, with 21 per cent. Except for the educators, only the librarians, the social workers, and the author-journalists among the professional women account for more than 10 women each. As in the case of men, the true number of women in some of the professions has been reduced by their inclusion as members of college faculties. For example, the most distinguished writer in the group is a university professor who is classified under that heading rather than as an author. Of five women psychologists, three are members of college faculties, and six biological scientists (all Ph.D.'s) are on teaching or research faculties. Of the two women who are professional artists (both painters), one is on an art school faculty.

The women on college faculties include a Provost and Dean of the Faculty; nine full professors, two of whom are also chairmen of their departments (in coeducational colleges); three research scientists; three associate professors; and five assistant professors. Among the women with executive positions in the field of business are a hospital administrator, an apartment house owner, a co-owner with her husband of a small factory, a vice-president of a large regional employment service, an executive buyer for a major department store, an investment broker, and several real estate dealers. The occupations of the employed women are given in Table 7.

2. *Occupation and Marital Status*

Less than one-third of the married women work full-time outside the home, while three-fourths of the widowed and divorced women, and all but a very few of the single women, are employed full-time. Of the seven single

TABLE 7
OCCUPATIONS OF WOMEN WITH FULL-TIME EMPLOYMENT

Occupation	N	%
A. Professional and semiprofessional occupations		
Member of college or university faculty	21	8.3
Member of junior college faculty	5	2.0
School administrative or supervisory positions	5	2.0
Teaching (elementary and secondary schools)	58	22.9
Librarian	15	5.9
Social worker or welfare personnel	14	5.5
Author or journalist	11	4.3
Physician	6	2.4
Economist, political scientist, and related	5	2.0
Physical scientist (industry)	2	.8
Lawyer	2	.8
Psychologist (private practice)	2	.8
Pharmacist, nurse, or laboratory technician	6	2.4
Theater arts	2	.8
Music teacher	2	.8
Other professions	3	1.2
B. Business occupations		
Secretary, bookkeeper, accountant, or related office work	54	21.3
Executive or managerial positions in business or industry	23	9.1
Real estate, insurance, investments	7	2.8
Public relations, promotion, advertising	5	2.0
Miscellaneous	5	2.0
Total employed	253	

women who are not working full-time, one is hospitalized because of mental illness; the other six, all of whom are financially independent, lead busy lives. Two are writers who occasionally publish their work, two are caring for elderly parents, one is active in volunteer social work, and one is an interior

TABLE 8
OCCUPATIONAL STATUS OF WOMEN BY MARITAL STATUS

Occupational status	1960 marital status			All women (N = 597) %
	Single (N = 56) %	Married ^a (N = 467) %	Widowed or divorced (N = 74) %	
Housewife, not employed		56.3	10.8	45.4
Employed full-time	37.5	31.5	77.0	42.4
Employed part-time or associated with husband in own business		12.2	9.5	10.7
Not employed, financially independent	10.7			1.0
Incapacitated by reasons of health	1.8		2.7	.5

^a Includes widowed and divorced women who are remarried.

decorator but chiefly as an avocation. Table 8 compares the marital with the occupational status of the total group of women.

Of the 253 employed women, 147 (58 per cent) are working wives, 57 (23 per cent) are divorced or widowed and not remarried, and 49 (19 per cent) are single. More than two-thirds of the working wives have one or more children and 19 per cent have three or more. Of the divorced and widowed women who are employed, 72 per cent have one or more children and 18 per cent have three or more. The single women are more often in the professions than are the married, widowed, or divorced, due, probably, to the greater frequency of graduate degrees among the single women and their freedom to pursue a career without family responsibilities.

3. *Occupational Status and Education*

Women who graduate from college are more likely to hold full-time jobs than are those who entered but did not complete college or those who did not continue beyond high school. Of the college graduates, 46 per cent are employed full-time and of the combined noncollege graduate groups, 35 per cent ($CR = 2.4$). More of the nongraduates work part-time or are associated with their husbands in a family enterprise, with the result that there is almost no difference between the college graduates and nongraduates in the proportion who are full-time housewives. Women who continue for graduate study and especially those with a graduate degree account for the greater employment among college graduates. Three-fifths of the women with a graduate degree and a scant one-third of those with only a Bachelor's degree are employed ($CR = 4.9$). In fact, a slightly smaller proportion of women with a terminal Bachelor's than of nongraduates are employed. Not only is greater career-mindedness found among women with a graduate degree, but, as shown in Table 2, these are the women who are the least likely to have married; one can only speculate as to which variable is cause and which is effect. Getting a college education as far as the Bachelor's degree is clearly not a deterrent to marriage, for 96 per cent of women in this educational subgroup are married. Furthermore, it is the women with a Bachelor's degree who are the most often of all women, regardless of the amount of education, full-time housewives. The relationship of education to occupational status for women is shown in Table 9.

4. *Income*

Information on 1959 earned income was supplied by 200 of the 253 fully employed women. The median annual income was \$6424 with a range of

TABLE 9
OCCUPATIONAL STATUS OF WOMEN ACCORDING TO EDUCATION

Occupational status	Graduate degree(s) (N = 144) %	Graduate study, no degree (N = 102) %	Highest level of education				No college (N = 92) %
			Bachelor's degree (N = 166) %	All college graduates (N = 412) %	Some college (N = 93) %		
Housewife, not employed	34.7	41.2	56.0	44.9	48.4	44.6	
Employed full-time	60.4	46.1	32.5	45.6	34.4	35.9	
Employed part-time	2.8	10.8	8.4	7.0	12.9	13.0	
Associated with husband in own business	1.4		1.8	1.2		6.5	
Independent means, not employed	.7	1.9	1.2	1.2	1.1		
Incapacitated by reasons of health					3.2		

\$2800 to \$28,000. There is only a slight increase in median earnings with age; the median for the under-50 women was \$6250 and for those age 50 and over, \$6660. The two highest earnings among women, both above \$25,000, were reported by a physician and a lawyer. Among the high incomes in the business group are those of three women executives who each earned from \$15,000 to \$20,000, and three self-employed business women who earned between \$12,000 and \$15,000. Annual earnings of \$10,000 or more were reported by 17 per cent, and close to three-fourths of employed women earned \$5000 or more. Only 1.5 per cent of gifted women had earnings of less than \$3000.

The single women have the highest earnings with a median of \$7833. The divorced and widowed are second with \$6500 and the employed housewives are in third place with \$5841. These figures are in line with expectation: the single women are more often dedicated career women holding prestige jobs and more often wholly self-supporting; the divorced and widowed need better paying and hence more responsible jobs to supplement whatever other income they may have in order to support themselves and their children; and the housewives, who are holding two jobs, are more likely to prefer less demanding, and therefore less remunerative, work in their outside employment.

Information on 1959 total family income of the gifted women including their own earnings if employed; husband's salary (if married); and supplementary income from sources, such as investments, income property, trust funds, and inheritance, is available for 370 married women, 58 divorced or widowed, and 40 single women. The 1959 median total family income of the married women and their husbands was \$14,637. This is somewhat less than the median total family income of \$16,140 reported by the men of the Terman group. The difference reflects the greater earnings, on the average, of the gifted men as compared to the husbands of the gifted women. As would be expected, the total income reported by the single and by the divorced and widowed women are each considerably less than that of the married. The single women reported a median total income of \$8667 and the divorced and widowed showed a median total of \$7444.

5. *The Matter of Career*

On the whole the gifted women have not shown marked interest in, or ambition for, a high degree of vocational achievement outside the home. There are, however, some 30 or so women whose vocational achievements have been outstanding. Of the most highly successful professional and business women, approximately 43 per cent are single, 43 per cent married, and 14

per cent divorced. Only five women in the 30 most outstanding have children of their own; three have one child each and two are mothers of two children. In addition, two women among the most highly successful each have two adopted children.

The distinctions won by women include listings in *Who's Who in America* (2), *Dictionary of American Scholars* (5), *Who's Who of American Women* (13), *American Men of Science* (12). A number of women are also included in various regional and professional biographical volumes. Some examples of outstanding honors include a microbiologist who was elected to the Polio Hall of Fame, a distinguished poet and essayist who received both the National Institute of Arts and Letters Award and the Blumenthal Award for poetry; a metallurgist who is one of the few, perhaps only, women to be honored by a citation in *Iron Age*; a writer (essays, short stories, and novels) who received among other honors the Headliners Award from Theta Sigma Phi and who is frequently invited as a guest lecturer at colleges and elsewhere; a journalist who has received several writing awards including the Press Club Award and the Christopher Award; and an educational administrator chosen as Woman of the Year in Education. These are only a few selections from among a considerable number of recognitions given the career women. Further evidence of achievement is found in their publications. The major publications include more than 300 scientific and professional articles and papers and four monographs, 47 books in the sciences and humanities (including history and biography), 10 novels, and six volumes of poetry as well as eight books in the field of literary criticism (all by one author). Between 35 and 40 short stories and 40 to 50 book reviews have appeared. In addition, more than 75 miscellaneous articles of varying degrees of significance have been published by the women.

Not all the honors have gone to the women with professional or business careers. Some illustrations of recognitions received by the noncareer women follow: (a) a member of the Board of Education of a large city school system who is also director at the state level of the World Affairs Council and a director of several community welfare and philanthropic organizations; (b) a woman who is on the 21-member national Women's Board of Directors of her church with responsibility for all of North America, and who is also editor of the quarterly bulletin and chairman of four major committees; (c) two women who have served at the state level on a Governor's Advisory Committee, one on the educational and one on the mental health committee; (d) a delegate to the White House Conference on Children and Youth and a member of the Citizens' Advisory Commission to the joint education com-

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mittee of the state legislature; (*e*) several nominees for Woman of the Year in their communities, and two winners of this award; (*f*) a member of the City Council of a large city who is also a school board member and a leader in League of Women Voters activities; (*g*) a woman active in many social and philanthropic projects who is a member of the Park and Recreation Commission of a large city and another woman who was appointed to the Board of Directors of the Planning and Housing Association in a metropolitan area; and (*h*) a member of the Board of Trustees of a leading college who has also served as vice-president of the state division of the American Cancer Society as well as a member of the national education committee. In addition she is a member of the national board of the Encampment for Citizenship and board member of two local philanthropic groups. In spite of all these activities she works as a volunteer at the Art Museum and has also found time for writing. Her most distinguished publication is a book on oriental art which has been highly praised by critics.

The foregoing are a few examples of dedicated service and participation in community and civic affairs. Although the amount of activity differs, there are few women who do not participate to some extent in programs to promote youth welfare, education, community health (mental or physical), the arts, and other service activities. More than two-thirds engage in one or more such activities either as volunteer workers or on boards and committees of service organizations.

In the evaluations by the subjects on the part the gifted study has played in their lives and the self-appraisals of several kinds (p. 41), some interesting data are brought out on self-concept, motivation, and opinion on sources of satisfaction in life. Two of these items that are especially pertinent to the career patterns of women will be touched on here.

In reply to the question asking for opinion on the extent to which they have lived up to their intellectual abilities, women who graduated from college are reliably more likely than nongraduates to respond with either "fully" or "reasonably well" (see Table 18). Within the college graduate group, however, there is almost no difference in opinion on this item between women with a Bachelor's degree only and those with a graduate degree. Occupational status is also related to opinion on the extent to which abilities have been realized. However, it is the sort of work in which women engage rather than just being employed that is the important factor in differences in self-ratings on how well they have lived up to their abilities. As shown in Table 20, women employed at the professional and semiprofessional level significantly more often feel that they have lived up to their abilities than do either house-

wives, those employed part-time, or those employed full-time in office or other business positions. Since the women in professional occupations more often hold graduate degrees, the expression of greater satisfaction with their attainments may be in part a reflection of their higher degree of education.

When asked to indicate from a list of nine items those aspects of life from which the greatest satisfaction is derived, the women not only differ significantly from the men (see Table 23), but there are also marked differences among the women themselves according to employment status. Especially striking are the differences between the housewives and women employed full-time. Only 21 per cent of housewives check "your work itself" as a source of satisfaction in contrast to the 64 per cent of the fully employed who check this aspect of life ($CR = 13.3$). The two groups of employed women, however, differ from each other in their feeling about their work; 89 per cent of those in professional and semiprofessional occupations consider their work an important source of satisfaction as compared with 76 per cent of women in office and business positions. Although "recognition for your accomplishments" and "your income" are mentioned by a much smaller proportion of women, both employed and housewives, than is "work itself," the employed women much more often than housewives include these two among the aspects of life that give satisfaction. "Marriage" and "children" are each checked by more than 80 per cent of housewives and by only 52 and 56 per cent, respectively, of employed women; but these figures are misleading because they do not take account of the marital status of the employed women. The proportion of *working wives* who check "your marriage" is only slightly less than that of housewives. In fact, the working wives check "your marriage" almost as frequently as they do "your work itself," as an aspect of life that gives great satisfaction. The distribution of opinions on the sources of greatest satisfaction according to occupational status of women is given in Table 10 and according to marital status in Table 11.

There is no yardstick by which to measure the success of women. Not only are the opportunities for achievement in a career outside the home limited by the cultural pattern and socioeconomic biases in our society, but job success, in the minds of most women, is likely to interfere with marriage success. In any case the gifted women, for the most part, show neither discontent with their lot nor a marked drive for career achievement. Marriage apparently is an important factor in the lack of career-mindedness. Less than one-third of the married women, who make up 60 per cent of the total employed, are working as compared with all but a very few of the single women and more than three-fourths of the divorced and widowed. Although there are some

TABLE 10
OPINIONS OF WOMEN ON ASPECTS OF LIFE THAT GIVE GREATEST
SATISFACTION ACCORDING TO OCCUPATIONAL STATUS

Aspect of life	Occupational status				
	Housewife, no outside employment (<i>N</i> = 221) %	Employed part-time (<i>N</i> = 54) %	Prof. or semiprof. (<i>N</i> = 146) %	Employed full-time	
				Office & business (<i>N</i> = 78) %	Total employed (<i>N</i> = 224) %
Your work itself	21.3	53.7	89.0	75.6	84.4
Recognition for your accomplishments	11.8	16.6	33.6	35.9	34.4
Your income	10.4	11.1	25.3	30.8	27.2
Your avocational activities	60.2	55.6	55.5	57.7	56.2
Your marriage	86.0	70.4	48.6	57.7	51.8
Your children	82.4	83.3	51.4	65.4	56.2
Religion	31.2	38.9	26.7	34.6	29.5
Social contacts	50.2	42.6	54.8	47.4	52.2
Community service	38.0	24.1	17.1	19.2	17.9
Other	9.5	1.8	11.6	14.1	12.5

Note: Percentages will not add to 100 because of multiple replies.

TABLE 11
OPINIONS OF WOMEN EMPLOYED FULL-TIME ON ASPECTS OF LIFE FROM WHICH
GREATEST SATISFACTION IS DERIVED ACCORDING TO MARITAL STATUS

Aspect of life	Marital status of employed women		
	Single (<i>N</i> = 39) %	Married (<i>N</i> = 133) %	Widowed or divorced (<i>N</i> = 42) %
	Your work itself	84.6	85.7
Recognition for your accomplishments	41.0	32.3	34.6
Your income	23.1	30.1	23.1
Your avocational activities	64.1	54.9	53.8
Your marriage		84.2	7.7
Your children		70.0	63.5
Religion	41.0	25.6	30.8
Social contacts	64.1	46.6	57.7
Community service activities	30.8	15.8	13.5
Other	17.9	10.5	13.5

Note: Percentages will not add to 100 because of multiple replies.

brilliant exceptions, the married women who work, even those in the professions, tend to take positions that do not demand dedicated service or a high degree of job concentration and so do not interfere too greatly with

homemaking and devotion to family considered by most women as their primary role and source of greatest satisfaction in life.

H. AVOCATIONAL AND LEISURE TIME INTERESTS

The Terman group in childhood and youth was characterized by spontaneous interests in many fields. As adults they have continued to cultivate a wide range of interests and activities not directly related to their vocations. In addition to the pursuit of hobbies, avocations, and other leisure-time interests, they have engaged in social and community affairs through membership in various organized groups and have participated to a marked degree in civic, educational, cultural, and other programs of a socially valuable nature.

1. *Avocations and Hobbies*

The inquiry regarding avocations read as follows: *List your chief avocational interests and hobbies of recent years.* The median number of avocations reported was 2.7 for each sex. The proportion who listed four or more such interests was 22 per cent for men and 18 per cent for women. Only 6 per cent of men and 7 per cent of women did not report any avocations. Among men sports ranked first as an avocation with mention by 60 per cent of the respondents. Gardening was in second place with 31 per cent followed by music and home workshop, each listed by 27 per cent. Gardening headed the list for women with 41 per cent, followed closely by music (40 per cent) and sports (39 per cent). A number of additional avocations and hobbies were reported by both men and women, but only the domestic arts (20 per cent of women and less than 1 per cent of men), the creative and applied arts (19 per cent of women and 8 per cent of men), and photography (11 per cent of men and 3 per cent of women) were mentioned by as many as 10 per cent of either sex. There was a trend toward a greater number of avocations among the age 50 and over subjects than among those under 50 years for both sexes, but the differences are not statistically significant.

2. *Other Leisure Time Activities*

Information was also sought on preferences in the use of leisure time. In this case a check list was used with the item worded as follows: *What are your preferences among the following leisure time activities? (Check)*
Reading . . . TV or radio . . . Visiting with friends . . . Playing cards . . .
Other

Although both men and women put reading in first place and visiting with friends in second place as leisure time interests, there is a significant sex difference in the proportions mentioning each. Reading was checked by 86 per cent of men and 96 per cent of women ($CR = 5.3$). The disparity between the sexes is even greater for interest in visiting with friends; this item was checked by only 47 per cent of men as compared with 67 per cent of women ($CR = 6.6$).

The TV or radio category was in third place with both men and women but was considerably less popular than either reading or visiting with friends; in fact only 37 per cent of men and 38 per cent of women list this as a leisure time interest. The category of playing cards in which games, such as bridge, scrabble, anagrams, dominoes, etc., were included was checked by 25 per cent of men and 28 per cent of women. Additional write-in preferences in the space for "other" interests were spread over a wide range of activities, none of which was mentioned by as many as 10 per cent of either sex.

There were slight differences in leisure time interests between those under 50 years and those 50 years of age and over, but none was significant. The greatest age difference was in the proportion of men who checked TV or radio: 34 per cent of the younger and 42 per cent of the older. Although more of the older women also checked TV or radio, the difference between the age groups was small: 37 per cent of the younger as compared with 40 per cent of the older women.

I. POLITICAL AND SOCIAL ATTITUDES

The 1960 Information Blank included a set of questions calling for information on voting habits, political affiliations or leanings, radicalism-conservatism, and political activities.

1. *Voting Habits*

The voting record of this group has been outstanding throughout, with the pattern of voting habits in 1960 about the same as it had been in 1950 and 1940. Approximately 94 per cent of men and 98 per cent of women report that they vote "always" or "usually."

2. *Political Leanings*

Information on political affiliation or inclination was supplied by 610 men and 501 women in response to the following question: *On national issues, which of the political parties most nearly represents your leanings? (Check) Democratic . . . Republican . . . Socialist . . . Communist . . . Other*

(specify) A majority of both men and women indicated a preference for the Republican party; approximately 60 per cent of men and 56 per cent of women said they were Republicans or had Republican leanings, while 34 per cent of men and 38 per cent of women listed themselves as Democrats or as having Democratic leanings. The sex differences in Republican-Democratic preferences are not significant. A small minority of subjects (10 men and seven women) indicated Socialist leanings. Unlike previous reports on political preferences, no one checked the Communist party in 1960. Of those who were not aligned with any of the political parties, the majority described themselves as independent or in such terms as "vote for the man, not the party," "sometimes Republican, sometimes Democrat," "more interested in issues than parties," while a few responded with "none."

An analysis of political leanings according to age shows little difference for women. In the case of men, however, the younger are more likely than the older men to be Democrats; 38 per cent of men under age 50 as compared with 28 per cent of those age 50 or over indicate a preference for the Democratic party. The difference here is fairly reliable ($CR = 2.4$).

3. *Radicalism-Conservatism*

Further information on the political and socioeconomic viewpoints of the subjects was obtained from self-ratings on radicalism-conservatism. The ratings employed the cross-on-line technique in which the responses were evaluated on a nine-point scale. The extreme left of the horizontal bar, defined as extremely radical, was coded 1; the mid-point or average was coded 5, and extremely conservative at the far right was coded 9. The directions were simple: *Rate yourself on the following scale as regards your political and social viewpoint (indicate by X on line)*. Only rarely did a subject complain of ambiguity in the question, although an occasional respondent checked himself at one level on political and another on social viewpoint. For all but a very few, the ratings presumably represented a composite of general attitude on political and social issues based, of course, on individual concepts of the term "political and social viewpoint" and of what constitutes the average in this regard. The word "radical" presented a semantic problem and a few subjects objected to the use of the term, saying that "liberal" would have been a better word. Certainly "extremely liberal" is a truer opposite of "extremely conservative" and "reactionary" a more exact opposite of "radical." Liberal is a more acceptable term in the current sociopolitical milieu than radical, and if it had been used as the opposite of conservative, the distribution of responses might have shifted leftward. It is also possible that there

would have been a smaller proportion of responses on the far right if the less euphemistic "reactionary" had been used as an opposite of radical. But imperfect as the scale is, it was felt that it should be used in 1960, since the subjects had rated themselves on the identical scale in 1940 and again in 1950, thus making it possible to compare the responses over a span of 20 years.

A total of 1110 subjects (606 men and 504 women) rated themselves on the radicalism-conservatism (r-c) scale in 1960. Because of the probable reluctance of some liberals to rate themselves as far to the left as they might have done if the term "extremely radical" had not been used, the median rating as well as the mean and the percentage distribution of the ratings were computed for each sex. Although the mean rating for both men and women is slightly to the right of center, the median is almost at center for men and slightly to the left of center for women. In percentage terms 46 per cent of the men and 51 per cent of the women consider themselves average or near average (ratings 4, 5, and 6) in political and social viewpoint as measured on the r-c scale. Men tend to be more conservative than women, with 42 per cent of men as compared with 36 per cent of women at the conservative end of the scale (7, 8, 9); the difference, however, is not very reliable ($CR = 2.2$). The age 50 and over subjects (both men and women) are slightly more conservative than the under-50 group, but the difference is not significant for either sex. The distribution of self-ratings for both men and women is given in Table 12.

A comparison of the self-ratings obtained in 1940, 1950, and 1960 on the same r-c scale indicates a significant trend to the right over the 20-year pe-

TABLE 12
DISTRIBUTION OF 1960 SELF-RATINGS ON RADICALISM-CONSERVATISM

Rating	Men ($N = 606$) %	Women ($N = 504$) %
1. Extremely radical	.2	.2
2.	.8	.4
3. Tend to be radical	10.4	13.1
4.	13.5	13.1
5. Average	23.6	29.2
6.	9.2	8.5
7. Tend to be conservative	35.6	31.1
8.	3.3	1.0
9. Extremely conservative	3.3	3.4
Median rating	5.16	4.80
Mean rating	5.66	5.46
SD	1.60	1.57

riod. By far the greater part of this change took place in the 1940-1950 decade. For men the mean r-c rating moved from 5.09 in 1940 to 5.57 in 1950 (CR = 5.3). Although the shift to the right was not quite so marked for women as for men, it also was significant; their 1940 mean was 5.09 (the same as for men) and the 1950 mean was 5.38 (CR = 3.1). Both men and women rate themselves only slightly more conservative on the average in 1960 than they had in 1950, and the changes in this decade are not significant for either sex. Table 13 shows the changes in mean self-ratings in the years between 1940 and 1960.

TABLE 13
TREND IN SELF-RATINGS ON RADICALISM-CONSERVATISM (R-C)
AS SHOWN BY MEAN RATINGS: 1940, 1950, 1960

Date of rating	Men			Women				
	<i>N</i>	Mean r-c rating	<i>SD</i>	<i>N</i>	Mean r-c rating	<i>SD</i>	CR	
1940	667	5.09	1.81	543	5.09	1.61		
1950	698	5.57	1.54	543	5.38	1.45		
1960	606	5.66	1.60	503	5.46	1.57		
Difference between means:								
1940 <i>vs.</i> 1950						5.3		3.1
1950 <i>vs.</i> 1960						1.0		.8
1940 <i>vs.</i> 1960						6.0		3.8

The picture that emerges from the data on political and social attitudes is that of a predominantly Republican group who are, on the average, middle-of-the-roaders in political and social viewpoint.

J. REFLECTIONS AND EVALUATIONS

Because 1960 marked the point at which the subjects had entered or would soon enter the fifth decade of life (average age 49.5 years), it was deemed a fitting time to ask the men and women of the Terman group for an expression of their feelings about the study and the role it had played in their lives, and for their opinions on how well they had lived up to their intellectual abilities. Additional questions designed primarily for men, but answered by women also, since the same questionnaire went to both, called for self-appraisals on the extent and growth of ambition in four specified aspects of vocational life and for an estimate of changes in responsibilities and work pressures. A further question related to this general summing up of their lives asked the subjects to indicate on a checklist those aspects of life from which they derive the greatest satisfaction.

1. *Attitudes of the Subjects Toward the Study*

The following questions were designed to discover how the subjects as middle-aged adults feel about their inclusion in a study of this nature:

1. *As nearly as you can recall, how old were you when you first learned that you were a subject in an investigation of gifted children?*

2. *Do you feel that this knowledge has played an important part in your life?*

3. *Describe the effects (favorable, unfavorable, or both) that inclusion in this study has had upon you.*

The question on age at learning of inclusion in the Terman study received a larger number of replies than either of the other two, and the data indicate that both men and women recall learning of their inclusion in the Terman study at a later age than that at which they were selected. About 30 per cent of men and 25 per cent of women say they were age 15 or older when they learned that they were subjects in a study of gifted children; actually only 16 per cent of men and eight per cent of women were selected for the study between ages 15 and 19 and no one was beyond 19 years. The actual ages when tested and chosen for the gifted group were distributed as follows: *before age 10*—32 per cent of men and 38 per cent of women; *age 10-14*—52 per cent of men and 54 per cent of women; *age 15-19*—16 per cent of men and 8 per cent of women. Table 14 gives the distribution of ages at which the subjects report that they learned of their inclusion in the study.

The opinions of the subjects on how important a part the knowledge of being in the gifted study has played in their lives are shown in Table 15. The majority of both men and women indicate that the knowledge of their inclusion has not been important to them. The proportion of "no" or "probably not" replies, however, is reliably greater among men than among women. Although only a minority of each sex feels that this knowledge has been an important factor in their lives, the sex difference in "yes" replies is also significant.

Most of the subjects who answered the question on the importance of the study in their lives also supplied the information called for regarding the effects of their inclusion. The respondents to this part of the question include not only those who feel that the gifted study has been an important factor in their lives, but, in addition, two-thirds of the subjects who say that the knowledge of their inclusion has *not* been important to them, who nonetheless commented on the effects. Favorable effects are the most frequently mentioned by both men and women; however, reliably more women than men

TABLE 14
AGE OF LEARNING OF INCLUSION IN THE GIFTED GROUP
(Subject's report—1960)

Subject's report of age	Men (<i>N</i> = 610) %	Women (<i>N</i> = 497) %
Before age 10	18.0	18.7
Age 10—14 or "in grade school"	50.2	52.1
Age 15—19 or "late teens" or "in high school"	23.3	19.7
Age 20 or later	6.2	5.0
"Don't know" or "can't remember," etc.	2.3	4.4

TABLE 15
OPINIONS ON IMPORTANCE OF KNOWLEDGE OF INCLUSION IN THE GIFTED GROUP

Has this knowledge played an important part in your life?	Men (<i>N</i> = 588) %	Women (<i>N</i> = 482) %	CR
"Yes"	24.1	32.6	3.1
"Possibly," "to some extent," etc.	4.8	7.9	} 4.4
"Probably not," "little, if any," etc.	1.4	3.1	
"No"	67.3	52.7	
"Don't know," "can't say," etc.	2.4	3.7	

indicate favorable effects. More men than women say that their inclusion has had little or no effect on their lives; this response was given by one-third of the men and one-fifth of the women. Only 20 per cent of men and 23 per cent of women feel that the study affected them unfavorably. A few subjects, about 5 per cent each of men and women, mention both favorable and unfavorable effects. Table 16 gives the responses of the 469 men and 443 women who described the effects of inclusion in the gifted study. The data from Tables 15 and 16 indicate that the majority of subjects feel that this experience either has been advantageous or has had little or no effect on their lives, and whatever importance or influence the study has had is greater for women than for men.

2. *Self-Ratings on How Well Subjects Have Lived Up to Intellectual Abilities*

At whatever age the members of the group may have learned that they were included in a study of superior intelligence, it was brought home to all in 1936 when the study was identified in the questionnaire and accompanying explanatory letter sent directly to the subjects rather than to their parents through whom the preceding contacts with the group had been effected. Thus

they had been living with the knowledge of their identification as gifted children for close to 25 years at least, if not for the almost 40 years that the research has been in progress, and so could be expected to have formed some opinions on the extent to which they had fulfilled their intellectually superior role. The question calling for this information was worded as follows: *On the whole, how well do you think you have lived up to your intellectual abilities? Don't limit your answer to economic or vocational success only (check): Fully . . . Reasonably well . . . Considerably short . . . Far short . . . Consider my life largely a failure . . .*

Only 2.5 per cent of men and 2.0 per cent of women consider that they have lived up to their abilities fully. One could scarcely expect many people in a group so highly selected for intelligence to have realized their abilities to the fullest possible extent; "reasonably well" is a more realistic response and has been combined with "fully" in the statistical comparisons of data. The distributions of self-ratings by men and women on how well they have lived up to their abilities are given in Table 17.

TABLE 16
OPINIONS ON NATURE OF EFFECTS OF INCLUSION IN THE GIFTED GROUP

Effects of study	Men (<i>N</i> = 469) %	Women (<i>N</i> = 443) %	CR
Favorable (one or more)	41.4	52.1	3.2
Both favorable and unfavorable	4.9	5.2	
Unfavorable (one or more)	20.2	22.8	
Little or no effect	33.5	19.9	4.6

TABLE 17
SELF-RATINGS BY SUBJECTS ON HOW WELL THEY HAVE LIVED UP
TO THEIR INTELLECTUAL ABILITIES

Extent lived up to abilities	Men (<i>N</i> = 608) %	Women (<i>N</i> = 498) %
Fully	2.5	2.0
Reasonably well	64.8	61.4
Considerably short	24.8	27.7
Far short	6.1	6.6
Largely a failure	1.1	1.0
Ambiguous reply	.7	1.2

In spite of their largely domestic careers, nearly as many women as men feel that they have lived up to their intellectual abilities; two-thirds of the men and 63 per cent of the women checked "fully" or "reasonably well." About one-fourth of the men and 28 per cent of the women feel that they have fallen considerably short, while slightly over 6 per cent of both men

and women say that their accomplishments have been far short of their abilities. Only 1 per cent (seven men and five women) report that their lives have been "largely a failure." Most of the seven men who rate themselves failures would not be considered so by the usual standards. In their personal life, however, all have had difficulty in social or emotional adjustments and two have a history of serious personality problems. The five women who rate their lives largely a failure do not differ substantially from the total group of women in either general adjustment or accomplishment. The evidence from the case histories of this small group of men and women who consider that they have failed to live up to their intellectual abilities leads to the conclusion that for these people "failure" is a matter of falling short of the respondents' own standards of achievement rather than in an objective comparison with an external criterion.

3. *Education and Opinion on Realization of Abilities*

A comparison of the responses of three educational groups—the college graduates, those who entered but did not complete college, and those who did not enter college—indicates that education is an important factor in determining the extent to which these gifted people feel that they have lived up to their abilities. Both men and women college graduates are reliably more likely to check "fully" or "reasonably well" than are the nongraduates, either those with some college or those who did not enter college (CR = 3.7 for men and 3.6 for women). It is interesting to find, however, that one-half of men and close to one-half of women with no college work consider that they have lived up to their abilities. Table 18 gives the self-ratings of men and women on how well they have lived up to their intellectual abilities by amount of education.

Of the men college graduates, those with a graduate degree more often than either the men with some graduate work or those with only a Bachelor's degree consider that they have lived up to their abilities. In the "fully" or "reasonably well" categories are 78 per cent of men with a graduate degree and 67 per cent of those with a terminal Bachelor's (CR = 2.6). There is little or no difference in ratings on how well they have lived up to their abilities between college women with a Bachelor's degree only and those who took graduate work with or without an advanced degree.

4. *Occupation and Opinion on Realization of Abilities*

When the opinions of the subjects on how well they have lived up to their abilities are compared by occupation, some significant differences are apparent for both men and women.

TABLE 18
 SELF-RATING ON HOW WELL INTELLECTUAL ABILITIES HAVE BEEN LIVED UP TO BY EDUCATION

Extent lived up to abilities	Amount of education					
	Men College graduate (N = 449) %	Men Some college (N = 92) %	No college (N = 67) %	College graduate (N = 346) %		
			Women Some college (N = 81) %	No college (N = 70) %		
Fully	2.9	1.1	1.5	2.3	1.2	1.4
Reasonably well	68.6	56.5	50.8	66.2	53.1	47.1
Considerably short	21.6	33.7	34.3	25.4	32.1	34.3
Far short	5.1	7.6	10.4	4.6	9.9	12.9
Largely a failure	1.1		3.0	.6	1.2	2.9
Ambiguous reply	.7	1.1		.9	2.5	1.4

Table 19 lists the occupations in which 15 or more men are engaged and gives the percentage distributions of opinion on how well they have lived up to their abilities for the respondents in each occupation. Men in the professions are the most likely to feel that they have lived up to their intellectual abilities, and among these the university faculty members are in the lead with 88 per cent checking "fully" or "reasonably well." The practising physicians are next with 81 per cent, and the lawyers with 77 per cent rank third in the frequency of "fully" or "reasonably well" replies. The teachers and school administrators below college level indicate less satisfaction with their accomplishments than do men in the other professions, ranking in ninth place among the occupations listed in Table 19. In spite of their achievements, the highly successful officials and executives in major business and in banking and finance feel somewhat less often than do men in the professions that they have lived up to their abilities. Those least likely to say that they have lived up

TABLE 19
SELF-RATING ON HOW WELL INTELLECTUAL ABILITIES HAVE BEEN LIVED UP
TO BY OCCUPATION—MEN
(Includes only occupations in which 15 or more respondents are engaged)

Occupation	N in occupation	Extent lived up to abilities		
		Fully, or reasonably well %	Considerably short %	Far short, or largely a failure %
College or university faculty	43	88.4	11.6	
Physician	32	81.3	15.6	3.1
Lawyer	56	76.8	14.3	8.9
Engineer	41	75.6	19.5	4.9
Chemist & physicist	26	73.1	19.2	7.7
Official & executive (major)	26	73.1	23.1	3.8
Executive in banking and finance	40	70.0	20.0	10.0
Manager or supervisor	43	69.8	25.6	4.6
Teacher, counselor, or school administrator	23	69.6	26.1	4.3
Sales manager, technical sales, etc.	19	57.9	36.8	(1 case)
Accounting and kindred	21	42.9	47.6	9.5
Skilled trades	16	37.5	56.3	(1 case)
Clerical, sales, retail business	31	32.3	38.7	29.0

Note: The chi square of the differences in responses according to occupation yields a p of .001.

to their abilities are the men in accounting and related fields, in skilled trades, and in the clerical, sales, and small business occupations. In an intellectually superior group it is not surprising, of course, to find the greatest satisfaction with accomplishment in those occupations that make the most demands on mental ability and offer the greatest opportunities for the expression of intellectual power.

In the case of women, the influence of occupational status on their feelings about how well they have lived up to their intellectual abilities is apparently limited to those in professional and semiprofessional positions. The women in these occupations consider that they have realized their abilities to a significantly greater extent than do either the housewives, the part-time workers, or full-time office and business employees. In fact, there is almost no difference among the latter three groups; approximately 58 per cent of each feel that they have fulfilled their potential fully or reasonably well as compared with 75 per cent of professional and semiprofessional women. Table 20 compares the occupational status of women with their opinions on how well they have lived up to their abilities.

TABLE 20
SELF-RATINGS ON HOW WELL INTELLECTUAL ABILITIES HAVE BEEN LIVED UP
TO BY OCCUPATIONAL STATUS—WOMEN

Extent lived up to abilities	Occupational status				
	Housewife, no outside employment (<i>N</i> = 216) %	Employed part-time (<i>N</i> = 51) %	Prof. or semiprof. (<i>N</i> = 144) %	Employed full-time Office & business (<i>N</i> = 80) %	Total employed (<i>N</i> = 224) %
Fully or reasonably well	58.3	58.9	75.0	57.5	68.8
Considerably short	29.6	23.5	22.2	36.3	27.2
Far short	9.7	9.8	2.1	5.0	3.1
Largely a failure	1.4	3.9			
Ambiguous reply	.9	3.9	.7	1.2	.9

Note: Difference in percentages: housewife *vs.* total employed full-time, CR = 2.3; housewife *vs.* professional and semiprofessional, CR = 3.3; professional and semiprofessional *vs.* office and business, CR = 2.7.

5. Self-Ratings on Ambition

In order to obtain some clues to achievement orientation, the subjects were asked to rate themselves on the extent of their ambition in four areas. The question was worded as follows: *As compared to your friends or colleagues*

of the same sex and of about your age, how ambitious do you consider yourself in regard to (indicate by X on line): (a) Excellence in your work, (b) Recognition for your accomplishments, (c) Further vocational advancement, (d) Financial gain. Each characteristic was rated on a five-point scale with average at the mid-point and ranging from much more to much less than average. Ratings were called for at two age periods in the lives of the subjects: when they were between 30 and 40, and since age 40. No significant differences in response according to the period of life being rated were found, and the following discussion will therefore be limited to the ratings obtained for the since-age-40 period. This item was devised primarily for the purpose of learning more about the motivational factors in the vocational careers of men, and, as shown in the last part of this study, yielded data that proved highly valuable in the analysis of the characteristics of the most and least successful men. Since the gifted women also supplied the same self-ratings on ambition, it is possible to compare the sexes on amount of ambition in the four areas listed.

The trait in which by far the largest proportion of both men and women rate themselves above average in ambition is *Excellence in your work*, and the smallest proportion of above average ratings for each sex is in ambition for *Financial gain*. Except for *Excellence in your work*, in which 80 per cent of men and 70 per cent of women rate their ambition above average, the ratings tend to cluster at average or somewhat above average. Table 21 gives the distribution of self-ratings on each trait for men and women.

Even though men and women agree on the areas of greatest and least ambition, they differ markedly in the amount of their ambition in the four traits. The most striking sex differences are in the proportions who rate themselves as having somewhat more to much more than average ambition for *Excellence in your work* and *Financial gain*. Significantly more men than women rate themselves above average on both these traits. The fact that 45 per cent of women are housewives with no outside employment and close to 11 per cent are employed only part-time is undoubtedly reflected in their self-ratings on ambition.

Further information on these four characteristics was called for in this additional inquiry: *During the last five years have you noticed any change in your ambition to achieve the following (indicate by X on line)*. The same four items—(a), (b), (c), and (d)—listed above followed, and again the ratings were made on a five-point scale that ranged from "increased substantially" to "decreased markedly." Although 50 to 60 per cent of both men and women indicate little change in their ambition in the four areas specified,

TABLE 21
 SELF-RATING ON AMBITION AS COMPARED TO FRIENDS AND COLLEAGUES
 OF SAME SEX AND AGE

Ambition for	Men %	Women %	CR
a. Excellence in work (Ns = 598 men, 437 women)			
Much more than average	22.7	18.8	} 3.6
Somewhat more than average	57.3	51.7	
Average	16.9	23.6	
Somewhat less than average	2.5	5.0	
Much less than average	.5	.9	
b. Recognition of accomplishments (Ns = 596 men, 424 women)			
Much more than average	6.4	3.8	} 2.3
Somewhat more than average	29.5	25.0	
Average	46.3	53.3	
Somewhat less than average	14.8	15.1	
Much less than average	3.0	2.8	
c. Further vocational advancement (Ns = 588 men, 387 women)			
Much more than average	7.8	6.4	} 1.9
Somewhat more than average	32.6	28.2	
Average	38.8	39.8	
Somewhat less than average	16.7	18.3	
Much less than average	4.1	7.2	
d. Financial gain (Ns = 599 men, 404 women)			
Much more than average	6.5	4.7	} 3.7
Somewhat more than average	26.5	17.6	
Average	42.2	40.6	
Somewhat less than average	19.9	26.0	
Much less than average	4.8	11.1	

a larger proportion of both sexes show an increase than show a decrease in ambition during the five-year period. Surprisingly, the characteristic in which the largest proportion of men (38 per cent) indicate an increase in ambition is *Financial gain*, even though this is the same trait that of the four receives the smallest proportion of above average self-ratings on *amount* of ambition as compared to friends and colleagues (see Table 21). Of the four items, only *Financial gain* shows a significant sex difference with reliably more men than women reporting an increase in ambition. The distributions of self-ratings on changes in ambition in the specified areas are given in Table 22.

Another inquiry directed toward eliciting information on vocational changes asked: *Have your responsibilities or work pressures changed during the last few years (indicate by X on line)*. For this question a nine-point rating bar was used with the two extremes defined as: 1, "increased substantially," and 9, "decreased markedly," with 5, "little change," at the mid-

TABLE 22
SELF-RATING ON CHANGES IN AMBITION DURING PRECEDING FIVE YEARS

Change in ambition for	Men %	Women %	CR
a. Excellence in your work (Ns = 606 men, 439 women)			
Increased substantially	8.1	10.5	
Increased somewhat	25.1	19.4	
Little change	60.4	57.4	
Decreased somewhat	5.9	11.6	
Decreased markedly	.5	1.1	
b. Recognition of your accomplishments (Ns = 605 men, 437 women)			
Increased substantially	5.1	4.6	
Increased somewhat	19.0	17.4	
Little change	59.3	59.7	
Decreased somewhat	15.5	14.2	
Decreased markedly	1.0	4.1	
c. Further vocational advancement (Ns = 601 men, 404 women)			
Increased substantially	5.5	7.9	
Increased somewhat	17.1	19.3	
Little change	57.4	52.0	
Decreased somewhat	16.3	13.4	
Decreased markedly	3.6	7.4	
d. Financial gain (Ns = 607 men, 414 women)			
Increased substantially	7.4	7.5	} 2.77
Increased somewhat	30.5	22.0	
Little change	49.6	55.5	
Decreased somewhat	9.9	10.6	
Decreased markedly	2.6	4.3	

point. Approximately two-thirds of men say their responsibilities have increased either somewhat or substantially, while only 9 per cent say they have decreased and 25 per cent indicate little change. In contrast to the 66 per cent of men whose responsibilities have increased, only 53 per cent of women note an increase (CR = 4.3), while 32 per cent of women say there has been little change and 15 per cent say their responsibilities have decreased. This sex difference can in part, at least, be attributed to the fact that women on the edge of the 50's are being freed of the duties and cares of raising a family, while men at this time of life are likely to be approaching the peak of their vocational careers.

6. Aspects of Life Which Give the Greatest Satisfaction

Additional light was shed on the personalities of the Terman group through their responses to the following question: *From what aspects of your life do you derive the greatest satisfaction? (check) Your work itself*

... *Recognition for your accomplishments* ... *Your income* ... *Your avocational activities or hobbies* ... *Your marriage* ... *Your children* ... *Religion* ... *Social contacts* ... *Community service activities* ... *Other* ...

Replies to this question were received from 613 men and 503 women with the majority of subjects indicating more than one important source of life satisfaction. In view of the number of aspects of life that were checked, it seems likely that the superlative "greatest" became "great" in the minds of most respondents. A few subjects checked all the aspects listed and the average number of checks was four. Table 23 gives the distribution of opinions on sources of satisfaction for men and women respondents.

TABLE 23
OPINION ON ASPECTS OF LIFE FROM WHICH THE GREATEST SATISFACTION
IS DERIVED—1960

Aspect of life	Men (N = 613) %	Women ^a (N = 503) %	CR
Your work itself	81.5	53.0	10.2
Recognition for your accomplishments	38.2	22.5	5.7
Your income	35.2	17.9	6.5
Your avocational activities	57.9	58.4	
Your marriage ^b	74.5	68.7	
Your children ^c	72.6	70.7	
Religion	16.5	31.1	5.8
Social contacts	29.0	50.4	7.3
Community service activities	16.1	27.5	4.6
Other	4.4	11.2	

Note: Percentages will not add to 100 because of multiple replies.

^a Percentages are for all women respondents. See Table 11 for opinions of women on aspects of life according to occupational status.

^b No account taken of marital status in figuring percentages. See p. 47 for data for married subjects only.

^c No account taken of either marital status or absence of offspring in figuring percentages.

The response most frequently checked by men is "work itself," with mention by 82 per cent. Although only 53 per cent of all women respondents check this aspect of life, the picture changes radically when the comparison with men is limited to the employed women who comprise 42 per cent of the total. In fact, a slightly larger proportion of women employed full-time (84 per cent) than of men check "work itself." The sex differences in both "recognition for accomplishments" and "income" in Table 23 are also greatly reduced when only employed women are compared with the men. Unemployment is so infrequent among men that the percentages are not affected

by the inclusion of those not regularly employed. In the following figures the opinions of the men on the importance of the three sources of life satisfaction most affected by occupational status are compared with those of the employed women as follows: "Your work itself," all men (81.5 per cent) and employed women (84.4 per cent); "Recognition for your accomplishments," all men (38.2 per cent) and employed women (34.4 per cent); "Your income," all men (35.2 per cent) and employed women (27.2 per cent).

In Table 10 the opinions of women on the most satisfying aspects of life are analyzed according to their occupational status. Housewives with no outside employment differ significantly from women employed full-time in their feelings about the importance of several aspects of life, most notably "work itself" and "recognition for accomplishments." As shown in Table 11, some of the differences among women, particularly in the case of marriage and children, are largely eliminated when the replies of the working wives among the employed women are compared with those of the housewives. The effects of occupational and marital status on women's opinions of the most satisfying aspects of life are discussed in greater detail on p. 29.

"Your marriage" and "your children" follow "your work itself" among the total group of men respondents in frequency of mention and rank in first and second place with the total group of women respondents. The slightly smaller proportion of women than of men who check each of these aspects can be explained by the differences in marital status. More than twice as great a proportion of women as of men are not presently married; 22 per cent of women and 10 per cent of men are either single, widowed, or divorced. As for children, 24 per cent of ever-married women are childless as compared with 16 per cent of ever-married men. When the data on these two aspects of life are limited to the currently married, the proportions of men and women who check "your marriage" are greatly increased; in fact, among married men "your marriage" has a slight edge over "your work itself" in frequency of mention. Somewhat more of the married subjects than of the total groups, both men and women, also check "your children," but the increase is not so marked as for "marriage," nor does the inclusion of currently divorced or widowed subjects appreciably change the frequency with which "your children" is checked by either men or women. The proportions of the 552 married men and 395 married women who check "marriage" and "children" are as follows (no allowance is made for childless marriages): "your marriage," 83.3 per cent of men and 86.3 per cent of women; "your children," 76.8 per cent of men and 79.5 per cent of women.

question: "What sort of adults do they become?" All the evidence indicates that with few exceptions the superior child becomes the superior adult. He maintains his intellectual ability, as measured by the Concept Mastery tests of 1940 and 1950; his mortality rate is lower than that of the general white population of like age; his physical health, according to his own opinion and substantiated by the field worker reports and other sources of information, is good or very good (so rated by approximately 90 per cent of subjects). The incidence of serious mental illness and personality problems appears to be no greater, and perhaps less, than that found in the general population; and crime is practically nonexistent.

In educational and vocational achievements persons of superior intelligence should be expected to rank considerably above the general population, and the gifted subjects, both men and women, more than fulfill this expectation. Approximately 87 per cent of men are engaged in occupations at the professional and higher business and semiprofessional levels. Additional evidence of the superior vocational record of the majority of the gifted men is found in a long list of publications, patents, and other professional and business output, as well as in the many recognitions and honors accorded them.

Women are far less interested in vocational careers and achievements than are men. Some 42 per cent of the women are employed full-time, with three-fifths of the employed women doubling as housewives. The two most frequent occupations are school teaching in first place and secretarial and related office work in second place. A number of the relatively small group of women who have seriously and wholeheartedly pursued a professional or business career have enjoyed marked success, shown in the importance and prestige of their positions, their scientific and literary contributions, and the distinctions won. Being a housewife and homemaker is an important and satisfying career in the opinion of most gifted women, but few housewives in the Terman group limit their activities to the home. The majority of the women, both the housewives and those who are employed, are active participants in the promotion of community welfare and civic betterment.

Civic and community activities, however, are not limited to women, either the housewives or those employed. The majority of men also find time to make important contributions in time and effort to the promotion of the common good. Both men and women have shown their interest in and obligation to our democratic society in their voting record; approximately 95 per cent say they vote "always" or "usually." In political and social viewpoint the subjects tend, on the average, to consider themselves about midway between "extremely radical" and "extremely conservative." Men, however,

somewhat more often than women rate themselves to the right of center. Both sexes moved to the right in the 20-year period between 1940 and 1960. The trend to conservatism may be a function of age or may be due to the changing socioeconomic milieu; probably both factors play a part.

Two-thirds of the men and almost as large a proportion of the women consider that they have lived up to their intellectual abilities fully or reasonably well. Opinion on the extent to which intellectual abilities have been realized is related both to education and to occupational status. Those with college degrees, both men and women, more often feel that they have lived up to their abilities. Men on the upper rungs of the vocational ladder are also more likely to express satisfaction with their accomplishments. More of the women who are employed full-time than of housewives consider that they have lived up to their abilities; however, close to three-fifths of housewives rate themselves as living up to their intellectual abilities fully or reasonably well.

In selecting those aspects of life from which the greatest satisfaction is derived, more than 80 per cent of men check "work itself." Only 53 per cent of all women check this aspect of life, but of the employed women 84 per cent check "work itself" as a source of satisfaction, a slightly larger figure than that for men. "Marriage" and "children" are in second and third place with both men and women as sources of satisfaction. When the percentages who name these two aspects of life are computed for married subjects only, "marriage" ranks slightly ahead of "work itself" as the aspect of life from which the greatest satisfaction is derived.

An earlier volume in the series of publications on the Terman study was *The Promise of Youth* (1). Now after 40 years of careful investigation there can be no doubt that for the overwhelming majority of subjects the promise of youth has been more than fulfilled. The Terman study has shown that the great majority of gifted children do indeed live up to their abilities.

III. CORRELATES OF VOCATIONAL ACHIEVEMENT AMONG GIFTED MEN

The Terman studies have shown that intellectually gifted persons tend to excel in nearly all that they do; however, not all are equally successful. There is a wide spread of achievement among the gifted men ranging from international eminence in the sciences, humanities, or politics to relatively humble occupations, with the curve of success markedly skewed toward the upper end. In an attempt to identify some of the nonintellectual factors that have influenced vocational achievement in this group of men, all of whom as children ranked within the 99th percentile of the generality in *IQ*, the life histories of the 100 most successful were compared with those of the 100 least successful men. The model for this study was a similar one made following the 1940 follow-up of the gifted subjects (6), and the criteria and procedures parallel those of the earlier study. The samples compared in that investigation were the 150 most successful and the 150 least successful men. The analyses of the large volume of case data obtained for the two groups between 1921 and 1940 yielded a number of differentiating factors which indicated that achievement is dependent on more than just the sum total of intellectual abilities. In the total picture, the greatest contrast between the most and least successful men of 1940 was in drive to achieve and in all-round social adjustment.

A. THE EVALUATION OF SUCCESS

There are various kinds of success and of creative achievement, many of which never receive recognition. "Greatness of achievement is relative both to the prevailing patterns of culture and to the individual's personal philosophy of life; there neither exists nor can be devised a universal yardstick for its measurement" (6, p. 312). The concern in this study is with vocational achievement; the criteria used in evaluating success reflect both present-day social ideology and an acknowledged bias in favor of achievement in vocational areas that call for the use of intelligence. The most important consideration was the extent to which a man had made use of his superior intelligence in his life work, both in his choice of vocation and in the attainment of a position of importance and responsibility in an area calling for a high degree of intellectual ability. It should be stressed that a man's achievement was evaluated in the context of the performance of the total group of gifted men; thus the most successful ("A" group) ranked at the top, while the least successful ("C" group) ranked at the bottom of the vocational ladder for the Terman

men as a whole. That is not to say, however, that the occupational status of the C group was necessarily below the average of the general population. In a few cases it was, but most of the C men equal or exceed the average of unselected white men of comparable age in vocational status.

The chief considerations in judging success were (a) nature of work, importance of position, and professional output; (b) qualities of leadership, influence, and initiative; (c) recognitions and honors (scientific, civic, professional), awards, biographical listings, election to learned societies, etc.; and (d) earned income. For most occupations, except business, income received the least weight and was always considered in relation to the occupation rather than according to an arbitrary standard of income. The requirement for the A group was conspicuous achievement in a field of endeavor calling for a high degree of intellectual ability in either the sciences, professions, business, or the arts. Classification in the C group was based either on work in an occupation that does not demand a high level of intellectual ability; or, for those engaged in a profession or other occupation calling for superior intelligence, failure to attain even moderate success by Terman group standards.

B. SELECTION OF THE MOST AND LEAST SUCCESSFUL MEN

In 1961, using case history data collected over a period of close to 40 years (1921-1960), two judges¹ independently rated the gifted men for success in terms of vocational achievement. Of the original 857 male subjects in the Terman study, 83 had died by 1960. Not all of the remaining 774 men filled out the 1960 Information Blank; however, sufficient data were on hand either furnished by the subjects themselves or obtained from other sources to permit the rating of the 1960 achievement status of approximately 750 men. The careers were evaluated solely on the basis of *vocational* accomplishment to 1960 and without reference either to the achievement ratings of 1940 or to other aspects of the case histories. There were, of course, some men at both ends of the success continuum whose status was obvious either because of years of vocational distinction or because of a long standing record of limited achievement. Because of the awareness on the part of the judges of the danger of contamination between the selection process and whatever correlates might be found, and the care taken to avoid this hazard, it is believed that the ratings are as nearly as possible unbiased and objective.

¹ The judges were Dr. Helen Marshall and the present author, both of whom have been associated with the Terman study since the beginning of the program.

1. *Status in 1960 of Men Selected as Most and Least Successful in 1940*

In the 20 years that followed their selection, eight of the most successful group and 16 of the least successful group died. (The two contrasting groups were designated as A and C in 1940 as well as in 1960.) The data do not offer an explanation of this difference in mortality, since the health records of the two groups to 1940, although slightly less favorable for the low group, did not differ significantly. On the other hand, difficulties due to nervous tendencies and general adjustment were significantly more prevalent among the C men than among the A men of 1940.

An analysis of the causes of death shows that all but two deaths among the A men were due to natural causes, while seven of the 16 C deaths resulted from external causes. One man from the A group and two men from the C group committed suicide. One A man and three C men lost their lives in World War II, although more A's than C's were in military service during the war (41 per cent and 36 per cent, respectively). Accidents (one industrial and one automobile) took the lives of two C men but no A's. Deaths due to natural causes in both groups were confined to two disease categories; the cardiovascular diseases claimed three A and six C men and cancer was the cause of three deaths in each group.

Of the 142 men in the earlier A group who survived, 65 (46 per cent) were rated among the most successful in 1960 and 60 (45 per cent) of the surviving 136 C men of 1940 were classified among the least successful in 1960. The reduction by one-third in the size of each sample of necessity forced a more rigorous selection. There were, however, a few men in both 1940 classifications whose status had changed to such an extent that they, even with the same *N* as in 1940, would not have been re-rated in the same group 20 years later. For example, four of the A men of 1940 were rated C in 1960. In the case of each, personal problems interrupted what had promised to be a highly successful career. For all four, alcoholism had been an important contributing factor in their loss of vocational status, complicated in two cases by marital difficulties. Although none of the earlier C group quite made an A rating in 1960, two were so close as to be tentatively A in the first selection; both, however, were eventually classified B+.

2. *The A and C Groups of 1960*

In the preliminary evaluations the judges selected close to 210 men as candidates for the A group, but only 61 men were rated as possibilities for

the C group by both judges. It was necessary therefore to revise the concept of success to conform more to the actual performance of the total Terman group. The result was a more highly selected sample for the A group. In order to fill the C group quota, the minimum standards for inclusion in the middle (B) group had to be upgraded, thus adding to the number who fell below a B rating. The problem of selecting samples in which the *N* at each end of the scale was arbitrarily limited to 100 led to difficult decisions in completing the quota for both groups. It is possible that a very few men (two or three at the most) who met the A standards were not included. The final choices for the C group were especially difficult. There is a wider spread of vocational achievement among the C men than among the A's, with some members of the former ranking close to the lower limits of the B group. The most and least successful groups, however, are separated by a middle group of more than 500 men so that even the borderline C's are far removed from the A's.

The median age of each group in 1960 was 49.5 years; however, there was a slight, but not significant, difference in mean age. For the A men the mean was 49.95 years (*SD* 3.97) and for the C men, 50.09 years (*SD* 4.05). The range in age was from 39 to 59 years for the A's and from 42 to 59 years for the C's. Seven per cent of A's were under 45 years as compared with 2 per cent of C's, while 8 per cent of A's and 20 per cent of C's were age 55 or over. The presence of fewer C's at the younger ages (and consequently more at the upper ages) is undoubtedly due to the reluctance of the raters to classify a man under 45 as C unless he had a continuing record of low achievement with little outlook for improvement.

3. *Occupational Classification*

Table 25 gives the classification of the 1960 occupations of the A and C men according to the Minnesota Occupational Scale as well as the status of those C men who were either not employed or working less than full-time.

The A group men in the professions include 24 members of university faculties, 11 lawyers, and eight physical or biological scientists (these are in addition to the scientists on university faculties). The other 16 A men in Group I are five physicians, four authors or journalists, three engineers, two architects, an economist, and a landscape architect. Group II accounts for 40 A men, of whom 30 are top level executives in major business or industry, or banking and finance. Six are high ranking officials in the State Department of the federal government; two hold administrative positions, one in a philanthropic foundation and one in a city government; and two

TABLE 25
OCCUPATIONAL STATUS OF THE A AND C GROUPS—1960

Status	A Group (<i>N</i> = 100) %	C Group (<i>N</i> = 100) %
A. Occupational classification (Minnesota Scale)		
Group I: Professional	59	5
Group II: Official, managerial, and semiprofessional	40	13
Group III: Retail business, clerical, skilled trades, and kindred		62
Group IV: Agricultural and related occupations	1	
Group V: Semiskilled occupations		8
		% of total
B. Not employed, or less than full-time employment		
1. Retired		3
2. Not regularly employed, or part-time only		7
3. Unemployed		2

are in the field of entertainment. Of the last two, one is a producer-director of motion pictures, and one a producer-writer for television. The one A man in Group IV of the Minnesota Scale operates extensive agricultural holdings as well as serving on various advisory boards of both the federal and state governments.

Five men rated C are classified in the professions of Group I in Table 25. Two of these are lawyers who have been unsuccessful professionally. One man with a Ph.D. in biology is a dilettante and sometime writer of light verse and short stories that seldom win publication; one with a master's degree in chemistry holds a minor position with routine duties in a chemical laboratory; and one who has taken graduate work in mathematics, though classified as an engineer, is actually working at the technician level. Thirteen of the C men are employed in the higher business and semiprofessional occupations of Group II. Two in this category are self-employed, one as a tax accountant and one as a business consultant, both with little success. Five of the other 11 men classified in Group II are employed by major business or industry but have not advanced beyond positions of limited responsibility and importance. The remaining six are in civil service jobs, either state or municipal. The great majority of the C men (62 per cent) are employed at the Group III level. Of these, 31 are in clerical, sales, and small business occupations

and 19 work in the skilled trades or crafts. Four men hold protective service jobs (police force or fire department) and eight are distributed among several miscellaneous Group III level occupations. The occupations in Group V (minor clerical and semiskilled) account for the remaining eight men of the C group. The C group also includes 12 men either not employed or working less than full-time in 1960 (Part B of Table 25). The three among these who list themselves as retired have never been wholly dependent on their earnings. One who is married and whose children are now grown had a record of continuous employment until his retirement, first as operator of a small retail business and later as a civil service employee in a clerical capacity. A substantial inheritance at age 52 made it possible for him to retire and devote his time to his avocational interests and the management of his financial affairs. The second, who is single, has held only minor clerical jobs with frequent periods of unemployment in spite of his college education. On being made the beneficiary of a trust fund which yielded a modest income, he gave up his job at age 42 to devote his time to writing (so far without success), reading, and Little Theater activities. The third man who has now reached the age where he can appropriately call himself retired has not held a position in more than 20 years. He is highly educated in a professional field but is a nonconformist who prefers to follow his own interests and hobbies. He is sufficiently provided for financially to permit this, especially since he has never married.

The seven men employed less than full-time in 1960 all attended college, and four are college graduates. One of the seven was at one time highly successful in his field but personal problems got him into trouble with his employers so that he has been in and out of work in recent years. The most recent report (since 1960) indicates that he may be making a comeback. Another in this group also enjoyed considerable success in his profession until he became alcoholic some 10 years ago. He lost his position, his marriage broke up, and though he now appears to have overcome the alcohol problem, he cannot return to his profession. He has a small income and has a part-time job as a writer. One of the other men among these seven is an alcoholic who has been in and out of hospitals and manages to hold only briefly the jobs which his family and friends find for him. Of the remaining four, only one has ever had a regular job. For some years he did very well in a minor managerial job, but the break-up of his marriage, some tendency to alcoholism, and personal maladjustment ended his career. He now works only occasionally. The other three, all unmarried and all financially provided for to a limited extent, have, so far as our records indicate, never held a full-time job. One is a perennial student, taking graduate courses while holding relatively menial

jobs; one devotes his time to reading, independent study, and attempts at writing; and one works seasonally at tax accounting and spends the rest of the time with his hobbies.

The two men who are classified as unemployed include one who has a lengthy history of poor health, apparently largely psychosomatic in origin (since he is well enough to go to the race track), and has never held a job. The other is a lawyer who is currently unemployed because of alcoholism. This has happened several times in his career and each time he has returned to his law practice on recovery.

4. *Income*

Since for most occupations earned income is to some extent a measure of success, the marked difference in earnings of the A-C men reflects the difference in vocational achievement. The median annual earned income in 1959 of those employed full-time was \$23,900 for the A men and \$7178 for the C's. (According to U. S. Census Bureau figures, the median 1959 earned income of white male workers in general was approximately \$5000.) Supplementary income from sources other than salaries and wages was \$3500 for the A's and \$400 for the C's. The median total family income (from all sources including wife's earnings, if any) in 1959 was \$33,125 for the A group as compared with a median of \$8500 for the C group.

C. DATA COMPARED

The A and C groups have been compared on all the major items of case history data obtained between 1921 and 1961. As is inevitable in a longitudinal study involving such a large number of subjects, complete information on every item was not available. In some comparisons, the *N*s are severely limited by the fact that in 1921-23 certain kinds of data were obtained only for the subjects of the Main Experimental Group who make up less than one-half of the total (5). In the follow-up studies, the *N*s in some areas, especially test scores, were reduced by the fact that subjects outside California or in the more remote parts of the state could not be visited by field workers. In other cases information was lacking simply for the reason that the subject or other informant failed to respond to certain items in the information schedules or occasionally did not fill out a particular questionnaire. Because of the possibility that those who were less cooperative in supplying data about themselves differed sufficiently from the total group to distort the comparisons, their records were carefully examined and the conclusion reached that in the great majority of items no such distortion occurred. The data compared

fall into the following categories: educational record; vocational interests; intelligence ratings; physical and mental health and general adjustment; marriage and children; interests, attitudes, and personality traits as adults; family and home background; birth and developmental history; interests, abilities, and personality characteristics in childhood and youth; reflections and self-appraisals by the subjects at mid-life.

1. Educational Histories

The A and C groups differ strikingly both in amount of education and in scholastic record. Of the A's, 92 per cent graduated from college as compared with 40 per cent of the C's. Furthermore a graduate degree (most often the Ph.D.) was taken by 72 A's, while only eight C's obtained graduate degrees. The C's include one man with a Ph.D. in biological sciences who is not gainfully employed, one with an M.A. degree who is a clerical worker, and six with an LL.B. degree. Of the latter, only two are engaged in law practice; three are in clerical jobs and one, incapacitated by alcoholism, is not working at present. The amount of education of the two groups is given in Table 26.

Although the greatest educational difference was in the number who completed college, there were significant differences in such aspects of college education as age at graduation, scholastic record and honors, and participation

TABLE 26
AMOUNT OF EDUCATION OF THE A AND C GROUPS
(Figures are for highest level of educational attainment)

Variable	A Group ($N = 100$) %	C Group ($N = 100$) %
College degrees		
Ph.D. or other doctorate	34	1
M.D.	9	
LL.B.	13	6
Master's	15	1
Other graduate professional degree	1	
One or more years of graduate study, without degree	4	9
Bachelor's	16	23
One to four years of college, not graduated	5	26
High school plus professional or technical courses (noncollege)	1	14
High school graduation	2	16
Less than four years of high school but special technical, trade, or academic courses taken		4

in extracurricular activities, all of which favored the A men. The areas of academic interest as shown in choice of major field also differed. The undergraduate major in first place with the A's was physical sciences (including engineering); 38 per cent of A's as opposed to 10 per cent of C's chose this field. On the other hand, 60 per cent of C men but only 36 per cent of A men majored in the social sciences. The college records of the A and C groups are shown in Table 27.

TABLE 27
COLLEGE RECORD OF THE A AND C COLLEGE GRADUATES

Variable	A Group (N = 92) %	C Group (N = 40) %	CR
Age at college graduation			
Before 21 years	41.3	25.0	
21.0—21.9 years	33.7	22.5	
22 years or older	25.0	52.5	3.1
Average grade in college "B" or better	91.8	55.6	
Graduation with honors and/or election to Phi Beta Kappa or Sigma Xi	63.3	10.8	5.4
Major field (undergraduate)			
Social sciences	35.9	60.0	2.6
Physical sciences (includes engineering)	38.0	10.0	3.8
Biological sciences	10.9	5.0	
Humanities	10.9	17.5	
Law	4.4	5.0	
Education		1 case	
Rating on extracurricular activities			
Outstanding	18.0	5.4	
Fairly active	59.5	35.2	
Minor or none	22.5	59.4	4.0
Extent of self-support			
One-half or more	28.9	32.5	1.3
One-quarter	22.2	17.5	
Less than one-quarter	48.9	50.0	

In the elementary school years the A's and C's were about equally successful scholastically; however, the A's were accelerated in grade placement to a greater degree. Sixty-three per cent of A's and only 36 per cent of C's completed the eighth grade before age 13; the mean ages were 12.7 and 13.2 years, respectively (CR = 3.8). By the high school years the groups had begun to draw apart in scholarship and the divergence continued thereafter.

The 15 high school units of *A* and *B* grade required for university were earned by 94 per cent of A's and 71 per cent of C's. The difficult scholastic record could not be blamed on extracurricular activities, were almost twice as frequent among the A's, even though they were on the average. Of the A's, 19 per cent completed high school before and all but 8 per cent graduated before age 18. The C's were significantly older with only 7 per cent graduating before 16 years and 31 per cent 18 or older.

2. Scores on the Strong Vocational Interest Test

As part of the follow-up investigation of 1940, the Strong Vocational Interest test was administered to 627 men of the Terman group. Those who took the test included 80 men who were rated A and 77 who were rated C for vocational success in 1960, twenty years later. The Strong Vocational Interest Test scores for 24 selected occupations and, in addition, for a man's own occupation if it was not one of the 24 on the schedule but was among the 34 occupations in the total scale at that time. Scores were also obtained for occupational level and masculinity-femininity. Table 28 summarizes the results of the test of 1940 for the present A and C groups. The men of the A group had a significantly larger number of high ratings among the occupations. Those with five or more A and B+ scores include 80 per cent of the A's and 60 per cent of the C's. The difference in M-F score is small, the C's scoring slightly less masculine on the average than the A's. Interpretation of the occupational level score is difficult. To the extent that it measures "drive" or "level of aspiration" (4), the higher mean score among the A's in 1940 was predictive of their subsequent vocational achievement. In their own occupation were obtained for 43 of the A group and 29 of the C group. Although the *N*s are small, the scores offer supporting evidence that the A's are more often in occupations suited to their interest. Of 43 A group men, 34 had an A rating in their own occupation, four B+ and five were B. In contrast, ratings in their own occupations were obtained as follows for the 29 C group men: 14 A, four B+, four B, five B- and two C.

3. Intellectual Abilities

Since all the subjects in the Terman Study were at the time of selection by definition, in the top 1 per cent of the school population in men's scores as measured by intelligence tests, no very great differences between A's and C's in childhood intelligence test scores could be expected. O

TABLE 28
COMPARISON OF A AND C GROUPS ON STRONG VOCATIONAL INTEREST
TEST SCORES OF 1940

Variable	A Group (<i>N</i> = 80) %	C Group (<i>N</i> = 77) %	CR
Number of A and B+ ratings			
Mean	6.6	5.2	3.7
<i>SD</i>	2.2	2.3	
Occupational level score			
Mean	59.7	55.4	21.5
<i>SD</i>	1.2	1.3	
Masculinity-femininity score			
Mean	45.9	45.2	2.0
<i>SD</i>	2.2	2.2	

in the A group, 68 qualified for the study on the basis of a Stanford-Binet *IQ* and 32 qualified on the Terman Group Test. Of the C men, 64 were Binet tested for admission to the study and 36 were selected by the Terman Group Test. The mean Binet *IQ* for the A group was 157.3 and for the C group, 149.7, with *SD*s of 13.1 and 9.9, respectively. The difference in means of 7.6 *IQ* points is statistically significant ($p = < .01$). The C men more closely resemble the total group in Binet *IQ* than do the A men; the mean childhood *IQ* for all Terman group males was 151.5. The importance of the A-C difference in *IQ* should not be overemphasized for several reasons. First, only about two-thirds of each group is represented; second, the absolute magnitude of the difference is not large and the absolute level of the mean *IQ*s is high; third, 17 per cent of the C group fall above the mean of the A group. It seems highly unlikely that the large achievement differences between the groups can be attributed to the small intelligence score differences. In the Terman Group Test of 1922, there was practically no difference between the A's and C's in mean score.

The subjects have been tested twice in their adult years with the Concept Mastery Test: Form A in the 1940 and Form T in the 1950-52 follow-up. Since the CMT was administered under supervision, only subjects seen by a field worker could be tested and it was not always possible to test those interviewed. More C's than A's took the test at both dates, probably because the work of the A men more often took them out of California beyond the reach of the field workers. The two sets of Concept Mastery scores, one obtained close to 20 years and the other approximately 30 years after the original selection of the subjects for the gifted study, show a significant

difference in mean scores between the two groups, with the A group scoring more than one-half a standard deviation higher than the C group at both dates. Although the data from this test support the hypothesis that an ability difference does characterize the two groups, a more reasonable explanation is that the Concept Mastery scores are a reflection, in part at least, of the substantial differences in education between the A and C groups. CMT scores are to some extent influenced by education, though less so in the gifted group than in the normative population (7). Comparisons with the scores for various college graduate populations show that the C's as well as the A's rank well above the other groups tested; for example, the mean CMT (Form T) score for the A's is 147, for the C's 130, and for a group of Ph.D. candidates at a leading university, 119. The mean scores of other college graduate populations tested ranged from 112 to 118.

4. *Physical and Mental Health as Adults*

a. Health and physique. In the self-ratings on physical health obtained from the subjects in 1940, 1950, 1955, and 1960, a larger proportion of A's than of C's report their health as "good" or "very good" at each date. However, the differences are statistically reliable only in 1955 and 1960: $p = < .001$ at each date. The distribution of the 1960 health ratings is given in Table 29. In the Supplementary Biographical Data blank of 1950, more A's than C's report that their health in both childhood and adolescence was "good" or "very good." Also, in a review of their lives to 1950, the A's more often mention excellent health as a helpful factor and the C's more often mention poor health as a hindering factor in life accomplishment. Although none of the 1950 A-C differences is statistically significant, they are all consistently in the direction of better health among the A's.

TABLE 29
RATINGS ON HEALTH FOR A AND C GROUPS—1960

Self-rating	A Group ($N = 100$) %	C Group ($N = 95$) ^a %	CR
Very good	60.0	33.7	} 3.7
Good	30.0	34.7	
Fair	3.0	10.6	
Poor or very poor	1.0	6.3	
No self-rating, but no indications of poor health	6.0	14.7	

^a Five C men were not rated because of inadequate information.

A self-report on height, furnished by the subjects in 1940, showed the A's to be taller than the C's, with a mean height of 5 feet 11 inches (SD 2.2) for A men and 5 feet 10 inches (SD 2.3) for C men. The difference is statistically significant ($p = .001$). The anthropometric measurements of 1923 showed the A's to be somewhat taller than the C's in early youth also; 87 per cent of A's as compared with 75 per cent of C's were classified average or above average in height for their age. The difference, however, is not significant ($p = .19$).

b. Mental health and general adjustment. The tendency toward poorer social adjustment on the part of the C's shown in the parent and teacher reports of 1922 and 1928 (see p. 76) became more marked as the subjects grew older. As adults the groups have been rated on mental health and general adjustment in each of the follow-up studies from 1940 on. These ratings, made by the research staff, are based on all the data available to the time of rating. The proportion of "satisfactory" ratings is very significantly greater for the A's, indicating a high correlation between adequate personal and social adjustment and achievement. Conversely, reliably more C men are rated as having marked difficulty in adjustment. The classification of the A and C groups according to the 1960 ratings on mental health and general adjustment is given in Table 30. It should be noted that because of the historical nature of the ratings, some of those rated in categories 2 or 3 of Table 30 are now greatly improved or in some cases reasonably free from difficulty. Among the 26 men of the C group rated as having serious difficulty in adjustment are six who have at some time been hospitalized in a mental institution. In four of these cases the immediate reason for hospitalization was alcoholism, although other personality problems were involved. The other two men with a history of hospitalization both had schizophrenic episodes that required psychiatric treatment.

c. Use of liquor. In 1960 excessive drinking was reported by 15 per cent of C's and only 3 per cent of A's; the C's, however, also significantly outnumber the A's in the proportion of those who never, or only rarely, take a drink. The abstainers include one A and one C who formerly drank to excess and who are now members of Alcoholics Anonymous. Heavy drinking has unquestionably contributed to the lack of accomplishment in the case of some members of the C group, but the question of to what extent, if any, abstinence is related to achievement is not answered in these data. The figures in Table 31 indicate that drinking in moderation does not hinder vocational achievement.

TABLE 30
 MENTAL HEALTH AND GENERAL ADJUSTMENT RATINGS OF A AND C
 GROUPS—1960

Rating	A Group (N = 100) %	C Group (N = 100) %	CR
1. Satisfactory	81	46	5.1
2. Some difficulty	15	28	
3. Considerable or serious difficulty	4	26	4.4

TABLE 31
 USE OF LIQUOR AMONG A AND C MEN
 (1960 report)

Use of liquor	A Group (N = 100) %	C Group (N = 99) %	CR
Never, or rarely take a drink	11.0	23.2	2.3
Moderate drinker	60.0	37.3	3.1
Between moderate and heavy	26.0	24.2	
Fairly heavy	3.0	7.1	} 3.0
Alcohol is a serious problem		8.0	

5. Other Adult Characteristics

a. Trait ratings. Data obtained in 1940 included ratings on a list of 13 traits of personality and temperament. Ratings of the subjects on an 11-point scale were made by their wives, their parents, as well as by themselves. Self-ratings on these same traits were also supplied by the subjects in the Supplementary Biographical Data blank of the 1950-52 follow-up. Although the wife and parent ratings of 1940 are available for slightly less than half the subjects (many had not yet married and many parents were deceased or unavailable for rating), their ratings are in striking agreement with those made by the subjects themselves. The traits showing the greatest A-C differences are Integration toward goals, Perseverance, and Self-confidence. All the ratings (self 1940 and 1950, wives 1940, and parents 1940) agree in judging the A's to possess these three traits to a significantly greater extent than the C's. The A's were also rated as having greater freedom from inferiority feeling, but the differences on this trait are less marked. The means and standard deviations of the ratings on the four traits that show the greatest difference between the A's and C's are given in Table 32. The ratings for the two groups on the remaining nine traits do not differ significantly. These were Happiness of temperament, Absence of moodiness, Cautiousness-

impulsiveness, Freedom from emotionality, Conformity or acceptance of authority, Good-nature, Sociability, Freedom from sensitiveness, and Freedom from vanity and egotism.

The parents in 1940 rated the subjects on three additional traits that were not on the list rated by their wives or themselves. These were Talkativeness, Common sense, and Popularity. Of the three, only Common sense discriminated between the A's and C's, with the A's rated as possessing this trait to a greater extent than the C's. The mean ratings were 3.7 and 4.4, respectively ($p = .01$).

TABLE 32
PERSONALITY TRAITS OF A AND C MEN AS RATED BY THEMSELVES,
THEIR WIVES, AND THEIR PARENTS

Trait	A Group			C Group			CR of difference between means
	N	Mean	SD	N	Mean	SD	
Self-confidence							
Rating by wife (1940)	49	4.1	1.3	41	5.1	2.1	2.7
Rating by parent (1940)	48	4.0	1.5	49	5.1	2.0	3.0
Self-rating (1940)	86	4.8	1.6	83	5.6	2.2	2.4
Self-rating (1950-52)	85	4.7	1.1	70	5.8	2.0	4.1
Perseverance							
Rating by wife (1940)	49	3.5	1.5	41	4.8	1.9	3.6
Rating by parent (1940)	48	3.5	1.3	51	4.6	2.1	3.4
Self-rating (1940)	86	4.0	1.5	83	5.4	1.8	5.2
Self-rating (1950-52)	86	4.1	1.4	70	5.1	1.7	3.7
Integration toward goals							
Rating by wife (1940)	49	4.2	1.4	41	5.4	1.5	3.8
Rating by parent (1940)	47	4.0	1.2	49	5.4	1.9	4.3
Self-rating (1940)	86	4.5	1.2	83	6.2	1.8	7.0
Self-rating (1950-52)	85	4.9	1.4	70	6.5	1.6	6.7
Freedom from inferiority feelings							
Rating by wife (1940)	49	4.9	1.6	41	5.7	1.9	2.1
Rating by parent (1940)	44	4.8	1.7	49	5.6	2.0	2.1
Self-rating (1940)	86	5.8	1.9	83	6.3	2.0	1.6
Self-rating (1950-52)	86	5.6	1.4	70	6.0	1.4	1.6

Note: A rating of 1 indicates the presence of the trait to an extreme degree, 6 is average, and 11 indicates lack of the trait to an extreme degree.

b. Ratings by field workers. In the follow-ups of both 1940 and 1950-52, the psychologists who interviewed the subjects and members of their families and administered the tests also rated the subjects on 12 aspects of personality that would be most likely to evidence themselves in the field workers' conference with the subjects. The ratings for all but three of these traits in 1940

and all but one in 1950 show marked differences between the A's and C's in the direction of higher ratings for the A's. The traits in which there is the least difference are those in which the presence of the characteristic to an extreme degree would not be desirable: for example, vanity, talkativeness, and frankness. A-C differences beyond the .01 level of significance were found for seven traits in 1940 and eight in 1950; however, the 1950 differences are the more striking. Although Alertness and Attentiveness rank first in the proportion of high ratings (1 or 2 on a scale of 5) for both A's and C's in 1940 and again in 1950, significantly fewer C's than A's received high ratings on these two traits. Two points should be taken into account in evaluating the field worker ratings. Not all the A-C men were rated (since not all were seen by a field worker) and the men from the A and C groups who were rated at both dates are not identical. Of the total rated, 40 from the A group and 65 from the C group were rated at both dates. Nor were the subjects necessarily rated by the same field worker both times. The ratings represent the impression made on the field worker by the subject, but the field workers were experienced psychologists, competent to make objective judgments, and the ratings can be considered at least reasonably free of personal bias. These two sets of ratings, made 10 and 20 years respectively before the men were selected as the most and least successful of the Terman group, give a very different composite picture of the A men from that of the C men. Table 33 gives the proportion of high ratings for each group of men at both dates.

TABLE 33
PROPORTION OF A AND C MEN RATED 1 OR 2 (HIGH) ON PERSONALITY TRAITS
BY FIELD WORKERS IN 1940 AND 1950

Trait	1940 ratings		CR	1950 ratings		CR
	A Group (N = 52) %	C Group (N = 76) %		A Group (N = 56) %	C Group (N = 83) %	
1. Appearance	73.1	37.4	4.0	76.8	38.5	4.4
2. Attractiveness	74.5	47.4	3.0	87.5	59.0	3.6
3. Poise	67.3	42.1	2.8	92.8	56.6	4.6
4. Speech	76.9	50.0	3.1	91.0	66.2	3.4
5. Freedom from vanity	13.5	19.7		21.5	16.9	
6. Alertness	88.5	73.7	2.0	100.0	69.9	4.5
7. Friendliness	69.2	53.9	1.7	81.8	64.7	2.2
8. Talkativeness	34.6	39.5		59.0	40.9	2.1
9. Frankness	55.8	54.0		67.9	50.6	2.0
10. Attentiveness	88.5	68.5	2.6	100.0	73.5	4.2
11. Curiosity	69.2	44.0	2.8	86.7	28.0	6.7
12. Originality	76.6	51.5	2.7	87.3	25.9	7.0

6. *Marriage and Children*

a. Marital status and marital adjustment. That marriage and marital success are important correlates of vocational success is brought out in the data on marital status. The question that cannot be answered is whether the relationship is causal and, if so, in which direction. Does successful marriage make for vocational achievement among men or does success in life accomplishment result in less marital discontent? One indication that successful marriage does foster achievement (even though the reverse may also be true) lies in the fact that 18 per cent of the C group have not married, whereas there are no A's who have not married. Furthermore, the A marriages less often end in divorce than do those of the C men; 16 per cent of A's have been divorced, while 42 per cent of the C's who married have been divorced. More than one divorce was reported by 10 per cent of the 82 C men who married as opposed to only two men among the 100 A's who married. The greater record of marital failure among the C's is consistent with other evidences of emotional instability and poor adjustment on the part of the less successful men. The data on marital status in 1960 are given in Table 34.

TABLE 34
MARITAL STATUS OF A AND C GROUPS—1960

Marital status	A Group (<i>N</i> = 100) %	C Group (<i>N</i> = 100) %	CR
Single		18.0	
Are, or have been married	100.0	82.0	4.4
Per cent of <i>N</i> ever married who have been divorced	16.0	41.5	3.8

The wives of the A men are more often college graduates than are the wives of the C men; 51 per cent of A wives and only 15 per cent of C wives completed college. Those with a graduate degree include 17 per cent of A wives and 6 per cent of C wives. More than one-fourth of C wives are gainfully employed outside the home, most often as office workers, while only five A wives have full-time employment. The differences in education and employment status of their wives are in line with the differences between the A and C men in education and occupational and economic status. The Concept Mastery Test, Form T, was taken by 45 A wives and 40 C wives. The mean score was 106.3 (*SD* 35.3) for A wives and 71.01 (*SD* 36.4) for C wives ($p = < .001$). To what extent those tested are representative samplings of the A and C group wives is not known, though there is no reason to believe that there was any selection favoring the A's. Although the *N* of

C wives is smaller, the proportion tested is greater, since in 1950-52 when the test was administered 22 C men were still single. That some of the difference in score may be attributable to the difference in education should not be overlooked.

b. Offspring. Not only do fewer C men marry, but those who marry tend to produce fewer children than do the A men. For the 100 A's and 82 C's who married, the average number of children was 2.5 and 1.6, respectively. Those whose marriages were childless include 8 per cent of A's and 32 per cent of C's. Forty-nine per cent of A's as opposed to 22 per cent of C's had three or more children. Both differences are highly reliable (p 's = $< .001$).

Stanford-Binet (Form L) tests have been given to 125 of the 249 offspring (50 per cent) of the A group and to 82 of the 132 offspring (62 per cent) of the C group. The mean *IQ* for the children of the A men was 140 (*SD* 16.4), and for the children of the C men, 132 (*SD* 15.9). The difference in means is significant ($CR = 3.8$). The A group children ranged from *IQ* 105 to 197 and the C group children ranged from 90 to 164. As far as can be determined, the sampling from each group was unbiased. Whether a child was tested depended chiefly on his age (4 years or older) and on his availability—that is, residence in an area canvassed by a field worker (California). The out-of-state subjects were encouraged, however, to arrange for tests for their children and have the results sent to the Terman Study. In this way Binet test scores (and in most cases the original test blank also) were obtained for 26 A children and one C child. Since nearly one-half of the A group live outside of California as compared to only five nonresident C men, the representation of the A group in the offspring *IQ* data would have been considerably less without these outside tests. Except for three given by a school psychologist, all the out-of-state tests were administered at various university departments of psychology and there is no reason to think any of the examiners less competent than the Terman staff. A check of *IQ*s shows no difference between the in-state and out-of-state tests.

Just as the C men more closely resembled the total group of men in childhood Binet *IQ* than did the A men, so also are their children more like the total group of offspring tested than are the A children. As shown in Table 4, the mean of the total 1571 children tested is 133.2 (*SD* 17.8).

7. Avocational and Other Interests

a. Avocations and hobbies. The A and C men do not differ in the number of avocational interests and hobbies; approximately 45 per cent of each group listed four or more avocations or hobbies in 1960, while about 8 per cent

did not report any. Sports was the most popular avocation with both groups; however, the A's showed considerably more interest than the C's in active sports and games. The proportion listing one or more active sports was 55 per cent for the A's and 38 per cent for the C's ($p = .02$). On the other hand, significantly more C's expressed spectator interest only: 20 per cent of C's as opposed to 5 per cent of A's ($p = .01$). Other leading interests were gardening, music, and home workshop, all of which received approximately equal mention by A's and C's.

b. Leisure time preferences. In response to a checklist of preferences in leisure time activities, only "TV or radio" shows an important difference between the A's and C's with mention by 18 per cent of A's and 45 per cent of C's ($p = < .001$). The leading preference for both groups is "reading," checked by 85 per cent of each. The A's and C's do not differ significantly on "visiting with friends" or "playing cards," the remaining two items on the list.

c. Memberships in clubs and organizations. The A's are much more likely than the C's to belong to clubs and organizations. Only 10 per cent of A's did not report any memberships in contrast to 39 per cent of C's who were in the "none" category ($p = < .001$). At the other extreme, 61 per cent of A's and only 14 per cent of C's belonged to four or more organizations.

The most frequent type of membership among the A's is professional or business, reported by 75 per cent of the group. This is to be expected, of course, since the A's are either professional men or high-ranking business executives. Twenty-two per cent of C's belonged to professional or business groups and 33 per cent to labor unions, guilds, and other employee groups. Only 3 per cent of A's belong to unions or similar groups. These differences in kinds of membership which result from the differences in occupation are all statistically reliable. The only other membership area in which the groups differ significantly is the social and fraternal, with 44 per cent of A's holding one or more social memberships as compared with 20 per cent of C's ($p = < .001$).

d. Community service activities. The A's also participate to a greater extent than do the C's in community service activities. Such activities include serving on boards and performing committee work and related services for philanthropic and welfare organizations, or community health, youth, civic, and educational, as well as church-connected programs. Thirty per cent of A's list participation in three or more such programs, while only 6 per cent of C's report as many as three service activities ($p = < .001$). Those who said "none" or "negligible" include 37 per cent of A's and 63 per cent of C's

($p = < .001$). The greatest A-C difference is in the civic and educational group, reported by 36 per cent of A's and only 5 per cent of C's ($p = < .001$). The A's and C's differ least in the religious and church-connected activities and in their participation in youth programs.

It seems likely that the greater amount of joining on the part of the A's and their greater participation in service activities are to a large extent reflections of their advantageous occupational status and income. It is true also, however, that a tendency to lack of sociability is a characteristic of the C's as was shown in the trait ratings, the social adjustment ratings, and the ratings on extracurricular activities in high school and college.

8. *Political and Socioeconomic Viewpoints*

Political preferences reported in 1960 show that the majority of both A and C men are Republicans (58 per cent of A's and 57 per cent of C's). The remainder are Democratic except for four A's and two C's who classified themselves "Independent." The self-ratings on radicalism-conservatism do not differ significantly; the C's, however, tend to be more conservative than the A's in political and socioeconomic attitudes. Those rating themselves at the right of the scale ("tend to be conservative" to "extremely conservative") include 47 per cent of C's as compared with 40 per cent of A's, not a reliable difference. There was no difference in the proportions who rated themselves to the left of center (12 per cent of each group).

9. *Family and Home Background*

There is no evidence that vocational success among these gifted men is related to such factors as birthplace of parents (however, the parents of 75 per cent of both A's and C's were American born), age of either parent at birth of subject, mother's health during pregnancy, length of breast feeding, birth order, or number of siblings. The proportion of firstborn children was 52 per cent for both the A and C groups (including one A man who was a twin). Third-born or later children included 20 per cent of A's and 17 per cent of C's. More C's than A's had no siblings; the "onlies" comprised 21 per cent of C's as compared with 13 per cent of A's. Forty-eight per cent of A's and 46 per cent of C's had two or more siblings, while the proportion with three or more siblings was 19 per cent for A's and 21 per cent for C's. None of these differences is significant.

A relationship to A-C status, however, was found among such home background factors as education of parents, occupation and marital status of parents, interests, activities, and honors of father, and size of home library. Of

interest also in the family background is the fact that more than twice as many A's as C's are from Jewish parentage; 17 per cent of A's and eight per cent of C's. The total Jewish representation in the Terman group is slightly over 10 per cent.

a. Education of parents. The parents, both fathers and mothers, of the A group had a greater amount of schooling than did those of the C group, but the differences are significant only for the fathers. The figures on parental education given in Table 35 show that 47 per cent of A fathers and only 25 per cent of C fathers were college graduates. Less than 30 per cent of A fathers and more than one-half of C fathers did not complete high school. On the maternal side, college graduation was reported for 20 per cent of A group mothers and 12 per cent of C group mothers. Information on the education of grandparents was available for 78 A's and 71 C's and here also the differences are in the direction of greater schooling among the grandparents of the A men than those of the C men. College attendance of one or more years was reported for 38 per cent of the paternal grandfathers of A men and 18 per cent of those of C men ($p = < .01$). The maternal grandfathers of the A men also had more schooling than those of the C men, but the difference is not significant. A larger proportion of A than of C grandmothers, both paternal and maternal, had a high school or better education, but again the differences are not reliable.

TABLE 35
EDUCATION OF PARENTS OF A AND C GROUPS

Highest level of education	A Group ($N = 92$) %	C Group ($N = 93$) %	CR
Fathers			
College graduation	46.7	24.7	3.0
Some college or training beyond high school	13.1	9.7	
High school graduation	10.9	12.9	
Some high school	14.1	20.4	
Eighth grade or less	15.3	32.1	2.7
Mothers			
College graduation	20.4	11.7	1.6
Some college or training beyond high school	20.4	16.0	
High school graduation	23.7	23.4	
Some high school	21.4	24.5	
Eighth grade or less	14.0	24.4	1.8

b. Occupational status of fathers. As would be expected from their superior educational attainments, the A fathers rank higher in occupational status than do C fathers. The occupations of the fathers were classified according to the Minnesota Occupational Scale, the same as that used in classifying the occupations of the male subjects of the Terman group (6, 7). Table 36 compares the occupations of the A and C fathers as of 1922, the approximate date at which the subjects were originally selected for study. Significantly more A than C fathers were employed at the professional level; 41 per cent of A's and 20 per cent of C's ($p = < .01$). The representation in the higher business and semiprofessional occupations (Group II) was about the same for the A's and C's, but the C fathers greatly outnumbered those of the A group in occupational Groups III to V.

TABLE 36
OCCUPATION OF FATHERS OF A AND C GROUPS—1922

Occupational classification (Minnesota Scale)	A Group ($N = 96$) %	C Group ($N = 98$) %	CR
Group I: Professional	40.6	20.4	3.0
Group II: Official, managerial, and semiprofessional	26.0	25.5	
Group III: Retail business, clerical, skilled trades, and kindred	21.9	29.6	
Group IV: Agricultural and related occupations	5.2	12.2	
Group V: Semiskilled occupations	6.3	13.3	

Note: For the fathers who were deceased by 1922 (10 A Group and 11 C Group), the occupation at time of death was used. Information on 1922 occupations was lacking for four A Group and two C Group fathers.

Information on the occupations of fathers was also obtained in 1928 when the subjects were chiefly in high school or entering college and in 1940 when they had reached adulthood. The differences in occupational status continued to be in the same direction and of about the same magnitude as in 1922, but with smaller representation from each group because of death or retirement among the fathers.

c. Incidence of death and divorce in parental background. The C's are more likely than the A's to come from homes broken either by the death of a parent or by divorce. When the group was first selected for study in 1922, more than twice as many C as A parents had been divorced and the difference in divorce rate was even greater in 1928 and 1940. There was also a higher death rate among C parents than among A parents, but the difference in

mortality did not become marked until 1940; by that date 31 A fathers and 11 A mothers had died as against 43 C fathers and 19 C mothers. To what extent the greater mortality of C parents was due to age is not clear. The information on age of the parents at birth of the subjects shows that the C parents were only slightly older than the A parents and the A and C men themselves average approximately the same age. Thus it appears that the age difference between the two sets of parents was not great enough to account fully for the much higher death rate among C parents. Table 37 compares the marital status of the parents of the two groups at three periods in the lives of the subjects: childhood, youth, and adulthood.

d. Other aspects of home background. Ratings made in 1922 on the Whittier Scale for Grading Home Conditions were available for 38 A's and 34 C's and showed no difference; close to 92 per cent of both A and C homes were rated above average to very superior. On the other hand, there was a reliable difference in size of home library; according to the parents' 1922 reports, 38 per cent of A homes and 19 per cent of C homes had 500 or more books ($p = .01$). Information on hobbies and interests and on positions of honor, trust, and recognition to 1922 was furnished for approximately 90 per cent of fathers of each group. The A fathers, as compared to C fathers, showed a reliably greater breadth of interests and had received more recognition as shown in positions of honor and trust (social, civic, political, professional or business, school, or church); 51 per cent of A fathers and 31 per cent of C fathers had received one or more such honors ($p = <.01$). The A and C mothers did not differ reliably in number and breadth of interests or in positions of trust and recognition; what differences there were, however, favored the A's. The parents' report in 1922 on the amount of home instruction received by the gifted subject in childhood, including reading and telling stories to the child as well as instruction along particular lines, showed no difference between the A's and C's.

10. *Childhood and Youth*

a. Developmental history. Data on a number of aspects of developmental history were available from parents' reports, teachers' observations, and the medical examiner's findings. There were no significant differences in health in the first year of life or in such aspects of health in childhood and adolescence as frequency of illnesses or accidents. Ratings on health based on the report of the medical examiner (1923) and the parents and teachers in 1922 and 1928 favored the A's, but the differences were slight. Anthropometric measurements, available for somewhat more than a third of each group, did not differ to any

TABLE 37
MARITAL STATUS OF PARENTS OF A AND C GROUPS AT THREE PERIODS

Marital status	1922 ^a			1928 ^a			1940 ^a		
	A Group %	C Group %	CR	A Group %	C Group %	CR	A Group %	C Group %	CR
Home unbroken	80	75	.9	73	61	1.8	54	32	3.1
Father deceased	10	13		14	17		31	43	
Mother deceased	7	5		9	9		11	19	
Parents divorced	4	10	1.7	5	17	2.7	11	26	2.7

Note: Percentages may not add to 100, since the "parents divorced" category includes a small number of deceased parents who had been divorced prior to death.

^a Ns = 100 for each group.

extent. The C's in childhood or adolescence were more often below average for their age in height and were more often overweight on a weight-height-age index, but neither difference approached reliability.

Neither the age at walking nor the age at talking reported by the parents in 1922 was related to A-C status. Data on the age at puberty as indicated by voice change was supplied by parents in either 1922 or 1928 (depending on the age of the child) for 54 A's and 65 C's and showed a small but significant difference; the mean age at puberty was 14.4 years for the A's and 14.9 for the C's ($p = <.001$).

b. Childhood tests of interests and personality. Data on interest in and knowledge of games and amusements, masculinity of play interests, character traits (Cady-Raubenheimer Test) and intellectual, social, and activity interests (Wyman Test) were obtained in 1922-23 for 42 A's and 43 C's. There were no important differences between the two groups in any of the areas included in this battery of tests.

c. Trait ratings in childhood and youth. Trait ratings on a 13-point scale using the cross-on-line technique were obtained in 1922 and again in 1928 from both parents and teachers who were instructed to rate the child in comparison with the average child of the same age. A composite parent-teacher rating was computed with the mid-point of the scale (7) defined as average. A rating of 1 indicated the presence of the trait to an extreme degree and 13 the marked absence of the trait. The traits were combined into categories as follows: (a) Intellectual: desire to know, originality, common sense, general intelligence; (b) Volitional: prudence and forethought, will power, perseverance, desire to excel; (c) Social: fondness for large groups, leadership, popularity, sensitivity to approval, freedom from vanity; and (d) Moral: sympathy and tenderness, generosity and unselfishness, conscientiousness, truthfulness.

Only the volitional traits showed a reliable difference between the two groups in 1922, with the A's possessing these traits to a greater extent than the C's. Ratings similar to those of 1922 were obtained in 1928 for approximately three-fifths of each group. By this time most of the subjects were adolescents and the differences in trait ratings more marked—especially in the intellectual traits, and, to a lesser degree, the moral traits. It is interesting to note that in both 1922 and 1928 the highest and lowest mean ratings for *both* A's and C's fall in the same categories: namely, the intellectual and the social. Table 38 gives the means and standard deviations of the composite parent-teacher ratings of 1922 and 1928.

TABLE 38
 TRAIT RATINGS OF THE A AND C GROUPS IN CHILDHOOD AND YOUTH
 (Composite of parent and teacher ratings)

Trait	A Group			C Group			CR of difference between means
	N	Mean	SD	N	Mean	SD	
Intellectual traits							
1922	90	3.6	1.2	91	3.8	1.2	
1928	61	3.6	1.5	58	4.6	1.6	3.8
Volitional traits							
1922	90	4.3	1.3	91	5.1	1.6	3.5
1928	61	4.3	1.7	58	5.4	1.7	3.4
Social traits							
1922	90	5.6	1.4	91	6.0	1.3	2.0
1928	61	5.6	1.5	58	6.2	1.4	2.1
Moral traits							
1922	90	4.6	1.4	91	4.8	1.7	
1928	61	4.6	1.6	61	5.3	2.0	2.4

Note: A rating of 1 indicates the presence of the trait to an extreme degree, 7 represents "average for age," and 13 indicates marked lack of the trait.

d. Interests, abilities, and personality characteristics in childhood and youth.

Neither the age at learning to read, the amount of reading, nor reading interests in childhood showed any difference between the groups. In their feeling about school, the groups differed considerably according to the parents. A "strong liking for school" was reported for 57 per cent of A's as compared with 42 per cent of C's ($p = .04$). Information from parents on indications of special ability in music, mathematics, science, art, or dramatics did not differ reliably, although the presence of one or more special ability was more often noted for the A's than for the C's. The subjects themselves as well as their parents reported on the number and size of their collections. The A's were more often collectors than were the C's; four or more collections of significant size were reported for 35 per cent of A's and 18 per cent of C's ($p = .01$).

The C parents (according to their 1922 report) more often punished the child and more often listed faults, such as disobedience and impudence, but the differences were small and not reliable. The parents' 1928 reports when the subjects were adolescent showed a significant difference in attitude toward discipline; those rated "rather" to "very headstrong" included 38 per cent of C's as against 13 per cent of A's ($p = .001$). There were no differences of consequence in either parents' or teachers' opinions on the occupation for

which these young people were best suited, nor was there any difference in the subjects' own occupational preferences for the future.

e. Nervous tendencies and social adjustment in childhood and youth. Information on tendencies toward nervousness obtained from parents, teachers, and (in 1922 only) the medical examiner showed no difference between the A's and C's in either 1922 or 1928. Those rated "little or none" on nervous tendencies included approximately 90 per cent of each group. The composite parent and teacher ratings on social adjustment were classified as follows: "satisfactory," "some maladjustment," "serious maladjustment." The ratings favored the A's at both dates; in 1922 the proportion rated "satisfactory" included 96 per cent of A's and 86 per cent of C's ($p = .02$) and in 1928 "satisfactory" ratings were given to 95 per cent of A's and 83 per cent of C's ($p = .02$). The A-C differences in childhood and youth in social adjustment became increasingly marked as the subjects grew older, as shown in the adult ratings given in Table 30.

11. *Autobiographical Report of 1950*

An information schedule called "Supplementary Biographical Data" was one of the questionnaires filled out by the subjects in the 1950-52 follow-up. It was an eight-page blank designed "to obtain certain kinds of information that will throw light on your personality development and on factors that may have helped or hindered you in achieving your life goals." The biographical data called for were supplied by 85 per cent of the A and 70 per cent of the C men.

a. Parent-child relationships. Seven aspects of parent-child relationships were listed, each followed by a five-point rating bar ranging from "extremely" to "not at all." The respondents checked the point on the scale that best described their relationship with their parents in childhood and youth. Fathers and mothers were rated separately on each trait. The only variable that showed a reliable A-C difference was the extent to which parents had encouraged initiative and independence, with the A's more often than the C's reporting encouragement toward independence from both their fathers and their mothers. The difference, however, was somewhat more marked for the fathers than for the mothers. Little difference appeared in such other aspects of child-parent relationships as admiration for parents, rebelliousness toward parents, resistance by parents to subject's attempt to achieve independence, feelings of rejection by parents, affection and understanding between subject and parents, and tendencies to over-protectiveness and solicitude on the part of parents. Table

39 compares the opinions of the A and C men regarding their relationships with their parents.

TABLE 39
REPORT OF A AND C MEN ON EARLY PARENT-CHILD RELATIONSHIPS
(From biographical report of 1950-52)

Variable	A Group N	%	C Group N	%	CR
a. Extent admired and wanted to emulate parents					
Father:	82		63		
A good deal to extremely		51.2		39.7	1.4
Moderately		28.0		31.8	
Slightly or not at all		20.7		28.6	
Mother:	82		69		
A good deal to extremely		40.3		39.1	
Moderately		43.9		34.8	
Slightly or not at all		15.9		26.0	1.4
b. Extent felt rebellious toward parents					
Father:	81		62		
A good deal to extremely		12.4		16.1	
Moderately		24.7		29.0	
Slightly or not at all		63.0		54.8	1.0
Mother:	82		69		
A good deal to extremely		20.7		15.9	.8
Moderately		24.4		29.0	
Slightly or not at all		54.9		55.0	
c. Extent parents encouraged initiative and independence					
Father:	80		62		
A good deal to extremely		62.5		41.9	2.4
Moderately		25.0		22.6	
Slightly or not at all		12.5		35.5	3.3
Mother:	83		69		
A good deal to extremely		60.2		44.9	1.9
Moderately		25.3		23.2	
Slightly or not at all		14.4		31.8	2.6
d. Extent parents resisted efforts to achieve normal independence					
Father:	78		61		
A good deal to extremely		5.1		6.5	} 1.1
Moderately		6.4		11.5	
Slightly or not at all		88.4		82.0	
Mother:	83		69		
A good deal to extremely		19.2		26.0	1.0
Moderately		12.0		17.4	
Slightly or not at all		68.7		56.5	1.6

TABLE 39 (continued)

Variable	A Group		C Group		CR
	N	%	N	%	
e. Extent felt rejected by parents					
Father:	80		62		
A good deal to extremely		8.8		9.7	
Moderately		11.3		12.9	
Slightly or not at all		80.0		77.4	
Mother:	81		69		
A good deal to extremely		2.4		5.8	
Moderately		3.7		5.8	
Slightly or not at all		93.8		88.4	1.2
f. Extent of affection and understanding between subject and parents					
Father:	79		64		
A good deal to extremely		36.8		28.1	
Moderately		34.2		32.8	
Slightly or not at all		29.1		39.1	1.3
Mother:	83		70		
A good deal to extremely		57.9		48.6	1.1
Moderately		28.9		34.3	
Slightly or not at all		13.2		17.1	
g. How solicitous were parents (anxious affection, over-protection, etc.)					
Father:	77		62		
A good deal to extremely		6.5		11.3	1.0
Moderately		26.0		24.2	
Slightly or not at all		67.6		64.5	
Mother:	82		69		
A good deal to extremely		37.8		39.1	
Moderately		21.9		34.8	
Slightly or not at all		40.3		26.0	1.8

b. Other parental traits. The subjects were asked to rate their parents on five traits of personality "entirely apart from their relationship toward you or their other children." The traits were: *how self-confident, how helpful, how domineering, how friendly, how intelligent.* The only one of these traits for which the A-C difference approached reliability was intelligence of the fathers: 28 per cent of A's as opposed to 15 per cent of C's rated their fathers as "extremely intelligent" ($p = .05$).

c. Family relationships and socioeconomic factors in childhood and youth. There were no clear-cut trends or reliable differences in the reports on sibling

attachment or rivalry, serious friction among family members, or such socio-economic factors as financial situation, social position of parents, or subject's opinion of the vocational success of his father.

d. Religious influences and attitudes. A somewhat smaller proportion of A than of C men said that they had had "considerable" to "very strict" religious training in childhood and youth, but the difference (54 per cent of A's as compared to 61 per cent of C's) was not significant. There was also little difference in the reports of religious inclination as an adult; however, slightly more A than C men expressed a moderate to strong religious inclination (38 per cent of A's and 30 per cent of C's).

e. Physical factors. Although a somewhat larger proportion of A's than of C's rated their health "good" or "very good" both in childhood and in adolescence, the differences were slight. Nor did the groups differ in their feeling about the effects on the personality (favorable or unfavorable) of such physical factors as size, appearance, ability at sports or games, or serious and extended illness or accidents. There was, however, a fairly reliable difference in the ratings on "amount of physical energy in recent years." Rating themselves as more energetic than average to extremely energetic were 62 per cent of A's and 45 per cent of C's ($p = .04$). Only 9 per cent of A's but 25 per cent of C's considered themselves below average in amount of energy.

f. Emotional and social factors. This section of the biographical data blank is in four parts. The first asked the subjects to rate themselves on the extent of their interest as compared to their friends in succeeding at five variables at age 12 to 20 and since age 20. The variables listed were *Being a leader*, *Having friends*, *Making money*, *Being a social success*, and *School work*. Except for interest in school success (reliably more A's than C's were interested), the two groups did not differ significantly in the 12 to 20 age period, but there were marked differences in the period since age 20. The A's more often than the C's expressed a good deal to extreme interest in succeeding at all the variables after age 20. The differences were highly reliable for *being a leader*, *having friends*, and *succeeding at school work*. Interest in *making money* did not differ markedly for the two groups; 48 per cent of A's and 44 per cent of C's expressed a good deal to extreme interest. This variable, however, ranked in first place in amount of interest with the C's but in fourth place with the A's. Both groups agreed in ranking interest in *being a social success* since age 20 at the bottom of the list. Table 40 gives the A-C self-ratings on the five variables at the two age periods.

The second and third parts of this section asked for information on whether in childhood or youth the subject had felt "different" from his classmates

TABLE 40
 SELF-RATINGS BY A AND C MEN ON EXTENT OF INTEREST AS COMPARED TO
 FRIENDS IN SUCCEEDING AT SELECTED ASPECTS OF LIFE
 (From biographical report of 1950-52)

Extent of interest in succeeding at	Age 12-20		CR	Since age 20		CR
	A Group (N = 86) %	C Group (N = 71) %		A Group (N = 86) %	C Group (N = 71) %	
Being a leader						
Extremely	12.8	9.9	} 1.1	15.1	5.6	} 6.1
A good deal	32.6	26.8		54.6	15.5	
Moderately	33.7	31.0		24.4	47.9	
Slightly	15.1	22.5		3.5	22.5	
Not at all	5.8	9.9		2.3	8.4	
Having friends						
Extremely	6.1	7.1	} 1.6	3.6	7.0	} 3.0
A good deal	45.1	47.1		58.3	31.0	
Moderately	35.4	40.0		35.7	47.9	
Slightly	11.0	5.7		1.2	12.7	
Not at all	2.4			1.2	1.4	
Making money						
Extremely	9.3	5.7		8.1	10.1	
A good deal	16.3	17.1		39.5	34.3	
Moderately	40.7	45.7		46.5	37.1	
Slightly	25.6	28.6		4.6	17.1	
Not at all	8.1	2.9		1.2	1.4	
Being a social success						
Extremely	6.0	8.6		3.5	1.4	
A good deal	31.0	31.4		17.6	11.4	
Moderately	31.0	31.4		51.8	45.7	
Slightly	23.8	17.1		23.5	22.9	} 1.9
Not at all	8.3	11.4		3.5	18.6	
School work						
Extremely	26.7	17.1	} 2.5	25.6	10.6	} 4.1
A good deal	46.5	37.1		50.0	31.8	
Moderately	20.9	34.3		20.5	39.4	
Slightly	4.6	10.0		1.3	12.1	
Not at all	1.2	1.4		2.6	6.1	

and whether it had been difficult for him to enter social and other activities of his classmates. Neither question yielded very reliable differences between the A's and C's. The A's more often said that they felt "different" from their classmates than did the C's (63 per cent of A's and 48 per cent of C's, $p = .05$). About 31 per cent of A's and 25 per cent of C's had felt intellectually superior and 32 per cent of A's and 22 per cent of C's had felt inferior or at a disadvantage either physically or socially with their classmates. According to their own reports, the A's had more difficulty than the C's in

entering into social activities and making friends in their youth. Thirty-nine per cent of A's and 25 per cent of C's reported such difficulty ($p = .06$).

The last question in this section asked if there had been either in childhood or later any major problems or marked difficulties related to sex. Approximately three-fourths of both A and C men indicated none, or only minor problems. The difficulties mentioned were varied and there were no significant differences between the two groups.

g. Factors related to education and vocational choice. Some of the most striking A-C differences came out in this section of the autobiographical report. The subjects' remembrance of their parents' attitude toward their schooling indicates greater pressure for scholastic achievement on the part of the A than of the C parents. The A's were significantly more often encouraged to forge ahead in school, to get better grades, and to go to college. Table 41 compares the responses of the A and C men regarding three aspects of parental attitude toward their education.

TABLE 41
REPORT OF A AND C MEN ON PARENTAL ATTITUDES TOWARD EDUCATION
(From biographical report of 1950-52)

Variable	A Group ($N = 86$) %	C Group ($N = 71$) %	CR
a. Attitude of parents toward school progress			
Encouraged to forge ahead	59.3	39.3	2.4
Allowed to go own pace	39.5	60.7	
Held back	1.2		
b. Attitude of parents toward school work			
Demanded high marks	15.1	5.7	} 4.3
Encouraged high marks	73.3	52.9	
Took high marks for granted	11.6	34.3	
Showed little concern		7.1	
c. Did parents encourage college attendance			
Yes	96.5	62.3	5.4
One encouraged, other opposed	2.4	1.5	
No, because of financial circumstances		17.4	
No, because of youth, delicate health, etc.		2.9	
No, not considered or were indifferent	1.2	15.9	

In reply to the question, *Did you have as much schooling as you wanted?* 91 per cent of A's and only 49 per cent of C's said "Yes" ($p = <.001$). The most frequent explanation given by 28 per cent of the C's was "lacked money" or "parents not willing to finance."

Another question asked the subjects what occupation their parents had thought they should plan for. A comparison of the replies to this question with the subject's actual occupation in 1950 shows that 28 per cent of A's and 14 per cent of C's followed their parents' choice; the difference, however, was not very reliable ($p = .05$). Fifty-seven per cent of A's and 48 per cent of C's said their parents did not indicate a choice. In response to a question on other circumstances that influenced vocational choice, 68 per cent of A's and only 23 per cent of C's mentioned aptitude or marked interest ($p = <.001$). The most frequent influence in the vocational choice of the C's was financial necessity, reported by 44 per cent of C men but by only 17 per cent of A men ($p = <.001$). Chance factors, such as job opportunity or personal contacts, were mentioned by more C than A men; 34 per cent as compared to 16 per cent ($p = .01$). Asked at what age they had first seriously thought about their life work, significantly more A's than C's were considering the matter before age 18; included here were 76 per cent of A's and 44 per cent of C's ($p = <.001$). The A-C difference in those who first seriously considered their life work before age 16 was also significant; 48 per cent of A's and 25 per cent of C's ($p = <.01$). Those who did not decide on their life work until after age 21 included only 5 per cent of A's but 28 per cent of C's.

In reply to a question on how they felt about their present vocation, 78 per cent of A's as compared to 22 per cent of C's expressed deep satisfaction and interest ($p = <.001$). Only 2 per cent of A's reported discontent to strong dislike of their work, while 17 per cent of C's said they were dissatisfied with their vocation. Another indication of the lack of fulfillment on the part of the C's appeared in responses to the question, "Does your life offer satisfactory outlets for your mental capabilities?" The reply was "Yes" or "Fairly well" for 94 per cent of A's but for only 56 per cent of C's. A "No" or a qualified negative reply was given by 6 per cent of A's and 45 per cent of C's ($p = <.001$).

h. Self-appraisals and evaluations. The last section of the Supplementary Biographical Data blank of 1950 called for an overview of their lives including appraisal of their accomplishments, opinion on factors related to achievement, self-rating on 14 traits of personality, feeling about the most

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important sources of satisfaction in life, and opinion on what constitutes success.

In appraising the extent to which they have lived up to their intellectual abilities, the A's far more often than the C's respond with "fully" or "reasonably well." Those who consider that they have lived up to their abilities (1950 report) include 83 per cent of A's and only 27 per cent of C's ($p < .001$). No A men but 32 per cent of C men thought that they had "fallen far short" or that their lives were "largely a failure" from the standpoint of realization of their abilities. Opinions on the extent to which their intellectual abilities had been realized were also obtained in 1960 and the responses of the A and C men at that date are compared in Table 44.

A list of 10 factors from which the respondents were asked to check those that had contributed to their life accomplishment yielded marked A-C differences as shown in Table 42. The factor most frequently checked by the A men was *Adequate education*, with mention by 90 per cent, and the factor most frequently checked by the C's was *Good mental stability* (56 per cent), followed closely by *Adequate education* (55 per cent). The most striking difference between the A and C men was in the proportion who checked *Persistence in working toward a goal* as a contributing factor in their life accomplishment. All of the items in the list of helpful factors were more often checked by A's than by C's, and the differences were all significant except for *Excellent health*. Seven per cent of the C's did not check any item having been helpful.

The same 10 factors were stated in reverse (*Inadequate education* and *Inadequate education*, etc.) in a second list in which the subjects were asked

TABLE 42
OPINIONS OF A AND C MEN ON FACTORS THAT HAVE CONTRIBUTED TO
THEIR LIFE ACCOMPLISHMENT
(From biographical report of 1950-52)

Contributing factor	A Group (N = 86) %	C Group (N = 71) %	CR
Adequate education	89.5	54.9	4.9
Superior mental ability	82.6	47.9	4.6
Good mental stability	75.6	56.3	2.6
Persistence	73.3	29.6	5.5
Good personality	66.3	42.2	3.0
Excellent health	60.5	47.9	1.6
Good social adjustment	58.1	35.2	2.9
Good habits of work	51.2	49.3	
Lucky chance factors	33.7	16.9	2.4
None of above factors indicated	1.2	7.0	

Note: Percentages will not add to 100 because of multiple responses.

to check those which had hindered life accomplishment. More than twice as large a proportion of A's than of C's did not check any of the hindering factors (44 per cent *vs.* 20 per cent). The two factors most frequently checked by the A's, each by about one-fifth of the group, were *Poor work habits* and *Poor social adjustment*. Interestingly, a somewhat smaller proportion of C's than of A's checked *Poor work habits*. The greatest obstacle to achievement for the C's was *Lack of persistence*, just as *Persistence* had been the least mentioned helpful factor. The A-C differences were significant for only two of the hindering factors: *Lack of persistence* and *Inadequate education*. The relatively small proportion of A's (about 56 per cent) who checked any hindering factor probably accounts for the decreased magnitude of the differences between the two groups.

Self-ratings on a group of 12 personality traits were called for in the biographical data blank of 1950 as well as in the personality inventory of 1940 (see p. 65). The traits that discriminated the most between the A's and C's were self-confidence, perseverance, and integration toward goals, with the A's possessing all of these characteristics to a reliably greater degree than the C's. The comparative data are shown in Table 32.

A question asking the subjects to check in a list of nine aspects of life those from which they derived the greatest satisfaction also brought out a number of clear-cut differences between the two groups. The greatest difference was in "work itself" as a source of satisfaction, checked by 91 per cent of A's as compared to 46 per cent of C's ($p = <.001$). "Recognition for your accomplishments" also was more often mentioned by A's than by C's; 74 per cent of the former and 27 per cent of the latter ($p = <.001$). Though less than half of the A's (44 per cent) checked income as a source of great satisfaction, the proportion was reliably greater than the 19 per cent of C's who mentioned this aspect of life ($p = <.01$). "Marriage" and "children" each ranked high with the A's (just below "work itself"), but the figures cannot be fairly compared with the C's, since 18 per cent of the C's are single and of those who married a larger proportion are divorced. The question on the most satisfying aspects of life was repeated in 1960 and the opinions expressed by the A's and C's in 1960 are compared in Table 45.

Finally, the 1950 biographical report asked, *From your point of view, what constitutes success in life?* There was a wide range of replies, often overlapping, and frequently a respondent gave more than one definition. The most striking difference between the two groups was in greater emphasis given by the A's to vocational satisfaction and achievement and the realization of potentialities. The groups also differed significantly in their opinion on the fulfill-

ment of social responsibility as a definition of success, with the A's much more oriented in this direction than the C's. Income did not rate very high with either A's or C's as a hallmark of success, though it was mentioned more often by C's than by A's.

12. *Reflections and Self-Appraisals—1960*

By 1960, at an average age of about 50 years, the A and C men were in a position to give even more definitive appraisals and evaluations of their lives than in 1950. A description of the data obtained follows.

a. *Subject's opinion on effect of Terman study.* The 1960 information blank asked several questions related to the part their inclusion in a study of gifted children had played in their lives, as follows: age at which the subject had learned of his inclusion in the study, whether such knowledge had played an important part in his life, and the nature of effects (favorable or unfavorable) of being in a gifted group. No reliable differences were found between the A's and C's in response to any of the questions; however, somewhat more of the C's mentioned unfavorable effects (31 per cent of C's as opposed to 17 per cent of A's), $p = .07$. The unfavorable effect most often mentioned by the C's was the generation of a feeling of guilt over not living up to their potential.

b. *Self-rating on extent of ambition.* The question directed toward eliciting information on this variable asked the subjects to rate their ambition, as compared to that of their colleagues, on four traits: *Excellence in work*, *Recognition for accomplishment*, *Further vocational advancement*, and *Financial gain*. Ratings were called for at two ages: when they were between the ages of 30 and 40, and since age 40 (no one was under age 40 at the time of rating). On each of these characteristics, except *Financial gain*, significantly more A's than C's rated themselves as having much more or somewhat more ambition at both age levels. The data on self-ratings on ambition are given in Table 43.

A further question related to the amount of change in ambition in the last five years (increased, little change, decreased) in these same areas brought out no significant differences between A and C men.

c. *Subject's appraisal of how well he has lived up to his intellectual abilities.* The A's and C's differed significantly in their responses to this item in which the choices to be checked were *Fully*, *Reasonably well*, *Considerably short*, and *Far short*. Predictably a greater proportion of the A's than the C's were of the opinion that they had lived up to their abilities. A response in either the "fully" or "reasonably well" category was given by 87 per cent of A's and only 39 per cent of C's ($p = <.001$). Eighteen per cent of C's considered that they had fallen far short of their potential. Information obtained in 1950 on this

TABLE 43
 SELF-RATINGS BY A AND C MEN ON EXTENT OF AMBITION AS COMPARED
 TO FRIENDS AND COLLEAGUES
 (Ratings made in 1960 for two age periods in life)

Ambition for	Age 30-40				Since age 40				
	A N	A Group %	C N	C Group %	A N	A Group %	C N	C Group %	CR
a. Excellence in work	92		71		92		75		
Much more than average		35.9		18.3		31.5		26.7	} 3.0
Somewhat more than average		53.3		47.9		56.5		42.7	
Average		9.8		21.1		9.8		22.7	
Somewhat less than average		1.1		7.0		2.2		5.3	
Much less than average				5.6				2.7	
b. Recognition of accomplishments	90		70		90		74		
Much more than average		13.3		2.9		7.8		6.8	} 3.3
Somewhat more than average		35.6		25.7		43.3		18.9	
Average		45.6		48.6		36.7		47.3	
Somewhat less than average		5.6		15.7		12.2		14.9	
Much less than average				7.1				12.2	
c. Further vocational advancement	89		70		89		74		
Much more than average		21.4		8.6		6.7		10.8	} 3.4
Somewhat more than average		39.3		15.9		48.3		17.6	
Average		38.2		41.4		32.6		35.1	
Somewhat less than average		1.1		21.4		10.1		21.6	
Much less than average				12.9		2.2		14.7	
d. Financial gain	91		71		91		75		
Much more than average		9.9		19.7		9.9		2.7	} 2.1
Somewhat more than average		20.9		40.8		30.8		22.7	
Average		48.3		23.9		38.5		37.3	
Somewhat less than average		18.7		15.5		19.8		21.3	
Much less than average		2.2				1.1		16.0	

question with identical wording yielded differences in the same direction of the same magnitude as in 1960. Table 44 gives the appraisals of men on the extent to which their intellectual abilities have been real

TABLE 44
SELF-RATINGS BY A AND C MEN ON HOW WELL THEY HAVE LIVED
TO THEIR INTELLECTUAL ABILITIES—1960

Extent lived up to abilities	A Group (<i>N</i> = 91) %	C Group (<i>N</i> = 76) %
Fully	8.8	2.6
Reasonably well	78.0	36.8
Considerably short	9.9	34.2
Far short	1.1	18.4
Ambiguous reply	2.2	8.0

d. Opinion on aspects of life from which the greatest satisfaction is derived. A check list of nine sources of life satisfaction yielded striking A-C differences. Although "work itself" ranked first with both A's and C's, it was chosen by 91 per cent of A's as compared with 62 per cent of C's. "Income" and "recognition for accomplishments" also discriminated reliably between the two groups. "Marriage" and "children," which ranked just below "work itself" with A's and C's, was also more often listed by A's; however, when accounting for of the unmarried C's (see Table 34), the differences between the A's and C's are not significant. The percentage distributions of opinions on the nine satisfying aspects of life are given in Table 45. Approximately the same differences were found in the responses made in 1950 to the same question on sources of satisfaction.

TABLE 45
OPINION OF A AND C MEN ON ASPECTS OF LIFE FROM WHICH THE GREATEST
SATISFACTION IS DERIVED—1960

Aspect of life	A Group (<i>N</i> = 93) %	C Group (<i>N</i> = 77) %
Your work itself	91.4	62.3
Your children	82.8	58.4
Your marriage	81.7	61.0
Your avocational activities	51.6	59.7
Recognition for your accomplishments	47.3	28.6
Your income	44.1	20.8
Social contacts	25.8	32.5
Community service activities	17.2	13.0
Religion	14.0	19.5
Other	5.4	5.2

Note: Percentages will not add to 100 because of multiple replies.

D. SUMMARY AND CONCLUSIONS

Because of its longitudinal nature, the Terman Study of the Gifted offers a unique opportunity to study the correlates of vocational achievement among a group of men, all of whom in childhood were in the top 1 per cent of the school population in mental ability. In the present study, the achievements to 1960 of approximately 750 men in the Terman group were evaluated by two judges, and two contrasting groups selected: the 100 most successful (A group) and the 100 least successful (C group). The groups were compared on all aspects of the voluminous data collected between 1921 and 1960 in order to identify the factors that make for outstanding achievement.

Only a few of the many variables in the family background discriminate to a significant extent between the two groups. Outstanding among these are the superior socioeconomic status of the parents of the A group shown in higher educational attainments, and greater frequency of professional occupations. Also important was the stability of the home; the parental divorce rate was markedly lower among the A group than among the C group.

In the autobiographical report made at about 40 years of age, the variables that most distinguished the A and C men in their childhood and youth were the greater extent to which the A parents encouraged initiative and independence on the part of the subjects, and their encouragement as well as their expectation of school success and of college attendance. Reporting in retrospect, the A's reliably more often than the C's indicate above average interest, in their youth and early adulthood, in school success, in leadership, and in having friends. The A's also more often report above average energy, vocational planning at an earlier age, and greater satisfaction in their work.

A comparison of the interests, abilities, and personality characteristics in childhood and youth yielded only a few items that differed reliably. Chief among these were the trait ratings of the subjects made by the parents and teachers in 1922, and again in 1928. In 1922, although the ratings on all traits favored the A's, the difference was significant only for the volitional traits. In 1928, however, when the subjects were adolescent, the A's were rated significantly higher not only on the volitional but also on the intellectual and, to a less marked degree, on the moral and social traits.

The early scholastic records showed little difference between the groups; however, the A's were more accelerated in grade placement than were the C's, finishing both eighth grade and high school at reliably younger ages. The groups began to pull apart in achievement in high school with the A's excelling not only in school marks but also in extent of participation in extracurricular activities. The trend toward scholastic achievement continued and more than

twice as many A's as C's graduated from college. The A's were younger at receiving their degrees, earned better grades, won more honors, and more often held positions of leadership in college activities.

Other distinguishing characteristics in the early years were the greater interest of the A's in collections, their greater liking for school, and their greater tractability in regard to discipline.

Ratings made on 13 traits of personality by the parents, the wives (if married), and the subjects themselves in 1940 when the men averaged close to age 30 brought out significant differences in personality between the A and C groups. The traits in which they differed the most were self-confidence, perseverance, and integration toward goals. The three sets of ratings, each made independently, agreed in rating the A's as possessing these traits to a reliably greater degree than the C's. The A's also suffered less often from feelings of inferiority than the C's, but the difference on this trait was not quite so marked. The subjects as adults were rated by the field workers on 12 characteristics at two follow-up dates: 20 years and 10 years (1940 and 1950, respectively) before their selection for the A and C groups. The ratings all favored the A group; especially notable were the significantly higher ratings for the A's on appearance, attractiveness, poise, attentiveness, curiosity, and originality.

Since in childhood all subjects ranked within the 99th percentile in intellectual abilities, no great difference could be expected in early test scores. Although the mean childhood Binet *IQ* for the A's was 157, the mean *IQ* of 150 for the C's was also well within the top one per cent of the norms and about the same as the mean for the total group of gifted subjects. The scores on the Terman Group Test given to high school age subjects in 1922 and in 1928 were practically the same for the two groups. The Concept Mastery Test given in 1940 and again in 1950 yielded a higher mean score at both dates for the A's than for the C's, but at least some of this difference can be accounted for by the difference in education of the groups. Even though scoring about half a standard deviation below the A's, the C men score well above the norms for various college graduate and graduate student populations. Thus it would appear that the intellectual superiority of the C's as well as that of the A's has, to a large part, been maintained.

By the time the subjects reached adulthood, the differences in a number of variables which, though favoring the A's, had not been marked in the earlier years, became significant. Chief among these were health and general adjustment. In physical health the A men more often than the C men report their condition as good or very good. Even more marked is the difference in general

adjustment; according to psychological evaluations, more than four-fifths of the men of the A group are "satisfactory" in adjustment as compared with less than one-half of the C men; in other words, the men of the C group are much more prone to difficulties in social and emotional adjustment.

Related to the poor adjustment on the part of the C men is the fact that they are more often single; and, of those who marry, significantly more C's than A's become divorced.

Other distinguishing variables appeared in the reports made by the subjects in 1960 at average age of 50. Prominent among these are the self-ratings on ambition for excellence in work, recognition for accomplishments, and vocational advancement in all of which the A's far surpass the C's.

In the total picture, the variables most closely associated with vocational success are a home background in which the parents place a high value on education, encourage independence and initiative, and expect a high level of accomplishment; good mental health and all-round social and emotional adjustment; and the possession of certain traits and characteristics of personality. Most important among these traits are perseverance, integration in working toward goals, and self-confidence; interest in being a leader, in having friends, and in academic success; and above average ambition, as compared with their friends and colleagues, for excellence in work, for recognition of accomplishments, and for vocational advancement. How these traits are acquired or developed is not fully answered in these data, but they are fundamental to achievement. These are the traits that provide the motivation, the drive, and the implementation of ambition that lead to the realization of potential.

The correlates of success are not possessed exclusively by the A's, for there are no factors favorable to achievement that are not also found among some, albeit a minority, of the C men, but the magic combination is lacking. It should not be overlooked that a few of the C men have deliberately chosen not to seek "success," expressing a preference for a less competitive way of life with greater opportunity for personal happiness and freedom to pursue their avocational interests.

In any case one must conclude, as was done in the 1940 study of success, that intellect and achievement are far from perfectly correlated, and that emotional stability and a composite of the personality traits that generate a drive to achieve are also necessary for outstanding achievement among intellectually gifted men.

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