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The longitudinal study of 110 junior high school boys and girls had the following objectives: (1) to test a developmental theory of career choice, (2) to determine whether there are significant sex difference in career sequences and, (3) to determine if self concepts and other factors influence career choice. The subjects were interviewed every two years from eighth grade to four years out of high school. It was found that intelligence, social class, place of residence and military service had joint effects on educational aspirations. Bright students from less affluent families or towns often failed to follow through on their early educational aspirations. The study also focused on the vocational maturity of the subjects at grade twelve. Results indicated that positive attitudes, self understanding and confidence, and the realization of the need to integrate the self concept into one's career choice were the means to later vocational success. (LS)

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CAREER DEVELOPMENT

Interim Report

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and
Paul R. Lohnes

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Regis College
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Chapter I

Framework of the Study

1. History of the Study

In 1958¹ the senior author initiated the first stage of this longitudinal study with a carefully-selected sample of 111 junior high school students. Personal interviews were conducted with the 57 boys and 54 girls using an interview schedule designed to stimulate the youngster to demonstrate his ability to analyze and synthesize facts about himself and the world of work in making decisions for the future. Basically, the complex and multi-dimensional interview schedule was concerned with aspects of the quality of planning done by youth. It was hypothesized that the scales based on the interview protocol would provide a basis for predictions of emerging career groupings and thus enrich the knowledge and theory of career development. Because so much rich and potentially valuable material was obtained in these interviews and from the school records, the senior author applied for funds to continue study of the careers of these youngsters until they would be in rather stable stages of their career development. Thus far, under funding from the U. S. Office of Education (Projects No. 5-0088 and No. 6-2151) the subjects have been interviewed every two years from grade eight to four years out of high school, excepting only three subjects not reached in the period covered by this report. The results of the first phase of this project, which includes grade eight to two years out of high school, are reported in detail in Career Development,

¹This was the first of two interviews which attempted to evaluate the short-term effect of a group guidance unit, You: Today and Tomorrow, written by Mariin Katz (1958) for the Guidance Inquiry of Educational Testing Service. This study was supported in part by the Rockefeller Brothers Fund and in part by Educational Testing Service, Princeton, New Jersey. Only the pre-YT&T interviews have been used in the Career Development Study.

Cooperative Research Project No. 5-0099, 1966 and Emerging Careers, Gribbons and Lohnes, 1968, Teachers College, Columbia University.

The general design of the study calls for data collection during one year and analysis the following year. The details of the data collection were reported in the October 1967 Interim Report, but will be repeated here for the reader unfamiliar with the work.

2. Objectives

The longitudinal study of the careers of 110 men and women (one man of the original sample is deceased) has the following specific objective:

1. Test the theory of occupational choice which proposes a process running through a sequence of developmental stages.
2. Determine whether there are significant sex differences in career sequences.
3. Describe in detail 110 real careers over eleven years of development, and seek unifying mathematical and psychological models for them.
4. Determine the extent to which career decisions are based upon selecting self-concept and other factors, answering such questions as:

What is the role of intelligence in choosing, entering, and remaining in an occupation?

What is the role of values in making choices?

What is the impact of value shifts as they occur with maturation?

What effects do familial and societal pressures have in shaping occupational aspiration?

5. Accomplish a successful multidimensional scaling of early vocational maturing from an interview protocols, naming the resulting scales, as a set, Readiness for Vocational Planning (RVP).
6. Explore the statistical dependence of numerous criteria of career development on the RVP scales, with the criteria being collected in follow-up interviews every two years for a total of eleven years.

3. Procedures

(a) General Design

It was recognized from the outset that the use of a personal interview and a longitudinal design would limit the number of subjects we could include in

the study, but it is our judgment that the follow-up personal interview produced data of a quality and completeness that could not be matched using any other research design. The rapport generated by the interview not only preserved contact with all subjects from grade eight to two years out of high school and a loss of only three subjects in the four years out of high school collection, but it seems to have encouraged a sincerity of responses which questionnaires do not seem to evoke. Therefore, we continued with this design as the best available method for reaching the objectives delineated in the previous section. In addition to the personal interviews, however, in four years out of high school all subjects completed a number of questionnaires and inventories to supply information not obtained in the interviews.

(b) Population and sample

Although it was not possible to achieve a random sample of communities for this investigation, comparisons of characteristics of the five Massachusetts communities in the sample--Beverly, Newton, Revere, Somerville, and Stoneham--with other urban communities in the U. S. indicated that, in most respects examined (e.g., Trends in Population, Distribution of Population by Age, Educational Level of Persons Twenty-Five Years and Over, Civilian Labor Force, Employed Personal Classified into Occupational Groups, and Income in 1949) the sample cities as a whole do not differ greatly from national trends. (U. S. Bureau of Census, 1953)

The 57 boys and 54 girls included in the study were selected from nine classrooms in the five cities by means of a random numbers table. The mean I. Q. of the group as measured by the Otis Test, Beta Form, was 107 with a range from 88 to 131. The ages, in the eighth grade, ranged from 144 months to 190 months with an average age of 160 months. Socioeconomic status, rated by Hamburger's revision of Warner's scale (1957) indicated that all major occupational groups were included among the parents of students in the sample, and there was a

tendency for the occupations to fall at the middle of the scale.

It was recognized that the inclusion of both sexes in a sample of this size involved some risks, but careful consideration indicated it was both feasible and necessary. Up to that time, little or no attention had been given to the career development of girls. Do they also go through developmental stages? If they do, are they similar to the stages delineated for boys? If they differ, how effective is their counselling when boys and girls are not treated differently?

(c) Data and Instrumentation

The main technique for gathering data has been standardized personal interviews with each subject. The interview schedule, which was modified as changes became necessary, was devised in a pilot study before use with this group. (A complete set of interviews and scoring manuals used from grade eight to high school plus two years can be found in Career Development, Project No. 5-0088, 1966.) Most of the questions were designed to stimulate the pupil to reveal his thinking process in making choices and to demonstrate his ability to analyze and synthesize information about himself and the educational and vocational worlds.

Much antecedent data was gathered from school records for each subject and will continue to be studied to determine whether they are predictive of occupational choices. In addition to school data, we now have other variables to consider, e.g., entry job, choice of college and field of concentration, and persistence in college or in an occupation.

A review of instruments used by other researchers, particularly those of Super's Career Pattern Study and Project Talent, resulted in the selection of a number of questionnaires and scales which were administered to each subject when applicable. In choosing the particular instruments to be used, it was necessary to consider the amount of time we could reasonably expect from our subjects without losing rapport or their interest, as well as the amount of

useful information as a sample of this size could supply. A short description of the HS+4 instruments follows. (See Appendix A for complete instruments.)

Personal Interviews

Seventy-eight questions designed to obtain in some depth the subjects' attitudes toward work, education, homemaking, satisfaction with work and life in general. Subject is given opportunity to demonstrate his thinking processes in making vocational and educational decisions. For the most part these responses will be used as criterion data and correlated with data obtained from earlier personal interviews.

N = 105

Time required: 1 to 2 hours

Interest Inventory - Project Talent

Designed to measure the relative interests in occupations which range from bookkeeping to U. S. Senator. Subject indicates his degree of interest in each of 122 occupations. These findings will be related to earlier stated interests of subjects and to eighth and tenth grade Readiness for Vocational Planning (RVP) scores.

N = 106

Time required: Approx. 10-15 minutes

Activities Inventory - Project Talent Personality Test

Answers will help to "add to knowledge of how personality differences account for the differences in accomplishment of equally talented normal people."

N = 106

Time required: Approx. 10-15 minutes

Occupational Aspirations Scale and Work Beliefs Inventory, Haller and Miller, Michigan State University

Designed to determine both realistic and idealistic expressions of level of occupations aspirations as well as attitudes and beliefs toward work. Subject's level of occupational aspirations can be compared with that of his fellows and correlated with RVP scores and I. Q. and Socioeconomic status.

N = 106

Time required: Approx. 20 minutes

Job Master Form, Career Pattern Study

Subject details job experience, rates satisfaction in many facets of job, and general feelings of success with present job. Data will be correlated with data collected in earlier interviews.

N = 91

Time required: Approx. 20 minutes

Military Form, Career Pattern Study

Subject details past and present military status, training experiences, and his evaluation of success and satisfaction with military experiences. Responses will be correlated with earlier responses, especially eighth and tenth grade RVP scores.

N = 19

Time required: Approx. 20 minutes

Training and Education Form, Career Pattern Study

Details past and present educational status, success and satisfaction in various aspects of training/education programs. Data will be correlated with data collected in earlier interviews.

N = 60

Time required: Approx. 20 minutes

(d) Data Collection - HS+4

Our initial contacts were telephone calls to the subjects' homes or other places they had suggested in previous meetings to ascertain that our addresses and names, in the cases of married women, were correct. In only one case did a parent refuse to give her son's military address or to forward our letter to him. The next step was to mail to each subject an individually-typed letter requesting a meeting, an appointment form to be filled out, and a self-addressed, stamped envelope. Of the 110 living subjects, 70 responded to the first request, 31 required a follow-up registered letter and/or a telephone call, and several letters or telephone calls were required by five subjects. These efforts resulted in the completion of 92 personal interviews and 14 mailed questionnaires.

In order to hold the interviewer variable at a minimum, two interviewers conducted the personal interviews; 64 were interviewed at Regis College, 23 were interviewed at the subject's homes in the Metropolitan Boston area, and 5 subjects were interviewed within a 250 mile radius of the Boston area.

To summarize, then, we have now collected an enormous amount of data on 106 subjects from the time they were in grade eight until four years out of high school, taking them through the tentative and into the beginning of the trial substages of the exploratory stage of their career development. Major examinations and discussions of these data follow in the next section of this report.

Chapter II
Status of Subjects at High School Plus Four Years

Table 1 displays for each subject his actual high school plus four years (HS+4) educational and occupational status, and his occupational and educational aspirations. (Similar listings for Grade 8 to HS+2 are contained in Career Development, Gibbons and Lohnes, 1966.) For most of the subjects, present occupational status can be classified within a few general categories; 25 students, 16 military personnel, 27 clerk-secretaries, and 14 housewives. Thus 82 of 109¹ subjects are found within four occupational categories. As would be expected, particularly with so many students and military personnel, a much wider range of occupations is noted when one considers aspirations. Twenty men aspire to occupations in the business-managerial area, 11 aspire to professionally-oriented occupations, nine contemplate jobs in the technical-skilled categories, four aspire to protective occupations, and the remaining 11 cover a wide variety of non-professional occupations. As will be noted in Table 1, most of the women aspire to careers as housewives. Of the 34 aspiring housewives, however, 22 also contemplate occupations outside the home on a part-time basis or when the children are in school. Eight women aspire to professionally-oriented occupations, five look forward to occupations in the secretarial-clerical category, and the remaining five women aspire to a variety of non-professional occupations.

An examination of the actual education attained at HS+4 indicates that 73 subjects are or have been involved in some post-high school education or training. Of this number 36 have completed one year, 11 subjects two years, 11 three years, and 15 were completing their fourth year of college. Thirty others graduated from high school and four have completed from eight to eleven years of schooling.

¹Although only 106 subjects were interviewed, current status information was available for 109 subjects.

Table 1

High School + 4 Years Actual Occupations and
Occupational and Educational Aspirations

Males

<u>Code</u>	<u>E*</u>	<u>Actual Occupation</u>	<u>Occup. Aspirations</u>	<u>Educ. Aspirations</u>
001	1	Military	Police Detective	Police Academy
002	0	Military	Business Field	College
003	4	Student	Bus. Management	Grad. School
004	3	Student	Law	Law School
005	2	Salesman	Gemologist	College
006	1	Salesman	Salesman	None
007	4	Student	Corp. President	Law School
008	4	Student	Banking	Grad. School
015	1	Military	Criminologist	Grad. School
016	1	Computer Operator	Computer Programmer	College
017	0	Clerk	Own Garage	None
018	3	Student	Psychologist	Grad. School
019	1	Student	Own Business	Law School
020	0	Military	Printer	Technical Courses
021	0	Bank Teller	Fire Dept.	None
028	0	Clerk (Pkg. Sorter)	Personnel Work	College
029	4	Student	Teacher	Law School
030	1	Military	None	College
031	2	Clerk (Pkg. Sorter)	Teacher	College
032	4	Student	Dentist	Grad. School
033	4	Student	Exec. Management	Grad. School
040	1	Military	Bus. Administration	College
041	3	Student	Teacher (Phys. Ed.)	Grad. School
042	1	Military	Flight Management	Airlines School
043	2	Student	Marketing	College
050	1	Military	Electronic Engineer	College
051	0	Shipper	Shipper	None
052	1	Draftsman	Draftsman	2 Yr. College
053	1	Bank Clerk	Accountant	Crse. in Acctng.
054	1	Military	Programmer	IBM Courses
055	2	Student	Journalism	College
056	1	Bank Teller	Bank Vice President	None
057	2	Military	Movie Photographer	College
064	0	Musician	Tradesman	None
065	1	Machine Operator	Computer Dept. Super.	Vocational Courses
066	1	Military	Machinist	Vocational Courses
067	4	Student	Teacher	Grad. School
068	1	Salesman	Buyer	None
069	0	Salesman	Pub. Co. Exec.	Misc. Courses
076	0	Research Technician	Bank President	Misc. Courses

*E = Actual educational level

0 - HS or less

1 - 1 yr. post h.s.

2 - 2 yrs. post h.s.

3 - 3 yrs. post h.s.

4 - 4 yrs. post h.s.

Table 1
(Continued)

Males

<u>Code</u>	<u>E</u>	<u>Actual Occupation</u>	<u>Occup. Aspirations</u>	<u>Educ. Aspirations</u>
077	1	Insur. Accounting Clerk	Accountant	College
078	0	Military		
079	1	Military	Science Field	College
080	1	Production Operator	Electronic Technician	Vocational Courses
081	0	Factory Worker	Crane Operator	None
090	0	Owner, Fuel Oil Business	Auto Repair Business	Vocational Courses
092	1	Military	Bus. Management	College
093	3	Student	Bus. Management/Law	Grad. School
095	0	Gas Station Attendent	Fire Dept. Captain	Misc. Courses
096	3	Salesman	Electronic Engineer	College
099	2	Student	Electronic Technician	2 Year College
100	4	Student	Electronic Engineer	Grad. School
102	4	Student	Business Executive	College + Trn'g. Program
104	1	Military	Personnel Management	Unspecified Schooling
106	4	Student	Pharmacology	Grad. School
108	1	Military	Electronic Technician	None

Females

009	4	Student	Hsewfe./Business	Grad. School
010	4	Student	Hsewfe./Teacher	College
011	2	Office Clerk	Social Worker	College
012	4	Student	Hsewfe./Counselor	College
013	2	Housewife	Housewife	None
014	2	Jr. Accountant	Social Worker	Grad. School
022	0	Clerk	Clerk	None
023	0	Housewife	Housewife	None
024	0	Teletype Operator	Jr. Secretary	Misc. Hobby Crses.
025	1	Secretary	Hsewfe./Secretary	Misc. Crses.
026	0	Sr. Clerk/Steno.	Housewife	None
034	3	Hsewfe./Nurse	Nurse Supervisor	Misc. Crses.
035	0	Housewife	Hsewfe./Clerk	Misc. Crses.
036	1	Secretary	Housewife	None
037	3	Student	Foreign Service	Grad. School
038	3	Student	Secretary	Misc. Crses.
039	4	Student	Teacher	Grad. School
044	1	Bank Teller	Hsewfe./Asst. Mgr. Bank	None
045	3	Dental Hygienist	Hsewfe./Dent. Hyg.	College
046	1	Housewife	Housewife	Misc. Crses.
047	1	Housewife	Housewife	College
048	2	Housewife	Hsewfe./Exec. Sec.	None
049	0	Clerk-Typist	Sec./Hsewfe.	Misc. Crses.
058	0	Housewife	Hsewfe./Med. Sec.	Vocational Crses.
059	0	Clerk/Housewife	Housewife	None
060	1	Laboratory Technician	Funeral Director	Embalming School
061	0	Unemployed		
062	1	Singer	Hsewfe./Sales	Vocational Crses.

Table 1
(Continued)

Females

<u>Code</u>	<u>E</u>	<u>Actual Occupation</u>	<u>Occup. Aspirations</u>	<u>Educ. Aspirations</u>
063	1	Dental Assistant	Hsewfe./D.A.	Misc. Crses.
070	0	Clerk	Accountant	Accounting Crses.
071	0	Clerk/Housewife	Housewife	None
072	0	Clerk/Housewife	Hairdresser/Hsewfe.	Vocational Crses.
073	0	Clerk/Housewife	Computer Programmer/ Housewife	Vocational Crses.
074	0	Housewife	Hsewfe./Office Wrk.	High School Crses.
075	0	Housewife	Hsewfe./LPN*	LPN Trn'g.
082	0	Housewife/Nurse's Aide	Hsewfe./LPN	LPN Trn'g.
083	0	Production Operator	Housewife	None
084	1	Secretary/Housewife	Housewife	Misc. Courses
085	1	Legal Secretary	Hsewfe./Sec.	None
086	1	Housewife	Hsewfe./LPN	LPN Trn'g.
087	0	Housewife	Housewife	None
088	1	Clerk	Clerk	None
089	3	Nurse	Nurse/Hsewfe.	None
091	0	Clerk/Housewife	Hsewfe./Sec.	None
094	0	Secretary	Housewife	Misc. Courses
097	3	Nurse	Hsewfe./Nurse	College
098	4	Student	Teacher	Grad. School
101	0	Clerk/Housewife	Hsewfe./Tailor	Vocational Crses.
103	1	Nurse's Aide/Housewife	Hsewfe./Nurse	Nursing School
105	0	Clerk/Housewife	Receptionist/Hsewfe.	None
107	2	Clerk	Housewife	None
109	1	Ballet Dancer	Dancer	Dance Lessons
111	0	Housewife/Waitress	Hsewfe./Leq. Sec.	Misc. Courses

*Licensed Practical Nurse

Table 1 also lists the educational aspirations of the group and indicates a larger number of males than females continuing to aspire to higher education. It must be noted, however, that this table does not reflect the three women who have already completed two or three year training programs and have, therefore, achieved their goals.

Table 2 compares actual HS+4 status and aspirations for Poe Level and Group. When the men's actual positions are compared with their verbalized occupational preferences, it is apparent that there is an upward trend in Group 3 and a downward trend in Group 4. When Levels are examined, an upward surge is noted in Level 2 and a decrease is noted in Level 4. All Groups (except 9, the student category) are represented in the aspiration column, indicating a much wider spread than is evident in the actual column.

When the women's actual positions are compared with their aspirations, however, there is noted a decrease in Group 3 and an increase in Group 0; and an increase in Level 4 and a decrease in Level 5.

Actual HS+4 occupations and occupational aspirations were rated according to Hamburger's Revision of Warner's Scale. An examination of Table 3 shows that, with the exception of Level 7, there is a good distribution of subjects across socioeconomic levels. The preponderance of males at Level 1 can be accounted for by the male students who are presently enrolled in college. The high percentage of women at Level 5 is due to housewives (an arbitrary classification because Hamburger does not include housewives) and clerical occupations. Levels 2 and 3 show marked increases from actual occupation to aspirations, indicating a desire to move upward in the level of occupation.

Another way of examining mobility is to compare the subject's occupational preference at HS+4 with his father's occupation, both of which have been rated on the Hamburger scale. Without regard to sign, the subject's score was subtracted from the father's score, resulting in a discrepancy score. Table 4

Table 2

Roe Level and Group for High School + 4 Years
Occupations: Actual and Aspirations

Roe Group	Men		Women		Roe Level	Men		Women	
	Actual	Asp.	Actual	Asp.		Actual	Asp.	Actual	Asp.
0	0	1	15	34	0	0	0	0	0
1	0	3	0	1	1	0	4	0	0
2	0	3	0	3	2	19	32	9	8
3	16	25	22	7	3	7	9	5	3
4	20	11	1	1	4	17	6	21	38
5	0	1	0	0	5	10	3	15	3
6	1	4	6	3	6	3	0	2	0
7	0	6	0	2	7	0	1	1	0
8	1	1	2	1					
9	<u>18</u>	<u>0</u>	<u>7</u>	<u>0</u>					
	56	55	53	52		56	55	53	52

Roe Occupational Groups

- 0 Unemployed, No aspiration, Hsewf.
- 1 Physical
- 2 Social and Personal Service
- 3 Business
- 4 Industry and Government
- 5 Mathematics and Physical Sciences
- 6 Biological and Medicinal Sciences
- 7 Education and Humanities
- 8 Arts
- 9 Student

Roe Occupational Levels

- 1 High Professional and Managerial
- 2 Professional and Managerial
- 3 Semi-Professional and Low Managerial
- 4 Skilled Support and Maintenance
- 5 Semi-skilled Support and Maintenance
- 6 Unskilled Support and Maintenance
- 7 Unemployed, No Aspiration

Table 3

HS + 4 Socioeconomic status: Actual and aspiration *

Actual Occupation				Occupational Aspiration			
<u>SES</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>	<u>SES</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL</u>
1	14	4	18	1	13	0	13
2	3	3	6	2	12	9	21
3	2	5	7	3	5	11	16
4	13	11	24	4	7	9	16
5	2	28	30	5	1	23	24
6	6	1	7	6	2	0	2
7	0	1	1				

* Military men have been omitted from this analysis.
 Students actual occupation rated on educational aspirations - o.e. if stated graduate school rated 1.

Women - if full time housewife rated 5 - if worked the occupation was rated.
 Aspirations for women - if aspired to occupation in future the occupation was rated - otherwise rated as housewife.

Table 4

Socioeconomic mobility

<u>Discrepancy</u> *	<u>Frequency</u>
0	22
1	42
2	22
3	14
4	4
5	2

* Discrepancy score is the difference between the Hamburger scale rating of the subject's HS + 4 occupational preference and the father's occupation.

indicates that 64 of the 106 subjects are found in the 0 and 1 categories, indicating no or slight discrepancy. The remaining 42 subjects had discrepancy scores of two or more SES levels. Although not shown in the table, it is interesting to note that when signs were considered only 24 aspired to occupations lower than their fathers' and 15 of these were girls who aspired to clerical-sales or housewife. The tendency of the group as a whole is toward upward mobility.

The sample has been geographically stable with 83 of the subjects continuing to reside in their original towns, 16 have moved elsewhere in Massachusetts, and 10 have moved out-of-state.

Thirty nine subjects have married, 16 males and 23 females; and there have been four divorces, one male and three females. Eleven of the subjects were engaged to be married in the near future.

The actual status of the group four years out of high school indicates that the group is confined to rather narrow occupational categories, but in terms of aspiration the group spreads out to cover most of the major occupational categories. Also apparent in terms of Roe Level and SES status is the desire to strive for upward mobility.

Chapter III Correlates of Educational Aspirations

In this chapter we will deal with some of the forces which affect the young person as he meets and deals with vocational decisions in the career development process. Curriculum, intelligence, socioeconomic class, place of residence, and military service will be examined to determine their relationships to educational aspirations elicited from our subjects at each of the five interviews over the nine-year period.

1. Educational Aspirations

It is clear from Table 1 that there is a definite downward trend for the total group over the nine years, with a sharper decrease noted for the girls (50%) than for the boys (26%). It is also clear that the percentage of boys aspiring to college far outnumbers the percentage of girls aspiring to college.

The increase noted in the 1 - 2 year category is inflated by the many subjects who said they intended to take a course or two but had no particular educational goal in mind.

2. Curriculum Election

An examination of Table 2 indicates that 14 of the 15 subjects presently enrolled in the fourth year of college were enrolled in the college preparatory curriculum in the 12th grade, and 13 of the 15 stated preferences for that curriculum at the eighth grade. Of the eight other students who are in varying stages of completing four year programs, four consistently chose college preparatory and the remaining four alternated between college preparatory and the other curricula. In addition, of the 22 students presently included in the two-three year category, 18 chose college preparatory in grade eight, and 19 were actually enrolled in that

Table 1

Educational Aspirations - 8th, 10th, 12th Grade HS+2 and HS+4 Frequencies

Aspiration	<u>Eighth Grade</u>			<u>Tenth Grade</u>			<u>Twelfth Grade</u>			<u>H.S. + 2</u>			<u>H.S. + 4</u>		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
College	42	22	64	34	18	52	31	15	46	33	17	50	31	11	42
3 years	1	6	7	5	6	11	1	4	5	5	1	6	0	1	1
2 years	6	12	18	10	22	32	12	15	27	10	15	25	15*	23*	38
High School or less	8	14	22	8	8	16	13	20	33	9	21	30	9	17	26

*Includes 1-2 years

Table 2

8th and 12th Grade Curriculum vs. Actual education at H.S. + 4
 (8th grade curriculum outside brackets - 12th grade curriculum within bracket)

H.S. + 4 Actual Education

Curriculum	<u>4th year of college</u>		<u>3 years</u>		<u>2 years</u>		<u>1 year</u>		<u>High School</u>		<u>Total</u>	
	M	F	M	F	M	F	M	F	M	F	M	F
College	9 (9)	4 (5)	4 (4)	5 (5)	6 (6)	3 (4)	15 (9)	7 (7)	3 (5)	12 (11)	37 (33)	31 (22)
Business	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (1)	2 (4)	8 (5)	7 (2)	7 (21)	9 (6)	16 (28)
I.A. & General	0 (1)	0 (0)	0 (1)	0 (0)	0 (0)	0 (0)	0 (4)	0 (1)	0 (2)	1 (1)	0 (8)	1 (2)
Don't Know	1 (0)	1 (0)	1 (0)	0 (0)	0 (0)	2 (0)	1 (0)	0 (0)	2 (0)	0 (0)	5 (0)	3 (0)
Drops Out									1 (3)	0 (2)	1 (3)	0 (2)

curriculum in grade 12. To some extent then, these data support Ginzberg's theory that occupational choice is an irreversible process, i.e., only one of our subjects was able to overcome the handicap of being in the "wrong" curriculum at grade 12. However, the reverse does not obtain in that many college preparatory subjects did not enter college and this choice of curriculum did not prevent them from entering other fields which require less than a four-year program. We feel that the educational system which forces a youngster to commit himself to a curriculum choice at grade eight or nine has the responsibility of insuring that the youngster is ready and able to make this decision, and that insofar as possible, it will encourage him to choose that curriculum which will give him the greatest freedom of choice in the future. (Perhaps this means that almost all students should take a college preparatory curriculum.)

3. Intelligence

When the relationship between intelligence and level of educational aspirations (Table 3) is studied over the nine-year period, it is interesting to note that both sexes in the 121 plus IQ college aspirers demonstrate extremely high consistency. The shift to "No Plans" is accounted for by three girls who are married, one girl who completed a three-year nursing course, and one man in the military who anticipates taking a "few courses".

The 111-120 IQ group demonstrates a marked lowering (16 to 8) of aspirations from grade eight to high school plus four years, (HS+4) but a strong consistency between grade twelve aspirations and HS+4. The 101-105 IQ group and the 106-110 IQ group are much more consistent than the below 100 IQ group, which showed a rather dramatic drop from 13 subjects aspiring to college at grade eight to two aspiring to college at HS+4. This lowering of educational aspirations would seem to be a move in the direction of more realistic aspirations, but the loss of 17

Table 3
Educational Aspirations and IQ Group Frequencies

IQ Range	Ed. Plans	Eighth Grade		Tenth Grade		Twelfth Grade		H.S. + 2		H.S. + 4	
		M	F	M	F	M	F	M	F	M	F
100 and Below	College	7	6	7	3	7	1	4	2	1	1
	2-3 Years	3	2	3	6	1	5	6	4	2	0
	No Plans	4	3	4	2	6	5	4	4	10	10
101-105	College	8	2	7	2	5	3	8	3	8	2
	2-3 Years	2	5	4	6	6	3	2	2	0	1
	No Plans	2	3	1	2	1	4	2	5	4	7
106-110	College	10	2	6	1	6	1	7	1	8	1
	2-3 Years	1	7	4	10	2	3	4	4	0	0
	No Plans	1	3	2	1	4	8	1	7	4	10
111-120	College	9	7	7	5	6	3	7	5	6	2
	2-3 Years	1	1	2	5	3	7	3	4	0	0
	No Plans	0	4	1	2	1	2	0	3	3	9
121 Plus	College	8	5	7	7	7	7	7	6	8	5
	2-3 Years	0	3	2	1	1	1	0	1	0	0
	No Plans	1	1	0	1	1	1	2	2	1	4

subjects with college aspirations in the 111-120 and the 121 plus IQ groups would seem to be a loss to the body of college-trained manpower. It seems obvious then that intelligence has a relationship to consistency, but it cannot account for the educational aspirations of many of our subjects.

4. Socioeconomic Level

When socioeconomic level was rated by Hamburger's Revision of Warner's Scale, all major occupational groups were found to be included among the parents of the students--from Level 1 (high level) to Level 6 (lowest level)--and there was a tendency for the occupations to fall at the middle of the scale. Examination of Table 4 reveals a positive relationship between high level socioeconomic class and college aspirations--15 of 18 members of Level 1 consistently aspired to college--and a tendency for boys to have higher aspirations than do the girls. The remaining levels all showed a decrease in the level of educational aspirations. Level 4 has the most marked drop with eight of 16 boys and two of five girls lowering their aspirations.

An examination of intelligence test score results and SES level (Table 5) indicates that, with the exception of Level 6, the average IQ of the college aspirers is consistently higher than that of the non-aspirers. This would support the position that intelligence is an important factor in determining those who will aspire to college. However, when SES Levels 5 and 6 are examined, it is found that the 11 subjects in these two classes have an average IQ of 110 (range 91-123), indicating that at least half of this group might be expected to have a chance of success in college and all have lowered their aspirations dramatically from grade eight to HS+4. In addition to this group, we find that 10 of the 17 subjects in the 111 plus IQ group who also lowered their aspirations are from Levels 4, 5, and 6; five are from Level 3, and there is one each from Level 1 and 2. How does this

Table 4

Socioeconomic status and educational aspirations at HS +4
 (8th grade curriculum outside brackets - 12th grade curriculum within brackets)

SES

Curriculum

	College		2-3 years		1 year		H.S. or less	
	M	F	M	F	M	F	M	F
1	9 (9)	3 (2)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	1 (2)
2	4 (3)	2 (1)	1 (0)	2 (0)	0 (2)	0 (3)	0 (0)	0 (0)
3	3 (3)	6 (3)	1 (0)	3 (0)	0 (1)	0 (2)	0 (0)	1 (4)
4	16 (8)	5 (3)	2 (2)	4 (1)	0 (6)	0 (1)	2 (2)	2 (4)
5	6 (5)	3 (0)	2 (0)	4 (0)	0 (1)	0 (6)	2 (3)	3 (4)
6	4 (2)	3 (1)	1 (0)	4 (0)	0 (1)	0 (6)	3 (3)	6 (3)
7			0 (0)	1 (0)	0 (1)	0 (0)	1 (0)	0 (1)

Table 5

SES - I.Q. and H.S. + 4 Educational Aspirations
(8th grade aspirations outside brackets - 12th grade within brackets)

	Educational Aspirations			Educational Aspirations		
	Aspire to college			Non college aspirers		
	M	W	Ave. I.Q.	M	W	Ave. I.Q.
1	9(9)	3 (2)	114	0	2	91
2	4(3)	2 (1)	112	1	0	103
3	3(3)	6 (3)	117	0	3	112
4	16(8)	5 (3)	109	7	1	99
5	6(4)	3 (0)	111	2	3	108
6	4(2)	3 (0)	102	2	4	111

group of non-college aspirers compare with the 111 plus college aspirers? Fifteen of the 21 college aspirers are in Levels 1, 2, or 3; four are in Level 4; and two are in Level 2. These data suggest that socioeconomic level does indeed influence whether a young person will persist in his aspirations for higher education, and we feel that it is not unreasonable to question whether more effective counseling could be instrumental in helping youngsters in the lower socioeconomic groups to realize their ambitions by giving them the extra incentive and information (e.g., work programs, scholarships, loans, etc.,) they may not be receiving in their homes.

5. Place of Residence

Hamburger's classifications were used again to investigate the question of whether place of residence has any effect on aspiring and fulfilling aspirations to higher levels of education.

Examination of Table 6 reveals that cities A and B fall into the lower half of the SES (using 3.5 as the dividing point), C and E fall into the upper half, and D has one school in the lower half and one school in the upper half of the scale. It is quite apparent that the number of college aspirers at grades eight and twelve is much greater in the upper SES towns; and an even wider disparity is noted when one examines the actual educational level attained in HS+4. It is, of course, impossible to attribute these results to any one particular environmental force, but it does seem obvious that SES status of both the family and the place of residence play no small part in determining the aspirations of the products of these families and towns.

(e) Military Service

Nineteen of our male subjects (no information on one serviceman) have served or are serving in the armed forces. Some interesting trends are noted when we

Table 6

8th & 12th grade Educational Aspirations and Actual education by Towns

Town	N	Ave. SES	College		2-3 Years		1 year		H.S.		College		2-3 years		1 year		H.S.	
			M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
A	13	5.1	2 (3)	0 (0)	0 (1)	0 (0)	3 (1)	2 (3)	2 (2)	4 (3)	0	0	1	0	2	0	4	6
B-1	12	4.6	5 (3)	3 (0)	0 (0)	1 (0)	0 (2)	0 (2)	1 (1)	2 (4)	1	0	0	0	3	0	2	6
B-2	12	5.5	5 (1)	2 (0)	1 (0)	0 (0)	0 (3)	4 (5)	0 (2)	0 (1)	0	0	2	0	4	4	0	2
C	14	2.7	7 (6)	6 (5)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (1)	3	3	2	3	1	0	2	0
D-1	12	4.1	2 (2)	2 (0)	0 (0)	0 (1)	2 (3)	2 (2)	2 (1)	2 (3)	0	0	0	0	3	3	3	3
D-2	23	3.5	9 (9)	4 (2)	0 (0)	3 (1)	1 (0)	2 (5)	1 (2)	3 (4)	3	1	3	3	3	3	2	5
E	24	3.2	11 (7)	5 (6)	0 (0)	2 (1)	0 (5)	2 (2)	1 (0)	3 (3)	3	1	3	5	4	5	2	1

* Grade 8 = Outside Brackets
Grade 12 = Inside Brackets

compare their educational aspirations at grade twelve with those at HS+4. Nine of the men raised their aspirations during this period (six to college), three lowered their sights--seemingly realistically because of IQ's of 98, 97, and 111-- , and six remained unchanged. Of the six who remained constant, four were college bound. These raised aspirations seem especially remarkable because we would consider grade twelve to be a clear cut-off point for decisions about college attendance. That is, if one hasn't made definite plans by that time, it would seem unlikely that college could be considered a realistic possibility. However, it seems that the time served in the military service provides some kind of buffer zone in which one can reanalyze one's plans before absolute commitment of self to a job. In addition to this, of course, is the very important financial aid to education offered to veterans of the armed forces. It will be interesting to follow up young veterans and later compare their progress with other young men who did not have the experience of military life and veteran benefits.

6. Summary

Our comparisons in this chapter of educational aspirations and the several variables have raised some interesting and, at times, disturbing trends. Our sample is limited in size and we do not intend to urge generalizations in any definitive form. We hope rather that we have suggested problems which can be further investigated with larger and more representative samples. For example, our data suggest that intelligence, social class, place of residence, and military service have joint effects on educational aspirations and attainment. It was disturbing to find how often our brighter students from less affluent families or towns failed to follow through on their educational aspirations of early years, but encouraging to note that military service may lead to aspirations for higher attainment with some of our young men. ✓

Chapter IV

Vocational Maturity at Grade Twelve¹

Although most analyses contained in this report are based on our high school plus four years data, we include a study just completed of the vocational maturity of our subjects at grade twelve, using a set of behavior characteristics not previously treated in depth in our research. This exploratory stage in career development is extremely important because it is at this point, career psychologists theorize, that the individual is crystalizing his vocational preferences and is about to commit himself to specific educational-occupational decisions which will vitally affect his future.

Vocational behavior characteristics of the exploratory stage can be categorized as search, experimentation, investigation, and trial. Their locus has been termed "self in situation" (Tiedeman, 1963) and their essential purpose is to test the validity of some hypothesis or expectation about the self or the environment. Such behaviors include: searching for an appropriate outlet for one's interests and values; experimenting with adult vocational roles; seeking opportunities to demonstrate abilities, trying out new activities, orienting oneself to new situations and striving for independence. (Super, et al., 1963.) When these activities are undertaken with the hope of eliciting information about oneself or one's environment they become a means to increased self knowledge and increased ability to relate this knowledge to future objectives.

Vocational maturity of the exploring adolescent should also be evidenced in his basic attitudes and perceptions. Satisfaction with a choice, confidence in plans, and enthusiasm over future prospects together with a congenial vocational self concept are signs that the individual is dealing with his vocational tasks successfully.

¹ Miss Catherine Lee of Regis College is co-author of this chapter.

A favorable outcome of the process of explorations and hypothesis-testing should result in a realistic, integrated self concept and clear formulation of objectives. The individual should be able to relate his special abilities, interests and values to an occupational goal, clearly understanding why these personal attributes are at the bases of sound decisions. Formulation and implementation of specific plans for attaining this objective can then be carried out successfully.

In order to understand emergence of the vocational self concept and assess career development, it is necessary to arrive at an operational definition for vocational maturity. This can be accomplished by a multi-variable approach similar to that described by Super (1963). Vocational maturity is conceived in terms of coping behaviors and attitudes which are instrumental in the formation of an integrated vocational identity and appropriate career objectives. These have been termed the dimensions of vocational maturity. For the purposes of this study, five dimension variables were selected because their contribution was felt to be essential to career development during the exploration years. They reflect the importance of an integrated value system, a sense of agency, and a feeling of high morale and self esteem as attitudes and beliefs which are central to a vocational self concept. The significance of role playing experiences and an understanding of the importance of informative advice were also explored as part of the process of career development.

1. Values

At the basis of every career decision, there is a hierarchy of personal values which organize judgements, attitudes and perceptions within the individual's self concept, and muster them for decision making. Values may be considered culturally influenced expressions of needs and the motivated reasons for which interests and goals are sought.

The source of an individual's value system is frequently the home. Family expectations, attitudes and roles, as well as socioeconomic status influence the child's ideals and aspirations. Peer groups, especially during adolescence, are a major force in determining valued goals. However, since values are intimately related to inner psychological and physiological drives, their primary determinant is the person himself. Ginzberg (1951) has classified values as they relate to occupational preferences into three types: 1) related to the work activity itself; 2) related to the returns of work, as exemplified by pay and the way of life a job permits; or 3) related to the concomitants of work, what is associated with the job such as coworkers and supervisors. The individual must be able to relate his "work" values to an appropriate career goal. Capacities and interests must also be considered, but it is the value scheme which mediates an effective choice.

In crystallizing and implementing a career, the individual must relate his value hierarchy to the realities of environmental limitations. This process required compromise between competing values and between values and opportunities. The value system is temporarily thrown out of balance and change is necessitated. This alteration of values to eliminate contradictions between hopes and expectations is a necessary part of maturation and must occur before an individual can choose effectively.

Vocational maturity is evidenced in realistic appraisal of the personal value scheme in relation to future objectives. This study has sought to probe the student's awareness of values and their importance in career decision making. Information about valued activities and ideals must be understood as factors in occupational choice. If the individual knows what satisfaction he wants out of life and work, he is better able to set his course for a goal which will satisfy these values. Katz (1963) defines the value system as "the synthesizing element that orders, arranges and unifies such interactions, that ties together an individual's perceptions of cultural promptings, motivating needs, mediating symbols, differentiating

characteristics, and sense of resolution that relates perceptions to self-concepts and that accounts most directly for a particular decision or for a mode of choosing". (P. 16) It would seem that effective occupational choice is impossible without the support of values.

2. Sense of Agency

In addition to understanding the factors on which decision making should be based, the individual must possess a functioning belief that he can choose. This "awareness that he is an active agent in determining the course of his own career" is termed sense of agency. (Tiedeman, 1967.) Sense of agency can be an attitude and an action. It is revealed first of all in self esteem; the person must be confident of his abilities and be able to realistically set his goals and limits. This confidence in self is basic to operating as an agent; "the individual must above all like himself..or his potential for manifesting agency behavior will remain latent" (Pincus, 1967, p. 3). Self direction and personal independence are also part of agency. The individual should display self reliance, active involvement in directing his career, and satisfaction in making his own judgements. Finally, the self-directed individual is "committed"; he accepts responsibility for making a decision and seeing his plans through.

Agency is displayed by the individual who is satisfied with the choices he has made in the past and who is busy formulating specific plans to reach his occupational goal. He accepts "his assets and his liabilities in a realistic way, a way that does not hinder his performance" and realizes "his worth as an individual and is ready to capitalize on it". (Pincus, 1967, p. 4.) The student's readiness and ability to engage in career choice and to evaluate, modify and achieve goals based on this choice is a basic criteria of career development.

3. Role Playing

"The complex self concept is organized within the framework of a role" (Super 1963, p. 18). One of the major vocational tasks of the adolescent is to explore the roles he may be expected to play and the opportunities to play roles which suit his personality, interests, and abilities. Role playing is carried on with the purpose of gaining information about the validity of some self concept; it is what Jordan calls hypothesis-testing.

Role playing begins with identification. The child who identifies with some significant adult strives in various ways to be like him. Eventually such identification becomes differentiated into occupational roles which can be tried out in fantasy and play. During adolescence, role playing comes to have more significance. The student who aspires to be a research scientist takes part in science fairs and laboratory classes with this role in mind. Whether these roles are played in imagination, discussion, or are actually participated in; they give some opportunity to try the role for size.

Role playing becomes reality testing when it is pursued in the "hope of eliciting information about oneself or one's environment, or of verifying or arriving at a basis for a decision". (Super, et al., 1963, p. 57-58). It is a trial in which the individual tests his performance in a role and discovers how well it agrees with his values and aptitudes. This also leads to greater understanding of the opportunities and expectation of various occupational roles and familiarizes the individual with alternatives that are open to him.

Students evidence occupational role playing by participating in school classes, clubs, part-time jobs, in thoughtful discussion about careers and even in daydreaming. The ability to relate experiences in roles to one's abilities, values and goals is an indication of vocational maturity.

4. Morale

Compromise between preferences and expectations is an essential part of the process of occupational choice. If the individual is able to realistically appraise his interests, abilities, values, strengths and weaknesses; and is able to relate this knowledge of self to future objectives, the confrontation between self concept and reality should be facilitated and prove satisfying. However, the individual who has not learned to deal with the developmental tasks of his career and has not achieved an integrated realistic self concept will be unprepared to face limitations imposed by environment. Poor planning, over-or-underestimation of abilities, and lack of information about opportunities leaves the individual with the single alternative of drifting into a potentially unsuccessful career. The result of all this will, of course, be disappointment, frustration, and depressions which will soon be reflected in all other aspects of the person's life. While low morale might be the result of overwhelming circumstances, this is the exception to the rule. Morale, thus, is an indicator of the past success, the present progress, and the future prospects of an individual's career.

Vocational maladjustment, like other emotional disturbances, is a symptom of inability to cope with the problems of reality. Feelings of inevitability, uncertainty, and lack of enthusiasm are certainly not to be considered typical vocational attitudes in people who are about to face the challenges of the working world. The vocationally mature person is the one who expresses satisfaction with his career and with his total picture of himself.

5. Key Person

"Central in decisions about occupations, jobs, or courses of study are facts about one's self and about work." (Tiedeman, 1967, p. 2) The individual is expected to use these facts to generate relevant information about those goals and

alternatives which are most compatible with the self concept. "The quality of decisions is ordinarily directly related to the quality and comprehensiveness of the information possessed by the decision maker. Even the most purposeful person is limited in a decision by the lack of complete information." (Tiedeman, 1967, p. 11)

The aware student realizes that, although the execution of a vocational decision is his responsibility, informed and experienced adults can help him to realize his full potentiality. Guidance counselors in the school are not only able to provide facts relevant to courses, training, and occupations; but they are also able to aid the student in translating these data into relevant information. In addition, people working in preferred occupations, students in a relevant training program, and other informed adults can provide valuable insights.

The student who does not take advantage of the aid these people can offer and who has not yet learned the role of information in vocational decisions has no means of coping with his developmental tasks. Accurate and comprehensive information about alternatives and consequences obtained from reliable sources and informed adults is a key to career success.

6. Vocational Maturity Scoring Criteria

One hundred six 12th grade protocols (four interviews were eliminated for various reasons) were read in their entirety and questions were selected which were felt to measure each of the five 12th grade vocational maturity scales (VM12):

1. Values

Questions 5, 7, 19, 22, 28, 30, 32, 33

2. Sense of Agency

Questions 4, 13, 22, 26, 39

3. Role Playing

Questions 6, 8, 29, 31, 34, 35, 45

4. Morale

Questions 43, 44, 46, 52

5. Key Person

Questions 3, 12, 16, 17, 20, 25

The 12th grade interview schedule is reproduced at Appendix B.

Eight interviews, selected at random, were used in preparing the scoring manual reproduced as Appendix C, to assess VM12. Responses from these protocols were studied, criteria for assigning scores were defined, and representative verbatim answers were selected to illustrate the quality of information expected for each scale. The main criteria for scaling were quality of response, accuracy of information, and awareness of an indicated dimension of vocational maturity. Emphasis was not on the occupation chosen, but on the reasons for the choice and the student's ability to relate his self appraisal to an appropriate goal. Responses which were indicative of average vocational maturity were scored 1 and expected to reveal understanding of the process of vocational decision making and integration of vocational information and choice. A score of 2 was given for responses which indicated superior maturity, highly adequate vocational coping behavior, and a well-developed decision process. Below average responses received a score of 0 and revealed little understanding of the importance of vocational choice or the factors on which it is based.

Questions 1, 2, 9, 10, 11, 14, 18, 24, 36, 37, and 38 supplied background material. They supplied general information concerning each student's high school curriculum, special test scores, educational plans, occupational goals, activities, and scholastic ability.

The scorer had a good understanding of the process of career development and was thoroughly familiar with the interview and the scoring manual. Only one VM12 dimension was scored at a time for each student protocol.

Reliability of Scales:

A formal reliability study was not undertaken because the generalizations behind the scales are very tentative and would not seem to justify the time and expense such a study would require. In an informal check of intra-judge reliability, however, the scorer rerated all interviews one week after the original scoring on two variables,--Values and Sense of Agency,--which had often presented scoring problems. About 90% of the scores agreed across trials and those which did not differ by only one point.

Results:

The mean scores (Table 1) for the 106 subjects indicate that the males earn slightly higher scores than do the females--6.5 vs. 5.9. Twenty two males but only 11 females score in the 8 to 10 point range also indicating a slight edge on the part of the males to score higher on this 12th grade measure of vocational maturity.

When the individual scale scores are examined (Table 2) it is quite clear that most of the scores, for both sexes, fall into the 1 to 2 point range, with Morale coming closest to a normal distribution of scores. It is also apparent that, with the exception of Sense of Agency, the males average scores are slightly higher on the individual 12th grade vocational maturity scales.

Although examination of Table 3 might suggest some slight relationship between IQ and VM scores, the evidence is far from clear. For example, 17 of 42 111 plus IQ students score in the high 12 VM range, but 13 of the same group fall

Table 1
Distribution of Total VM12 Scores

Score	N	Males N 54	Females N 52
0 - 5	36	16	20
6 - 7	37	16	21
8 - 10	33	22	11
Mean	6.2	6.5	5.9
S.D.	2.38	2.02	2.63

Table 2
Distribution of Scores for 5 VM12 Scales

VM Score	Values		Sense of Agency		Role Playing		Morale		Key Person	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	3	6	7	5	4	7	9	7	8	7
1	31	27	25	26	26	23	29	38	17	22
2	20	19	22	21	24	22	16	7	29	23

Male N-54
Female N-52

Table 3

Distribution of VM12 According to Educational, Occupational, and Socioeconomic Class Variables

Variable	N	VM12 Scores		
		0 - 5	6 - 7	8 - 10
<u>Intelligence</u>				
111 plus	42	13	11	17
100-110	45	14	21	10
99 below	20	9	5	6
<u>Socioeconomic Class Level</u>				
1 - 2	24	5	10	9
3 - 5	60	21	19	20
6 - 7	22	10	8	4
<u>Curriculum</u>				
College Prep.	55	14	20	21
Business	34	15	12	7
IA - General	17	7	5	5
<u>Educ. Aspir.</u>				
College	45	10	16	19
Post High School	32	13	11	8
High School	29	13	10	6
<u>Roe Levels</u>				
2 - 3	64	12	26	26
4 - 7	42	24	11	7

at the lowest end of the scale. The overall results do not appear to indicate a strong relationship between VM and IQ.

There does appear to be a relationship between SES (rating of father's occupation according to Hamburger scale) and VM12. Almost twice as many (12-5) subjects at high SES levels earned high VM scores, the reverse tendency is noted for low SES levels, and the middle SES subjects are spread quite evenly throughout the range of the ten point scale.

Twelfth grade curriculum enrollment seems to be related to VM scores; more college preparatory students earn high VM scores while Business and 1A-General students generally earn lower scores.

Examination of the 12th grade educational aspiration data indicates that far more college aspiring subjects score in the high range (19) than in the low range (10), and subjects with no educational aspirations beyond the 12th grade show a complete reversal of this pattern (6 high vs. 13 low).

Roe's levels of occupational aspirations were combined into two groups and it is quite clear that subjects who showed a preference for higher level occupations also score higher on the 12th grade measure of vocational maturity.

Discussion:

The instrument designed to measure 12th grade vocational maturity has demonstrated some interesting trends. Males, subjects in higher SES levels, college curriculum students, those aspiring to education beyond high school, and those aspiring to higher levels of occupations all score higher on this measure of vocational maturity. There does not appear to be a strong relationship between IQ and vocational maturity.

Because these results are based on an instrument whose reliability has not been established they must be considered as very tentative.

The authors feel, however, that they do suggest that 12th graders, on the average, are coping adequately with their vocational tasks, have come to understand the important factors in their decision making, and realize, at least tacitly, the need to integrate the self concept into the process of career choice. If one's self-concept conveys a picture of satisfaction and success in an occupational role, the individual is likely to initiate activities which will advance his goal and bring its implementation closer. The relationships which have been noted between vocational maturity and curriculum, social status, and vocational aspirations can be understood as part of this relationship. Seeing oneself as the product of an economically and socially successful home, as an educated and respected member of the professions is certainly more likely to stimulate career implementation than the expectations of a laborer's son who envisions his future as an inevitable repetition of his father's unhappy drudgery. This situation has important implications for counseling. Positive attitudes, self-understanding and a well-developed vocational repertoire are the means to vocational success; without them, all the ability and opportunity in the world are lost.

Seventeen is a fascinating age from which to view an emerging career for it is the time when the individual begins to sight his approaching goal and can feel his power over the future course of his career. He waits on the brink of so many important insights into his own self concept and into the process of implementing a vocational choice. In Super's (1963) words, this is the time when "young people explore the world in which they live, the subculture of which they are about to become a part, the roles they may be expected to play, and the opportunities to play roles which suit their personalities, interests, and aptitudes. It is at the same time a period in which the adolescent through experience and self-examination clarifies his self concept and begins to put it into words, finds out what outlets exist in society for one who seeks to play a given role, and modifies his

self concept to bring it in line with reality. Adolescent exploration is, in this view, a process of attempting to develop and implement a realistic self-concept".

p. 51

Relating Vocational Maturity in Early Adolescence
to Nine-Year Career Patterns Criteria

Warren D. Gribbons

Paul R. Lohnes

1968

In their 1957 framework for research on career development Super and his associates elucidated a construct they called vocational maturity. This construct has dominated the psychology of career development in the ten years since the publication of that crucial theoretical framework. The key word in Super's original exposition of the construct is "evaluation." The trait indicators of vocational maturity in adolescence require evaluation by the psychologist for the extent to which, in his judgment, they presage achievement of the goal of integrative vocational adjustment in adulthood. There is a "criterion of long-term efficiency in attaining satisfaction of socialized goals" (Super, et al., 1957, p. 70) which is the standard for rating adolescent behaviors for degree of vocational maturity. A recent extensive review of Super's Career Pattern Study has characterized that longitudinal research program as follows:

Perhaps most important is the exposition of a dependent, or criterion, set of variables as the class of dimensions of integrative vocational adjustment. The basic research paradigm which emerges is to scale the independent variables as dimensions of vocational maturity by relating them to the dimensions of the criterion. (Cooley and Lohnes, 1968, p.)

In short, the main justification of vocational maturity traits

is to be their power as predictors of subsequent career adjustments. Published longitudinal research results have demonstrated weak but positive predictive powers for VM scales in the Career Pattern Study data (Super, et al., 1968) and in the data of the parallel Career Development Study (Gribbons and Lohnes, 1968). This report extends the results of the latter study to data collected four years after the 111 male and female subjects graduated from high school, or nine years after the initial interviews in the eighth grade.

The initial eighth grade data of the Career Development Study ~~were~~ collected by interviewing in 1958. The nine-year follow-up data were collected by interviewing and inventorying in 1967. All analyses referred to here as previously reported can be found in Emerging Careers (Gribbons and Lohnes, 1968). In the eighth grade data, vocational maturity was treated as a syndrome of eight moderately correlated traits, called as a set Readiness for Vocational Planning (RVP). The eight 1958 RVP scale scores of the subjects are related to several career patterns criteria in this report. However, a continuing research problem for the CDS has been the artificial over-determination of the subjects by the predictors, especially since this has prevented the teaming of other interesting predictor variables, such as intelligence, with the vocational maturity scales. There simply aren't enough degrees of freedom made available by 111 subjects to convincingly relate eight-plus predictor scales to criteria, particularly if the criterion variable is a taxonomy in several categories. Classification criteria have had to be forced into dichotomies, frequently with real loss of meaning. Therefore, a major objective of this report is to explore the possibility

of recovering degrees of freedom by substituting a univariate treatment of vocational maturity for the RVP syndrome. The new univariate scaling is called Readiness for Career Flanning (RCF). The 22 items selected by factor analysis procedures from the original 45 items of the eighth-grade interview and scored for RCP are listed in Table 1. It is hoped that the retreat to a single scale for a subset of the 1958 VM indicators will be justified by the opportunities it creates to team a VM measure with other predictors and to employ more detailed taxonomic criteria.

The additional predictors from early adolescence to be incorporated with RCP are sex, socio-economic status, and intelligence. Table 2 contains the intercorrelations among these variables, and their means and standard deviations, for the eighth-grade data. The strongest relationship among the four variables is a moderate tendency for intelligence to increase with increasing socio-economic status of family. RCP is not significantly correlated with sex or socio-economic status, and its correlation with intelligence is modest. This .31 correlation can be compared with the previously reported multiple correlation of the eight RVP scales with intelligence of .57, which suggests that the RCP scale is perhaps freer of contamination with intelligence than are the RVP scales as a set. Anyway, these four relatively independent predictors seem to represent a suitably parsimonious yet potentially powerful antecedent measurement space for a longitudinal study with the modest sample size of the CDS.

The criterion scaling problem has been a bugaboo which the CPS and the CDS have attempted to reduce through a series of approximations of assorted worthiness. It is one thing to speak

Table 1: Eighth-grade interview items scored for Readiness for Career Planning (RCP)

1. What curricula are there that you can take in the 9th grade?
2. Why did you decide to take _____ curriculum?
3. Why did you decide not to choose one of the other curricula?
4. Why did you decide not to choose a second of the other curricula?
5. Is there any advantage to taking the college curriculum?
6. Are there advantages in taking the other curricula?
7. What facts should you know about yourself before you choose a curriculum?
8. How can you predict your chances of success in different courses for next year?
9. Is there any advantage to taking algebra?
10. Why would you like to become a (first choice)?
11. What facts should you know about yourself before choosing an occupation?
12. How much education is required to be a (first choice)?
13. What does a (first choice) do at work?
14. What connections do you see between the subjects you'll be taking next year and the work you want to do later on?
15. Which abilities do you have that will help you to be successful in your program for next year?
16. Which ability do you lack that you feel would help you to be successful in your high school program?
17. Which abilities do you have that will help you in the work you are planning?
18. Which ability do you lack that you feel would help you to be successful as a (first choice)?
19. What particular interests and activities would your occupation satisfy?
20. As you know, things that are important to us are called values. Tell me some of your values.
21. What values of yours would working as a (first choice) satisfy?
22. Suppose your parents didn't agree with your plans. What would you do?

Table 2 : Intercorrelations, means, and standard deviations for four eighth-grade (1958) variables (N = 110)

<u>Variable</u>	SES	I Q	RCP	Mean	S.D.
Sex (male=1; female=2)	.01	.03	-.18	1.5	.6
Socio-economic Status (1=hi;7=lo)		-.35	-.14	4.0	1.6
Otis Beta Form Intelligence			.31	107.9	9.5
Readiness for Career Planning				32.4	10.8

philosophically of the goal of integrative vocational adjustment. It is another thing to choose operational indicators of progress toward this panacea. Similarly, it is easier to talk about career patterns than to decide how to quantify them for research manipulations. In order to evaluate a trend in a subject's vocational adjustment it is necessary to look simultaneously at data from at least two points in his life history, so that what is evaluated is a transition from time 1 to time 2. Super (1963) has defined a set of five coping behaviors that seem to represent the best available rubric for evaluating transitions in career development data. These coping behavior categories are 1) floundering, 2) trial, 3) stagnation, 4) instrumentation, and 5) establishment. Since the CDS subjects have been interviewed five times at two-year intervals, it has been possible to score four transitions for coping behaviors, using the categories as an exclusive and exhaustive taxonomy. Unfortunately, five unequally populated cells is about two or three too many for multivariate statistical analysis of data on 111 subjects. It was necessary to pool the coping behaviors of floundering and stagnation into one category, which might then be called "unsatisfactory adjustment transitions," and to pool the other three coping behaviors into what might be called "satisfactory transitions," particularly to permit multivariate analysis of variance (MANOVA) in the measurement space of the eight RVP variables. The present strategy is to report parallel studies of criteria in the two spaces of 1) the eight RVP scales, and 2) the four predictors of Table 2, in order to compare results.

When the 1958/61 transitions were judged, 70 subjects were rated as "unsatisfactory" and only 40 were rated as "satisfactory." These are fairly global clinical ratings that take into account

both the occupational and educational aspirations in both years and the actual educational or occupational placements. That there is some lawfulness apparent in the ratings over four transitions is evidenced by previously reported fitting of Markov chain theory to the data. Looking at the separation of the two groups of 1958/61 ratings in the space of the eight 1958 RVP scales, as shown in Table 3, it appears that the RVP syndrome does not significantly separate the groups. Only Evidence for Self Ratings displays a marked contrast between the groups, and that in a contra-theory direction. Turning to Table 4, it can be seen that there is also a failure of separation of the criterion groups in the space of the four predictors. The "satisfactory" group has better RCP, intelligence, and socio-economic status (and more females), but the trend is not significant.

In the light of this failure of short-range predictive validity for the two predictor sets, it is not surprising that the transitional coping behavior groups for the most remote transition, 1965/67, are not significantly separated in either of the measurement spaces. Table 5 shows that of the eight RVP scales Evidence for Self Ratings provides the only significant contrast between the groups. The "satisfactory" group is about one half a standard deviation higher on this variable than is the "unsatisfactory" group. Evidence for Self Ratings is based on judgments of the quality of the evidence cited by the subject in defense of his appraisal of his own abilities. It should be noted that the interview protocol items that combine to form this scale in the RVP system are not items that enter into scoring RCP. Table 6 reveals that for the 1965/67 transition the "satisfactory" group again has better RCP, intelligence, and socio-economic status, but again

Table 3 : MANOVA study; criterion is 1958/61 transitional coping behavior ratings; group 1 (N = 70) floundering or stagnation; group 2 (N = 40) trial, instrumentation, or establishment; predictors are 1958 eight RVP scores

<u>RVP Variables</u>	<u>Grp 1 Means</u>	<u>Grp 2 Means</u>	<u>Grp 1 S.D.s</u>	<u>Grp 2 S.D.s</u>	<u>F₁₀₈¹</u>
Factors in Curriculum Choice	15.4	15.6	6.5	5.9	.0
Factors in Occupational Choice	14.3	15.2	4.7	4.5	.9
Verbalized Strengths and Weaknesses	6.1	6.9	3.0	3.7	1.5
Accuracy of Self Appraisal	7.1	7.0	1.5	1.3	.3
Evidence for Self Ratings	1.6	1.2	1.2	1.2	4.2
Interests	4.2	3.9	2.1	2.4	.8
Values	3.1	3.2	2.6	2.4	.0
Independence of Choice	4.4	4.3	1.9	1.8	.1

For equality of dispersions, MANOVA $F_{\infty}^{36} = 1.2$

For equality of centroids, MANOVA $F_{101}^8 = 1.2$

Table 4 : MANOVA study; criterion is 1958/61 transitional coping behavior ratings; group 1 (N = 70) floundering or stagnation; group 2 (N = 40) trial, instrumentation, or establishment; predictors are 1958 sex, SES, IQ, RCP

Predictors from Eighth-grade (1958)	Grp 1 Means	Grp 2 Means	Grp 1 S.D.s	Grp 2 S.D.s	F_{108}^1
Sex (male = 1; female = 2)	1.5	1.6	.6	.5	1.7
Socio-economic Status (1=hi;7=lo)	4.0	3.9	1.6	1.7	.0
Otis Beta Form Intelligence	107.7	108.4	9.1	10.2	.1
Readiness for Career Planning	31.7	33.7	10.7	11.0	.9

For equality of dispersions, MANOVA $F_{\infty}^{10} = 1.0$

For equality of centroids, MANOVA $F_{105}^4 = .8$

Table 5 : MANOVA study; criterion is 1965/67 transitional coping behavior ratings; group 1 (N = 51) floundering or stagnation; group 2 (N = 58) trial, instrumentation, or establishment; predictors are 1958 eight RVP scores

<u>RVP Variables</u>	<u>Grp 1 Means</u>	<u>Grp 2 Means</u>	<u>Grp 1 S.D.s</u>	<u>Grp 2 S.D.s</u>	<u>F₁₀₇¹</u>
Factors in Curriculum Choice	14.8	15.8	6.3	6.2	.8
Factors in Occupational Choice	14.4	14.6	4.7	4.8	.0
Verbalized Strengths and Weaknesses	6.2	6.6	3.5	3.1	.4
Accuracy of Self Appraisal	6.9	7.1	1.4	1.4	.8
Evidence for Self Ratings	1.1	1.7	1.2	1.2	7.4
Interests	4.0	4.1	2.5	1.9	.0
Values	3.0	3.2	2.5	2.7	.3
Independence of Choice	4.2	4.5	1.9	1.8	.8

For equality of dispersions, MANOVA $F_{\infty}^{36} = .8$

For equality of centroids, MANOVA $F_{100}^8 = 1.0$

Table 6 : MANOVA study; criterion is 1965/67 transitional coping behavior ratings; group 1 (N = 51) floundering or stagnation; group 2 (N = 58) trial, instrumentation, or establishment; predictors are 1958 sex, SES, IQ, RCP

Predictors from Eighth-grade (1958)	Grp 1 Means	Grp 2 Means	Grp 1 S.D.s	Grp 2 S.D.s	F_{107}^1
Sex (male = 1; female = 2)	1.5	1.5	.6	.5	.0
Socio-economic Status (1 = High; 7 = Low)	4.2	3.8	1.6	1.7	1.8
Otis Beta Form Intelligence	107.1	108.5	9.1	9.9	.6
Readiness for Career Planning	31.3	33.2	10.8	10.7	.9

For equality of dispersions, MANOVA $F_{\infty}^{10} = .5$

For equality of centroids, MANOVA $F_{104}^4 = .6$

to insignificant extents. It is interesting that in the latest ratings a majority of 58 subjects have been judged "satisfactory" and a minority of 51 have been judged "unsatisfactory." Perhaps this shift in the populations of the two categories from the 1958/61 transition in early adolescence to the 1965/67 transition in early adulthood represents a real gain in the percentage of subjects who are making reasonable progress toward their goals, and not just a softening of the standards of judgment. We hope so.

The fact that the subjects responded to a number of inventories in the 1967 data collection provides an opportunity to view the predictability of the latest coping behavior ratings from the measurement base of 11 inventory scales in a concurrent validity study. The first inventory scale, Occupational Aspirations, is adapted from Haller and Miller's () instrument of the same name. High scores indicate personal preferences for high status occupations. The Work Beliefs scale

High scores indicate beliefs about such matters as mobility, scheduling, and promptness which are judged to be conducive to success in the world of work. The four interest scales, Business, Outdoors and Shop, Cultural, and Science, are adaptations of the Project TALENT interest inventory, and the remaining five scales, Conformity, Impulsion, Sociability, Leadership, and Introspection, are adaptations of the Project TALENT temperament survey. The nine scales based on Project TALENT items follow quite closely the outcomes of Lohnes' (1966) factor analysis of the motives domain in the Project TALENT battery. However, all these item pools were created for and tested on high school age youth, and their use with young adults four years out of high school is

experimental, to say the least.

Table 7 contains the concurrent validity study results. Only one of the inventory scales separates the groups by an amount approaching one half of a standard deviation, and that is Conformity, on which the group rated "unsatisfactory" scores higher. In the Lohnes theory the Conformity variable represents an unintelligent global response set much like Edwards' social desirability factor, making this a convincing contrast between these two groups of young adults. Table 7 also shows the "unsatisfactory" group to be at a disadvantage with respect to Occupational Aspirations, Business Interest, Cultural Interest, and Science Interest. It is not surprising that they should be higher on Outdoors and Shop Interests or on Sociability, but their slight edge on Work Beliefs and larger edge on Introspection are contrary. In general, the concurrent validity of this 11-scale inventory battery appears to be real but weak.

The 11 inventory scales are part of a set of 22 variables we have scaled from the 1967 protocols. The other variables include a masculinity-femininity scale based on the Project TALENT interest items, four scales based on the positions of the 1967 occupational aspiration and the 1967 occupational placement in the Anne Roe occupational group and occupational level structures, and six additional clinical-type ratings of aspects of the protocols. These "22 correlates" can be thought of as a set of criterion scales to which to relate the 1958 predictor sets by correlation procedures. Tables 8, 9, and 10 provide details on a rank 7 canonical correlation model relating the 1958 eight RVP scales to these 22 correlates from 1967. Once again, there is no strong, robust finding. Even this high-rank model accounts for little

Table 7 : MANOVA study; criterion is 1965/67 transitional coping behavior ratings; group 1 (N = 48) floundering or stagnation; group 2 (N = 58) trial, instrumentation, or establishment; predictors are 11 1967 inventory correlates

<u>1967 Self-report Inventory Scales</u>	<u>Grp 1 Means</u>	<u>Grp 2 Means</u>	<u>Grp 1 S.D.s</u>	<u>Grp 2 S.D.s</u>	<u>F_{10/4}¹</u>
Occupational Aspirations	40.8	42.0	9.3	11.2	.4
Work Beliefs	32.5	32.1	3.8	3.6	.3
Business Interest	81.2	89.5	30.7	33.1	1.8
Outdoors - shop Interest	83.0	79.4	41.9	38.4	.2
Cultural Interest	88.4	92.2	27.7	25.2	.5
Science Interest	43.3	45.5	20.3	21.5	.3
Conformity	46.5	41.7	10.5	12.2	4.6
Impulsion	2.8	2.7	1.9	1.9	.0
Sociability	8.2	7.5	2.7	2.8	1.8
Leadership	1.6	1.5	1.4	1.6	.1
Introspection	8.0	7.0	2.7	2.9	2.9

For equality of dispersions, MANOVA $F_{\infty}^{66} = 1.1$

For equality of centroids, MANOVA $F_{94}^{11} = 1.2$

Table 8 : Canonical correlation of 1958 eight RVP scales with 1967 twenty-two correlates (N = 105); rank 7 model

Factor Set	Canonical R	1958 Eight RVP		1967 Twenty-two	
		Percent Variance	Percent Redundancy	Percent Variance	Percent Redundancy
1	.67	15.3	6.9	8.6	3.9
2	.53	14.1	4.0	4.4	1.2
3	.51	13.0	3.4	5.7	1.5
4	.46	11.8	2.4	7.1	1.5
5	.44	9.9	2.0	2.9	.6
6	.38	17.0	2.4	4.9	.7
7	.37	9.6	1.3	4.8	.7

Totals for rank 7 model:

Variance extracted from 1958 8-RVP = 90.7 %

Redundancy of 1958 8-RVP = 22.4 %

Variance extracted from 1967 22-scales = 38.4 %

Redundancy of 1967 22-scales = 10.1 %

(2)

Table 9 : Canonical correlation factors of 1958 eight RVP scales
 (entries are factor-scale correlations, with coefficients
 smaller than .25 edited out for clarity)

<u>RVP Variables</u>	Canonical Factors						
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Factors in Curriculum Choice	.67		.57			.29	-.33
Factors in Occupational Choice			.41		.59		
Verbalized Strength and Weaknesses	.55				.53		.44
Accuracy of Self Appraisal		.70	.34			-.42	-.27
Evidence for Self Ratings	.44	.52		-.67			
Interests	.37	.42		.60		.27	
Values	.27		.59		-.29	.33	.57
Independence of Choice		.29				.87	

Table 10: Canonical correlation factors of 1967 twenty-two correlates (entries are factor-scale correlations, with coefficients smaller than .25 edited out for clarity)

<u>Twenty-two Scales</u>	<u>Canonical Factors</u>						
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Occupational Asp.	.52						
Work Beliefs			.25	.36			.47
Business Interest		.27	-.26	.63	.29		
Outdoors-shop Int.		.40		.45			
Cultural Interest			.39				.42
Science Interest				.41		-.26	
Masculinity-fem.	-.26	.43		.39			.26
Conformity	-.37		-.43		.25		
Impulsion					-.25		
Sociability							.26
Leadership				.37		.50	
Introspection					.35	.29	
Actual Roe Group	.44		.29				
Roe Group Aspir.	.35						
Actual Roe Level	-.38	.33	-.30				
Roe Level Aspir.	-.46						
Realism	.32						
Commitment	.59						
Parental Rel.						.62	
Plans Certainty			.35	-.40		.29	
Adjustment		-.29	.45		.36		
DCP Rating			-.30				.29

of the variance in the 22 correlates (38%) and displays little ostensible redundancy of the 1958 battery, given the total variance of the 1967 battery (22%), and even less redundancy of the 1967 battery, given the total variance of the 1958 battery (10%). Neither of the canonical factor patterns displays any approach to simple structure.

The canonical correlation relations of the 1967 twenty-two correlates with the four 1958 predictors are presented in Tables 11 and 12. These relations are stronger than those with the eight 1958 RVP scales, but this is because there is a definite sex effect for a number of the twenty-two correlates and sex is one of the four predictors. The first canonical factor for each sex displays this sex linkage. The magnitudes of the second and third canonical correlation coefficients in this study (.64 and .52) are very close to those of the first and second in the preceding study (.67 and .53). For both the second and third canonical relations, socio-economic status loads higher on the prediction function than either intelligence or RCP.

Table 11 : Canonical correlation of 1958 four predictors with 1967 twenty-two correlates (n = 105); rank 3 model, with canonical factors of 1958 data

Factor Set	Canonical R	1958 Four X		1967 Twenty-two X	
		Percent Variance	Percent Redundancy	Percent Variance	Percent Redundancy
1	.84	28.0	20.0	9.6	6.8
2	.64	33.7	13.6	14.4	5.8
3	.52	19.7	5.3	2.7	.1

Totals for rank 3 model:

Variance extracted from 1958 four predictors = 81.4 %

Redundancy of 1958 four predictors = 38.9 %

Variance extracted from 1967 22-scales = 26.7 %

Redundancy of 1967 22-scales = 12.7 %

1958 Variables	Canonical Factors		
	<u>1</u>	<u>2</u>	<u>3</u>
Sex	.97	-.33	-.11
Socio-economic Status	.22	.70	.62
Otis Intelligence	-.07	-.32	-.56
Readiness for Career Planning	.08	.56	-.54

Table 12: Canonical correlation factors of 1967 twenty-two correlates (entries are factor-scale correlations, with coefficients less than .25 edited out for clarity)

<u>Twenty-two Scales</u>	Canonical Factors		
	<u>1</u>	<u>2</u>	<u>3</u>
Occupational Aspirations	.36	-.47	
Work Beliefs			
Business Interest	.38	.33	
Outdoors-shop Interest	.27	.51	
Cultural Interest			
Science Interest	.38		
Masculinity-femininity		.42	
Conformity			.31
Impulsion			.26
Sociability			
Leadership	.43		
Introspection	.35		
Actual Roe Group	.42	-.38	
Roe Group Aspiration	.64		
Actual Roe Level	-.34	.62	
Roe Level Aspiration	-.66	.29	
Realism		-.65	.25
Commitment		-.69	
Parental Relationship		-.42	
Plans Certainty		-.42	-.39
Adjustment		-.28	
DCP Rating		.41	

The transitional coping behaviors data had one strike against them to start with, due to their basic subjectivity as evaluations placed on protocols of subjects by the researcher. The results just reported add the second strike of weak predictability from the antecedent variables of interest in this inquiry. Nevertheless, we will keep these data in the game for the two reasons that they represent the best approximation to scaling Super's very convincing construct of coping behaviors we can muster, and that they do succeed in displaying an innate orderliness in our Markov chain analyses of them. It may be that we will yet discover more meaningful relations of these data with other variables in the life histories of our subjects as we know them. Meanwhile we have to look for other career adjustment scales against which to try to demonstrate more convincingly the predictive potency of our vocational maturity measures.

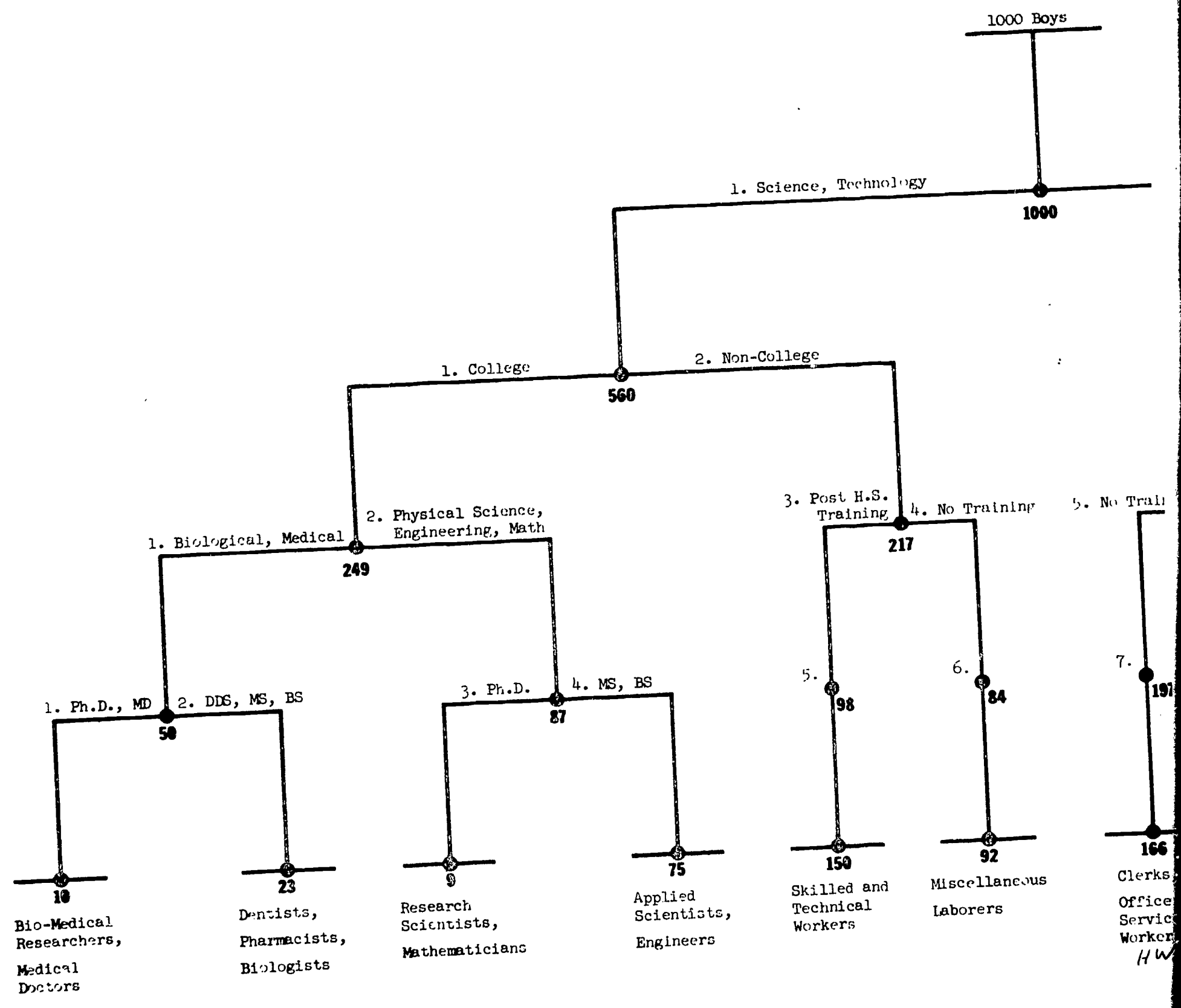
The GDS has in the past relied heavily on Anne Roe's constructs of occupational levels and occupational groups as criterion scales, placing the occupational aspirations of the subjects at the different developmental stages in these two taxonomic variables. The eighth grade RVP syndrome has been shown to be a valid predictor of Roe level of occupational aspiration at every one of the four developmental stages previously reported on, and of Roe group of occupational aspiration at the most remote stage previously reported one. That is, eighth-grade RVP yielded significant prediction of Roe group of aspiration two years out of high school. Successful Markov chain fittings have also been previously reported for these two Roe criterion variables. One of the problems with the Roe variables is that they are anything but independent, and are in theory the two axes of a lattice system containing 48 cells. No research program to date has been able to employ the lattice system

successfully as a criterion variable. It has too many cells to serve as a factorial analysis of variance design, especially since the correlation of the factors of the design leads inevitably to practically empty cells in some regions. It can't be worked as a two-element vector variable because the scale positions on the group axis are strictly nominal. The problems with the Roe lattice are compounded when one tries to use it repeatedly in longitudinal studies such as the CPS or the CDS where a rather small sample of subjects is observed many times, because the resulting three-dimensional lattice really has a plethora of cells. Roe's group and level constructs are essential aspects of the theory of career development, but some refinements of scaling beyond the Roe lattice appear to be research necessities.

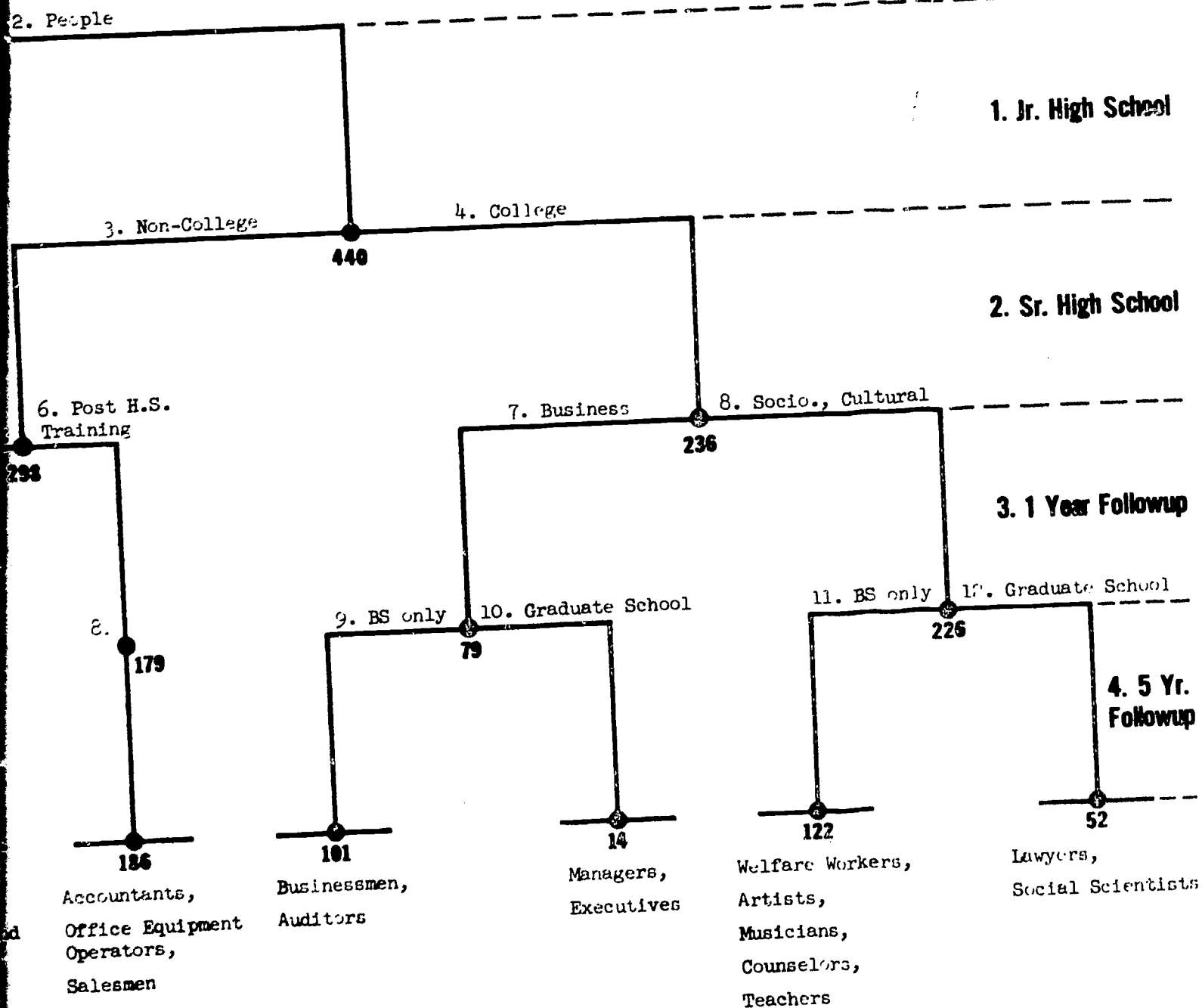
Recently, Cooley and Lohnes (1968) have capitalized on the extensive longitudinal data files of Project TALENT to refine a sequential structure of occupational taxonomy variables, inspired jointly by Roe's constructs and the construct of developmental stages as proposed by Ginzberg et al. (1951) and improved by Super et al. (1957). One of the major virtues of the Career Tree Structure arranged by Cooley and Lohnes is that its categories for occupational aspirations at each age level have been selected to be highly discriminable in suitable personality measurement spaces, as indicated by extensive computing on the Project TALENT data. Another attractive feature of the model is that the level of complexity of the taxonomic variable increases over time as a function of increasing vocational maturity, yet each new level of complexity is achieved by application of a simple dichotomous choice rule. Figure 1, reproduced from Cooley and Lohnes (1968, p. represents the tree structure model.

Insert Figure 1: Project TALENT Career Development Tree, here. It will be page 23.

Figure 1:
Project TALENT
Career Development Tr



LEVEL



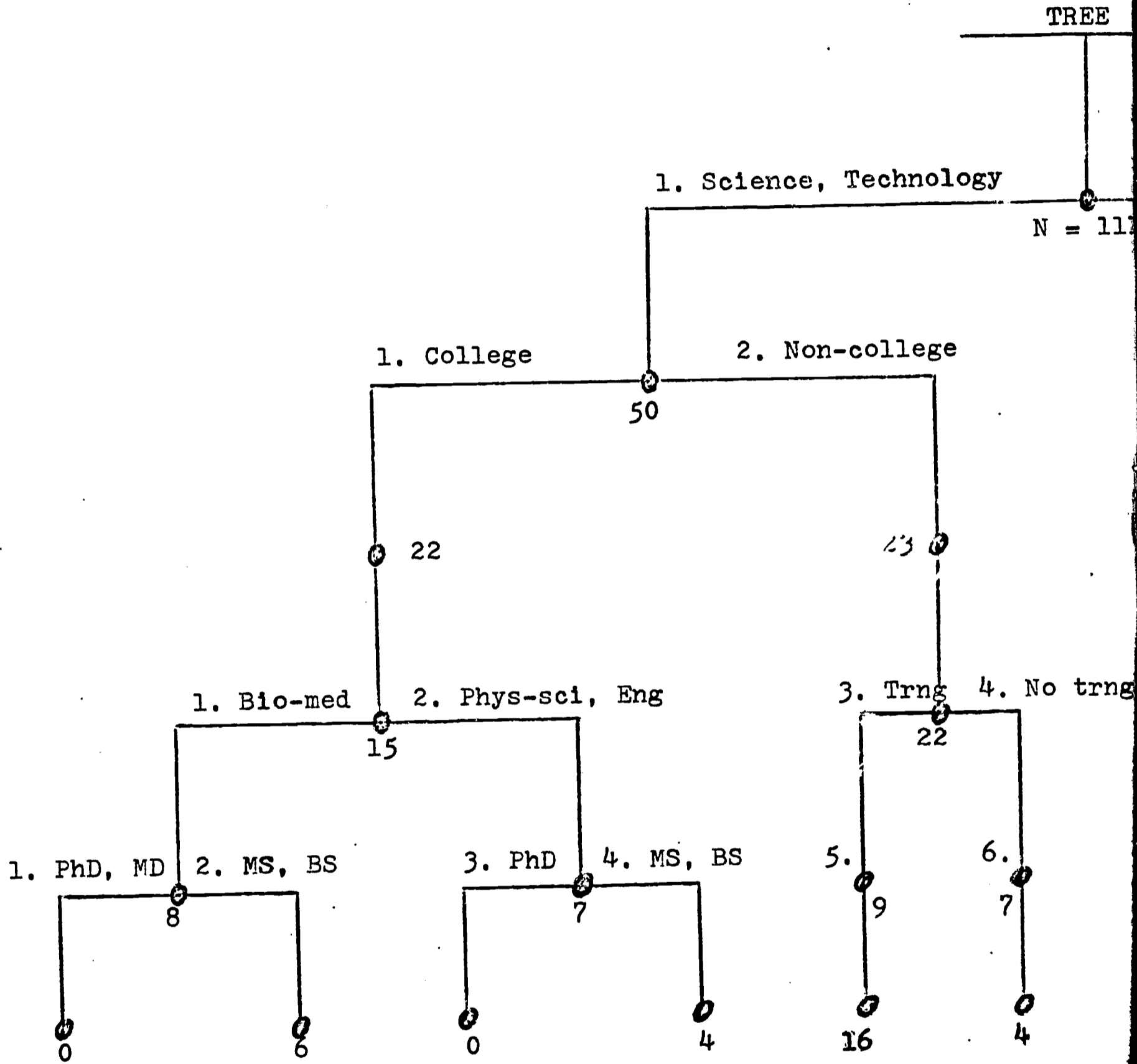
Paul R. Lohnes

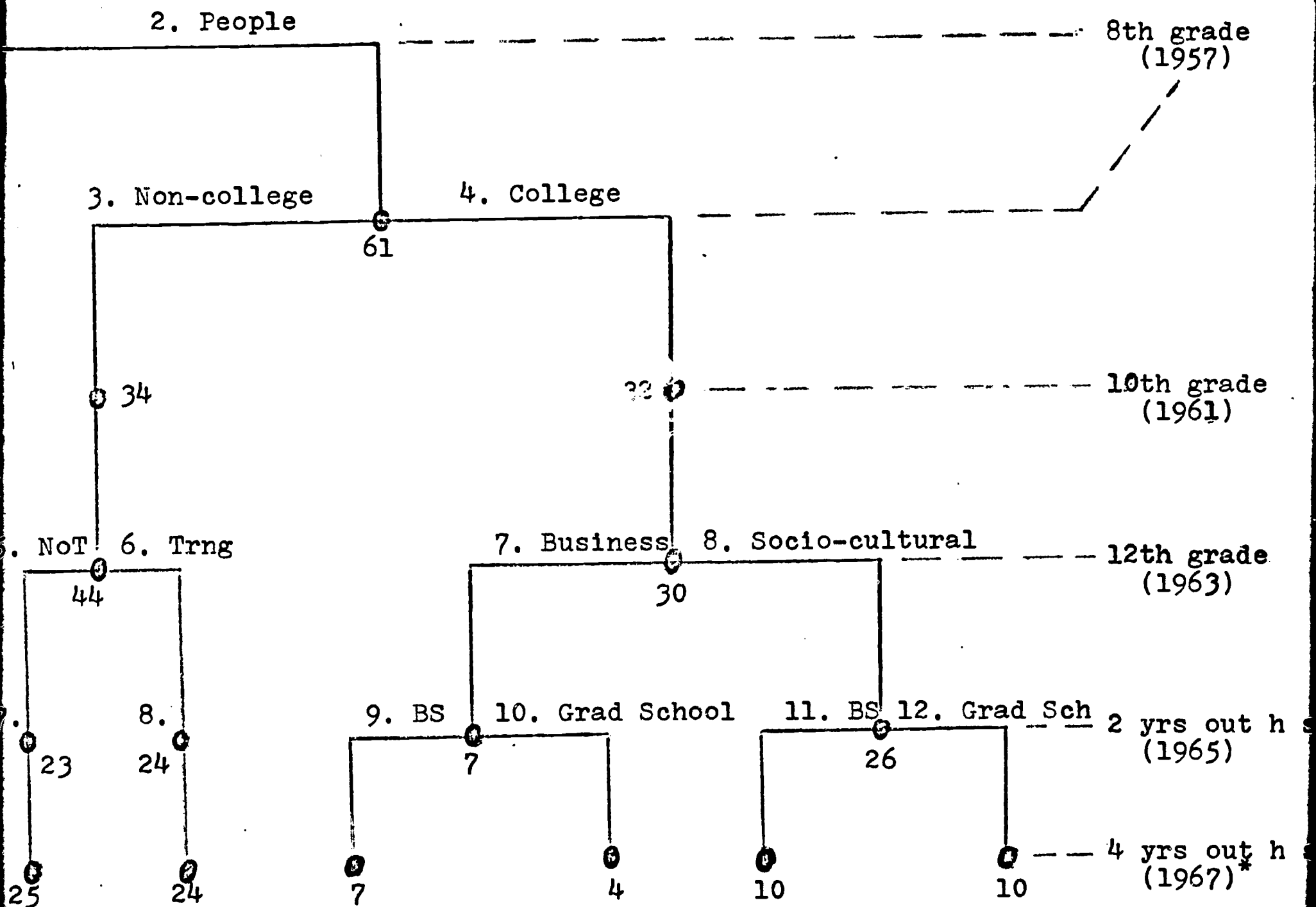
The earliest dichotomization or branching in the tree is premised on Anne Roe's people-thing continuum (Roe and Siegelman, 1964). In Figure 1 the numbers in boldface under each branch node report the part of a nominal 1000 males that the Project TALENT estimates, based on tens of thousands of males in a national probability sample, place at that node. Thus it is estimated that of 1000 boys entering junior high school about 560 would be classed as primarily "thing" oriented and about 440 as primarily "people" oriented. The next dichotomization is based on whether or not the subject is planning to attend a four-year college, and so on. Eventually the twelve branch tips of the tree provide a twelve-category taxonomy of occupations or occupational aspirations for young adults, which is as complex as the view of the world of work promoted by this model ever gets. Even so, it is apparent that studies with the modest sample sizes of the CPS and CDS will not be able to use all of the detail of the twelve-category variable for many purposes. Figure 2 distributes the 111 subjects of the CDS through the branchings of the tree structure model. Note that substantially less than half of the subjects persist in aspiring to graduate from college, and the two highest level of aspiration cells at the branch tips are empty of subjects in this sample. The one subject who would clearly have persevered to cell three, Ph.D. in physical science or engineering, was a young man who was killed in an automobile accident.

A companion paper to this one discusses the transitions of the CDS subjects in the tree model at greater length. The purpose here is to report predictive validity studies for the eighth grade measurement sets which employ criterion variables based on the tree.

Insert Figure 2: Career Development Study
Tree, here. It will be page 25.

Figure 2: Career Development Study Tree





* one deceased male, probably would have been in group 3

Table 13 reports a study of the 1958 career tree variable, which is the people-thing dichotomy, in the measurement space of the 1958 eight RVP scores. The RVP scales do not provide a basis for predicting the concurrent tree variable. Table 14 reports the parallel study in the space of the four 1958 predictors. Here there is dramatic separation of the two criterion groups, but neither intelligence nor RCP contributes to the contrast. Sex is the big separator, with a preponderance of boys displaying a science and technology orientation and a majority of girls showing a humanistic, socio-cultural orientation. There is also a significant socio-economic status contrast, with the science and technology oriented youths enjoying higher status as a group than do the humanistic, socio-cultural oriented youths. It is theoretically satisfactory that the vocational maturity measures should not have concurrent validity for this basic interests orientation in early adolescence, because if they did have it would simply indicate an interests contamination in the maturity measures, which would be no more acceptable than a substantial intelligence contamination would be.

The 1961 tenth grade tree criterion has four cells, reflecting both basic interests and whether or not the subject plans to attend college. As shown in Table 15, the eight RVP scales do provide a basis for significant prediction of this variable. Factors in Curriculum Choice is the strongest predictor, with the effects indicating that the two college planning groups have given more careful thought to curriculum selection than the two non-college groups. Table 16 shows that the contrasts among the criterion groups are very strong in the space of the four predictors. Sex continues to be the strongest predictor, but there is a good, strong relationship between RCP and the criterion. The comparison

Table 13: MANOVA study; criterion is 1958 career tree variable; predictors are 1958 eight RVP scores (N = 110)

1958 RVP Variables	Orientation Groups		Pooled-groups est. S.D.s	F_{108}^1
	Sci-tech (N = 49) Means	People (N = 61) Means		
Factors in Curriculum Choice	16.5	14.7	6.2	2.3
Factors in Occupation- al Choice	14.2	14.9	4.6	.6
Verbalized Strengths and Weaknesses	6.3	6.6	3.3	.2
Accuracy of Self Appraisal	7.0	7.1	1.4	.1
Evidence for Self Ratings	1.5	1.4	1.2	.3
Interests	4.2	4.1	2.2	.1
Values	3.0	3.2	2.6	.1
Independence of Choice	4.5	4.3	1.9	.2

For equality of dispersions, MANOVA $F_{\infty}^{36} = 1.3$

For equality of centroids, MANOVA $F_{101}^8 = .9$

Table 14 : MANOVA study; criterion is 1958 career tree variable; predictors are 1958 sex, SES, IQ, and RCP (N = 110)

Predictors from Eighth-grade (1958)	Orientation Groups		Pooled- groups est. S.D.s	F_{108}^1
	Sci-tech (N = 49) Means	People (N = 61) Means		
Sex (male = 1; female = 2)	1.2	1.7	.5	29.4
Socio-economic Status (1 = high; 7 = low)	3.6	4.3	1.6	5.0
Otis Beta Form Intelligence	107.8	108.0	9.6	.0
Readiness for Career Planning	33.4	31.7	10.8	.6

For equality of dispersions, MANOVA $F_{\infty}^{10} = 1.1$

For equality of centroids, MANOVA $F_{105}^4 = 9.4$

Table 15: MANOVA study; criterion is 1961 career tree variable; predictors are 1958 eight RVP scores (N = 110)

<u>RVP</u>	<u>Orientation Groups</u>				<u>Pooled- groups est. S.D.s</u>	<u>F₃ 106</u>
	<u>College Science (N = 22) Means:</u>	<u>Non-coll Technol. (N = 22) Means</u>	<u>Non-coll Business (N = 34) Means</u>	<u>College Bus-cult (N = 32) Means</u>		
I	16.7	15.4	12.6	17.8	6.0	4.5
II	13.9	13.9	14.2	16.1	4.6	1.6
III	7.2	6.1	5.2	7.4	3.2	3.1
IV	7.4	6.6	7.1	7.1	1.4	1.2
V	1.9	1.3	1.2	1.6	1.2	1.8
VI	5.1	3.3	3.6	4.5	2.1	3.6
VII	3.0	3.1	2.3	4.0	2.5	2.6
VIII	4.3	4.3	3.9	4.9	1.8	1.4

For equality of dispersions, MANOVA $F_{\infty}^{108} = 1.2$

For equality of centroids, MANOVA $F_{287}^{24} = 1.6$

Table 16: MANOVA study; criterion is 1961 career tree variable; predictors are 1958 sex, SES, IQ, and RCP (N = 110)

Four Scales	Orientation Groups				Pooled-groups est. S.D.s	F ₃ 106
	College Science (N = 22) Means	Non-coll Technol. (N = 22) Means	Non-coll Business (N = 34) Means	College Bus-cult (N = 32) Means		
Sex	1.2	1.3	1.9	1.5	.5	8.7
SES	3.5	4.1	4.6	3.4	1.6	3.9
I Q	110.0	104.6	106.6	110.3	9.4	2.2
RCP	33.9	31.6	27.0	37.8	10.1	6.5

For equality of dispersions, MANOVA $F_{\infty}^{30} = 1.8$

For equality of centroids, MANOVA $F_{272}^{12} = 4.6$

of the modest predictive validity of intelligence with the strong validity of RCP is noteworthy.

The next six tables report predictive validity studies for the 1963, 1965, and 1967 career tree variables. Several trends are apparent. The predictive validity of the 1958 eight RVI scales increases steadily over time! This can be seen by comparing the centroids MANOVA F-ratios for 1961 = 1.6 (Table 15), 1963 = 1.7 (Table 17), 1965 = 2.0 (Table 19), and 1967 = 2.3 (Table 21). There is an irregular trend for the predictive validity of the 1958 four predictors to increase over time. The centroids F-ratios are 1961 = 4.6 (Table 16), 1963 = 4.4 (Table 18), 1965 = 6.6 (Table 20), and 1967 = 6.3 (Table 22). All four predictors are potent at every follow-up year, but sex and RCP are the stronger predictors in 1961 and 1963, whereas socio-economic status moves to first place in 1965, and both SES and intelligence are stronger than sex and RCP in 1967. We are, of course, especially pleased with the robust univariate F-ratios for RCP for all four follow-up years.

These are:

Career Tree Year	RCP F-ratio
1961	6.5
1963	6.1
1965	7.6
1967	4.6

Table 17 : MANOVA study; criterion is 1963 career tree variable; predictors are 1958 eight RVP scores (N = 110)

<u>RVP</u>	<u>Orientation Groups</u>				<u>Pooled- groups est. S.D.s</u>	<u>F₃ 106</u>
	<u>College Science (N = 15) Means</u>	<u>Non-coll Technol. (N = 21) Means</u>	<u>Non-coll Business (N = 44) Means</u>	<u>College Bus-cult (N = 30) Means</u>		
I	17.2	14.8	13.3	17.9	6.0	4.0
II	13.9	13.6	13.9	16.4	4.7	2.4
III	6.9	6.1	5.3	8.0	3.1	4.7
IV	7.3	6.6	7.1	7.1	1.4	.8
V	2.2	1.1	1.2	1.8	1.2	4.9
VI	4.1	3.5	3.8	5.1	2.2	3.0
VII	2.7	2.7	2.6	4.3	2.5	3.3
VIII	4.2	4.0	4.3	4.8	1.9	.9

For equality of dispersions, MANOVA $F_{\infty}^{108} = .9$

For equality of centroids, MANOVA $F_{287}^{24} = 1.7$

Table 18 : MANOVA study; criterion is 1963 career tree variable; predictors are 1958 sex, SES, IQ, and RCP (N = 110)

Four Scales	Orientation Groups				Pooled-groups est. S.D.s	<u>F₃ 106</u>
	College Science (N = 15) Means	Non-coll Technol. (N = 21) Means	Non-coll Business (N = 44) Means	College Bus-cult (N = 30) Means		
Sex	1.1	1.4	1.8	1.4	.5	6.4
SES	3.5	4.1	4.5	3.3	1.6	3.8
I Q	112.5	103.5	106.3	111.0	9.1	4.6
RCP	33.5	29.9	29.0	38.7	10.1	6.1

For equality of dispersions, MANOVA $F_{\infty}^{30} = 1.5$

For equality of centroids, MANOVA $F_{272}^{12} = 4.4$

Table 19: MANOVA study; criterion is 1965 career tree variable; predictors are 1958 eight RVP scores (N = 110)

<u>RVP</u>	Orientation Groups				Pooled- groups est. S.D.s	<u>F³₁₀₆</u>
	College Science (N = 15) Means	Non-coll Technol. (N = 15) Means	Non-coll Business (N = 47) Means	College Bus-cult (N = 33) Means		
I	19.0	12.1	13.5	17.9	5.7	7.6
II	14.6	12.4	14.2	15.9	4.7	2.0
III	7.3	5.6	5.7	7.5	3.2	2.8
IV	7.9	6.2	7.0	7.0	1.4	4.1
V	1.9	1.2	1.2	1.8	1.2	3.1
VI	4.4	4.0	3.5	4.8	2.2	2.4
VII	3.8	1.7	2.7	4.0	2.5	4.1
VIII	4.7	4.1	4.4	4.3	1.9	.3

For equality of dispersions, MANOVA $F_{\infty}^{108} = 1.3$

For equality of centroids, MANOVA $F_{287}^{24} = 2.0$

Table 20: MANOVA study; criterion is 1965 career tree variable; predictors are 1958 sex, SES, IQ, and RCP (N = 110)

Four Scales	Orientation Groups				Pooled-groups est. S.D.s	F_{106}^3
	College Science (N = 15) Means	Non-coll Technol. (N = 15) Means	Non-coll Business (N = 47) Means	College Bus-cult (N = 33) Means		
Sex	1.3	1.1	1.8	1.4	.5	8.3
SES	3.3	4.5	4.7	3.0	1.5	10.5
I Q	111.6	103.1	105.8	111.5	9.0	4.9
RCP	37.0	26.7	29.1	37.7	9.9	7.6

For equality of dispersions, MANOVA $F_{\infty}^{30} = .8$

For equality of centroids, MANOVA $F_{272}^{12} = 6.6$

Table 21: MANOVA study; criterion is 1967 career tree variable; predictors are 1958 eight RVP scores (N = 109)

RVP	Orientation Groups				Pooled-groups est. S.D.s	F_{105}^3
	College Science (N = 10) Means	Non-coll Technol. (N = 19) Means	Non-coll Business (N = 49) Means	College Bus-cult (N = 31) Means		
I	17.4	13.2	13.7	18.5	5.9	5.5
II	12.7	12.9	14.3	16.3	4.6	2.8
III	5.8	6.0	5.7	7.9	3.2	3.4
IV	8.0	6.5	7.0	7.0	1.4	2.5
V	2.0	1.1	1.1	2.0	1.2	5.4
VI	3.1	3.6	3.9	5.0	2.1	3.1
VII	3.0	2.7	2.6	4.2	2.5	3.1
VIII	4.5	4.8	4.3	4.1	1.9	.7

For equality of dispersions, MANOVA $F_{\infty}^{108} = 1.2$

For equality of centroids, MANOVA $F_{284}^{24} = 2.3$

Table 22: MANOVA study; criterion is 1967 career tree variable; predictors are 1958 sex, SES, IQ, and RCP (N = 109)

<u>Four Scales</u>	<u>Orientation Groups</u>				<u>Pooled-groups est. S.D.s</u>	<u>F³₁₀₅</u>
	<u>College Science (N = 10) Means</u>	<u>Non-coll Technol. (N = 19) Means</u>	<u>Non-coll Business (N = 49) Means</u>	<u>College Bus-cult (N = 31) Means</u>		
Sex	1.3	1.3	1.8	1.4	.5	6.6
SES	3.7	4.4	4.6	2.8	1.5	9.8
I Q	113.1	101.1	106.3	112.8	8.6	9.2
RCP	32.8	30.2	29.4	37.9	10.2	4.6

For equality of dispersions, MANOVA $F_{\infty}^{30} = 1.2$

For equality of centroids, MANOVA $F_{270}^{12} = 6.3$

In the career tree data for nine years, almost one-half of the subjects display patterns of transitions in their aspirations that can be classified as "path-following." Each of the path-followers traces one of the twelve branches provided in the career tree. The majority of the subjects can be classified as "path-jumping," since at least once they make a transition in aspiration that removes them from one of the twelve branches and transports them to some other branch. (To more nearly balance the populations in the two groups, the authors have classified as path-followers eight subjects who followed non-college branches strictly over the four transitions observed but who, in the most recent 1965/67 transition jumped from either no post high school training to some post high school training or the other way. This is viewed as a modestly meaningful jump in comparison to the other available jumps.) For people who are path-followers, expressed aspiration at any time is of course the best prediction of what the aspiration will be at a later time. For path-jumpers, Cooley and Lohnes argue that a probability law governing their migrations can be phrased:

Our research and that of others shows that migration from one stable career path to another (or path-jumping) tends to take the individual to a path for which he is closer to the centroid. That is, changing plans so that his career pattern is classified as unstable usually decreases the generalized distance of the individual from his group's centroid in a suitable personality measurement space. This change law is perhaps the most significant finding of psychometric research on career variables. (Cooley and Lohnes, 1968, p.)

An interesting issue is the possible predictability of who will be a path-jumper and who will be a path-follower. Sex is a predictor, since more females are path-followers than are males. Table 23 indicates that eighth grade RVP measures are a basis for predicting this dichotomy, with jumpers scoring higher than followers on the two best predictors, which are Factors in Curriculum

Table 23 : MANOVA study; criterion is 1958-67 career tree structure behaviors; predictors are 1958 eight RVP scores (N = 110)

<u>1958 RVP Variables</u>	<u>Orientation Groups</u>		<u>Pooled- groups est. S.D.s</u>	<u>F¹ 108</u>
	<u>Path- Followers (N = 51) Means</u>	<u>Path- Jumpers (N = 59) Means</u>		
I Factors in Curriculum Choice	13.9	16.6	6.1	5.1
II Factors in Occupational Choice	15.0	14.1	4.7	1.1
III Verbalized Strength and Weaknesses	6.7	6.2	3.3	.6
IV Accuracy of Self Appraisal	6.8	7.2	1.4	2.0
V Evidence for Self Ratings	1.6	1.4	1.2	.7
VI Interests	4.3	3.9	2.2	.9
VII Values	3.0	3.2	2.6	.1
VIII Independence of Choice	4.2	4.5	1.9	.9

For equality of dispersions, MANOVA $F_{\infty}^{36} = 1.0$

For equality of centroids, MANOVA $F_{101}^8 = 2.3$

Choice and Accuracy of Self Appraisal. Table 24 displays the sex contrast and indicates that RCP is a significant predictor of this criterion behavior, with the path-jumpers scoring higher on this vocational maturity scale than do the path-followers. There would seem to be an important implication for career development theory in this finding that people whose occupational aspirations over the span from early adolescence to early adulthood follow a simple tree structure model tend to be rated as less vocationally mature in early adolescence than those whose patterns violate the simple structural model. The data of Table 25 reinforce this implication by showing that on inventory scales in early adulthood (1967) the path-jumpers have higher occupational aspiration, stronger cultural interests, more introspection, and less conformity than the path-followers. Note in Table 24 that the jumpers are not more intelligent and enjoy only a slight advantage in socio-economic status of family, yet the suggestion is that in some ways the jumpers who break the rules of the tree structure are stronger people.

Table 24: MANOVA study; criterion is 1958-67 career tree structure behaviors; predictors are 1958 sex, SES, IQ, and RCP (N = 110)

Predictors from Eighth-grade (1958)	Orientation Groups		Pooled- groups est. S.D.s	F_{108}^1
	Path- Followers (N = 51) Means	Path- Jumpers (N = 59) Means		
Sex (male = 1; female = 2)	1.6	1.4	.6	4.5
Socio-economic Status (1 = high; 7 = low)	4.2	3.8	1.6	1.5
Otis Beta Form Intelligence	108.3	107.6	9.6	.1
Readiness for Career Planning	30.7	34.0	10.7	2.6

For equality of dispersions, MANOVA $F_{\infty}^{10} = 1.9$

For equality of centroids, MANOVA $F_{105}^4 = 2.1$

Table 25 : MANOVA study; criterion is 1958-67 career tree structure behaviors; predictors are eleven 1967 inventory scales (N = 106)

1967 Self-report Inventory Scales	Orientation Groups		Pooled- groups est. S.D.s	F_{104}^1
	Path- Followers (N = 48) Means	Path- Jumpers (N = 58) Means		
Occupational Aspirations	38.4	44.0	10.0	8.5
Work Beliefs	32.4	32.3	3.7	.0
Business Interests	82.3	88.6	32.1	1.0
Outdoors-shop Interests	78.6	83.1	40.0	.3
Science Interests	90.2	90.7	26.4	.0
Cultural Interests	39.0	49.9	20.3	6.5
Impulsion	2.6	2.9	1.9	1.0
Sociability	7.6	8.1	2.8	.8
Leadership	1.4	1.6	1.5	.2
Introspection	6.8	8.0	2.8	5.4
Conformity	45.7	42.3	11.6	2.3

For equality of dispersions, MANOVA $F_{\infty}^{66} = 1.1$

For equality of centroids, MANOVA $F_{94}^{11} = 2.0$

Summary and Conclusions

Published predictive validities of vocational maturity scales collected in early adolescence can be characterized as weak but positive. To some extent the research problem has been to find more appropriate follow-up criteria for vocational maturity scales. This paper has reported predictive validity studies for two sets of variables collected on 110 subjects when they were in the eighth grade. The first set is eight Readiness for Vocational Planning (RVP) scales. The second set is sex, socio-economic status, Otis intelligence, and Readiness for Career Planning (RCP), which is a unitary vocational maturity scale from a subset of the RVP items. Both RVP and RCP are relatively free of correlation with sex, socio-economic status, and intelligence.

A series of studies involving transitional coping behaviors as the criteria once again showed only disappointing degrees of predictive validity for RVP and RCP. Canonical relations of both sets of predictors with a set of ~~twenty~~two 1967 correlates were relatively weak, except for sex linkages.

The breakthrough occurred when a set of criteria were scaled from a career tree structure model for transitions in educational and occupational aspirations over time. RVP and RCP were both robustly related to the career tree variables at all points in time, with a regular trend for RVP validity to increase over time. Comparative validities of sex, socio-economic status, and intelligence were reported.

Path-following versus path-jumping in the career tree is moderately predictable, and there are indications that the path-jumpers as a group are the stronger people.

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12TH GRADE INTERVIEW SCHEDULE

1. What curriculum are you taking now?
2. In the eighth grade you told us you thought you would take the ----- curriculum. Why did (or didn't) you change?
3. Who was especially influential in helping you make this decision?
4. If you were given another chance, would you make the same choice?
5. Now I'd like you to tell me something about these past two years in school. What have you done that you liked?
6. What do you feel you've done especially well?
7. What things have you disliked or regretted?
8. What would you consider your most important experiences in the past two years in school?
9. What tests have you taken in school during the past two years?
Primer: Like I. Q., College Boards or Interests tests.
10. Have the results of these tests been given to you?
11. Would you tell me how you did on each of the tests you mentioned?
12. Has anyone at school explained what these scores mean?
13. Have these results helped you make your decisions about the future? Would you tell me how?
14. Do you plan to go any further in education? School:-----.
Have you already applied? Have you been accepted? Type of school:-----.
Major:-----. Number of years:-----.
15. How are you planning to finance this schooling? (Parents, working, scholarship)
16. Whom did you talk with before making your plans? (Parents, guidance counselor, friends)
17. Are you planning to enter an occupation (or go to a school) your best friend is going to?
18. Now I'd like to have you tell me a little about your occupational plans for the future. What occupation are you planning to enter?
First choice-----. What is your second choice?

19. Why have you chosen----- as first choice?
20. To whom have you talked about this occupation?
21. How do you plan to reach your occupational goal? How will you prepare for it? How will you enter it?
22. What is the most important factor to consider in making an occupational choice?
23. Why do you consider this factor important?
24. In the 8th grade you were considering the possibility of becoming a ----- and in the 10th grade a ----- . Will you tell me what made you change your mind (or kept same plans)?
25. What do your parents think of your educational and/or vocational plans?
26. Do you feel that the occupation you enter is a matter of chance or choice? Explain: Could you tell me why you don't (or do) think it is a matter of chance?
27. Would you tell me something about your interests? (Primers: hobbies, activities)
28. Which of these activities have you enjoyed?
29. Which of these activities do you feel you have done well in?
- 30.. Have you participated in any activities that you've disliked or regretted?
31. Has your experience with any of these activities helped you in deciding on your future occupation?
32. What would you like to get out of life? What do you think would make you happy and satisfied?
33. What would you like to get out of work?
34. Would you tell me something about your strong points? The things you do well in.
35. Would you tell me something about your weak points? The things you wish you could do better.
36. If we divide the class in four quarters, in which quarter would you place yourself for scholastic ability, that is over-all school ability?
37. For verbal ability, the kind of ability you need to do well in English or History?

38. For mathematical ability or the ability needed to do well in math and science?
39. How certain are you about your educational and vocational plans we have been discussing? Would you tell me why you feel certain (or uncertain) about your plans?
40. If you cannot go to ----- College (or occupation mentioned) what do you think you will do?
41. Do you have any plans for military service?
42. Do you have any plans for marriage? Are you going steady? Do you think your plans for marriage will make any difference in your future occupational goal?
43. Can you tell me something about how you feel about going to work? Probe: Are you looking forward to it?
44. When you think about work is there anything that you feel would be disagreeable about it?
45. What jobs have you had during the past two years? Which did you enjoy? Which did you dislike?
46. What occupation would you like to be in five years from now?
47. What occupation do you expect to be in five years from now?
48. If not the same, is there anything you could do to make them the same.
49. Would you say in general that these last two years have been good or bad years for you? Why?
50. What have been two or three of the best things about them?
51. What have been two or three of the most difficult things?
52. What advice would you give to a boy or girl just about to enter high school that you wish someone had given you?

Ask how he feels about being in Career Development Study.

Tell about plans to talk to them in two years.

Address where can be reached.

SCORING MANUAL FOR MEASURES OF VOCATIONAL MATURITY
FROM TWELFTH GRADE PROTOCOLS

The purpose of this interview is to evaluate the student's vocational maturity as indicated by:

- 1.) his self-appraisal in terms of values and interests and the extent to which they have shaped his vocational decisions.
- 2.) evidence that he sees himself as an agent in determining the course of his career, i.e. the degree to which he is genuinely concerned with choice, has become actively involved in his vocational plans and is generally satisfied with their current progress.
- 3.) the extent to which he has participated in activities that provide opportunities for implementing the self-concept and for self-assessment in roles similar to those in the career to which he aspires.
- 4.) his appraisal of success in meeting the problem of occupational educational and personal decision-making over the past two years, and the attitude with which he views the future.
- 5.) evidence that his decisions have been based on information from valid sources and informed persons.

Scoring Procedure

- 1.) Study the interview schedule to become thoroughly familiar with each question.
- 2.) Read the general rules for scoring.
- 3.) Read the specific rules under each dimension and the examples accompanying the questions.
- 4.) Read the responses to questions 1, 2, 9, 10, 11, 14, 18, 24, 27, 36, 37, 38, from each interview to obtain background information.

on the abilities, educational programs and occupational plans of each student.

5.) Read all responses to questions for a single dimension and give a single rating in terms of overall quality of response (i.e. form a 'Gestalt' of performance).

Rate each of the dimensions of vocational maturity in the same manner.

6.) Total the ratings for each dimension to obtain an overall V.M. score.

General Rules.

Scores from 0 to 2 will be assigned on the basis of quality of responses, accuracy of information and emphasis on the indicated dimension.

2- A score of 2 will be given for responses of high quality which indicate that values, sense of agency, occupational role-playing, high morale or use of informed resource persons has played an important part in the vocational decisions and plans of the individual. Strong emphasis on any of these dimensions will be evidence of above average vocational maturity in that area and will always score 2.

1- A score of 1 will be given for responses which show some understanding and awareness of the dimension under consideration and reveal, at least, loose integration into the individual's decision processes. This score indicates average vocational maturity for a twelfth grade student.

0- A score of 0 will be given for responses which indicate vague understanding or no awareness of the importance of the dimension under consideration in decision-making. This score indicates immaturity in vocational development and choice.

Because examples of all possible responses could not be included in this scoring manual, the scorer will occasionally be confronted with cases which are ambiguous and leave him undecided between a score of 2 or 1, 1 or 0. In these instances, he should be aware that emphasis on a dimension in the responses and indication of its operation in the student's vocational decision process is the usual requirement of a good score.

Scoring for each dimension is by a "gestalt" method, 1-3. The scorer does not rate each answer separately, but rather considers each one as part of the individual's total response. All questions for a dimension are read together and one score is assigned which reflects performance in that area. While each question is expected to elicit information of equal importance this may not always be the case, the weighting^{of} questions which provide more material from which to judge the student should be increased proportionately.

If an answer has been omitted, this is taken as evidence of a lack of understanding of the dimension being probed and indicates below average vocational maturity. Such an omission usually detracts from the general score. However if the question has been answered in a previous response or is not applicable to the student's situation (e.g. questions concerning further education directed at the terminal student), the score is unaffected.

Specific Rules for Scoring the Dimensions of Vocational Maturity

Values.

Questions: 5, 7, 19, 22, 23, 28, 30, 32, 33.
(Particular attention should be paid to questions 5, 22, 23, 32, 33 for they usually contain most of the scorable material.)

The scorer should consider the extent to which values have been incorporated into the decision making process and their number, meaningfulness and contribution to long range growth.

2- The student mentions at least three different values, all consistent with his goal and with each other. There is an emphasis on values which are rich in meaning and substantial.

1- Mentions three different values which are consistent but narrow in meaning OR mentions two values which are rich in meaning and are elaborated on.

0- Mentions only weak, or narrow values with little consistency; can think of few reasons behind choice.

The following section contains examples of responses which reveal the contribution of value-orientation to vocational maturity. (In most cases these were quoted directly from students interviewed in the Career Development Study.) While the "Gestalt" method does not involve the scoring of individual questions, these examples have been rated in order to suggest the type of response most typical for a student given a rating of 0, 1 or 2.

5.) Now I'd like you to tell me something about these past two years in school. What have you done that you've liked?

2 - Mentions at least two valued activities which are consistent with plans OR one which has definitely advanced occupational plans.

"Latin and French clubs, future teachers club." (teacher)

"Yearbook advertising manager. - it was good experience."
(business administration)

"Some courses - chemistry, biology and most of the math courses were interesting and worth taking." (scientist)

1 - Mentions one consistent value with no elaboration.

"Science." (electrician)

"I really like shorthand." (secretary)

0 - Values or valued activities have no relation to goal, are undifferentiated or non-existent.

"Enjoyed basketball games, dancing, skating, swimming."
"I liked everything."

7.) What things have you disliked or regretted?

2 - Mentions something which has interfered with progress of occupational plans.

"I regret the way I set up my schedule - made it harder for me. (Gives concrete suggestions for improvement, reasons surrounding failure)."

"Regret working after school. I would have liked to have put more time into my studies."

1 - mentions no regrets or one which is unrelated to plans.

"Typing, not very important." (teacher)

"Sorry, I took French; it might have helped, but I didn't do well."

0 - Regret involves something essential to the success of plans.

"I'm not very good at shorthand." (stenographer)

"High school itself, don't enjoy it at all, seems to be too fixed."

19.) Why have you chosen _____ as first choice?

2 - Mentions two or more reason or one substantial reason with elaboration.

"I like to work with my hands; there's good money in it."

"I like it so far working on machines." (shoe-machine operator)

"I had law in school, I found it interesting and it comes easy to me." (legal secretary)

"I think I'll like it; I like working with kids and there's a need for teachers now."

1 - One reason; simple enumeration of reasons which tend to have weak, narrow bases.

"It's rather interesting and you can learn to handle each person you meet." (stenographer)

"High school teaching is interesting."

0 - Little basis for choice indicated.

"I watched a couple of guys working at it."
"Just like it."

22.) What is the most important factor to consider in making an occupational choice?

2 - Several factors mentioned or elaboration on one which is sufficiently important and value-oriented.

"Whether you have the ability to go through with it, whether you really find it interesting - if you don't you won't put your whole heart in it."

"How well you're fitted for the different phases of the work, if you have enough money to go on to further education, how much money you'll be making."

1 - Mentions one factor but no direct indication of value-orientation.

"What you enjoy doing."

"That you like it and can get interested in it."

0 - No understanding of decision factors.

23.) Why do you consider this fact important?

2 - Indicates an understanding of how the factor(s) mentioned in #22. is related to long-range growth.

"If you don't have the ability or interest, it might be bad for the students; you wouldn't make a very good teacher."

"You must have confidence in yourself to achieve your goal, otherwise you won't get very far."

1 - Indicates that factor is operating in an important way but has no precise knowledge of its role.

"If you enjoy your work, you're more likely to succeed and make good advances."

"If you don't like it you won't be looking forward to it."

0 - No real understanding of any factor.

"It's my life and I want to make sure what I do is what I want."

"Helps you decide what you want to do."

28.) Which of these activities have you enjoyed?

2 - Interests are directly related to occupational goals.

"Being advertising manager of the yearbook."

1 - Interests show some relation to long range growth.

"The clubs, I like dealing with people." (teacher)

0 - Interests show no relation to plans.

"Being with my friends."

"The summer and swimming."

30.) Have you participated in any activities that you've disliked or regretted?

2 - Regrets activities which have proved an obstacle to the goal and gives reasons.

1 - Regrets activities not related to goal or mentions none.

0 - Regrets activities which might have advanced plans.

32.) What would you like to get out of life? What do you think would make you happy and satisfied?

2 - Mentions three or more different values (much emphasis on consistency and richness of meaning if fewer than three).

"Doing my work well, having enough money, being healthy."

"I'd like to work awhile, have a good bank account, travel - see the world and then get married."

1 - Mentions one or two substantial values.

"Start teaching, get married."

"Steady job."

0 - Factors mentioned are not directly value-centered.

"What I want - that's my main ambition."

"Get through school, do what I really like."

33.) What would you like to get out of work?

2 - Mentions two or more different values.

"Satisfaction of knowing that I'm doing my job well and am able to help somebody."

"Satisfaction that I'm able to help kids and teach them something they didn't know."

1 - Mentions one value.

"As long as its a good paying job, I'll like it and be satisfied."

0 - No values.

"I don't know."

Sense of Agency

Questions: 4, 13, 21, 26, 39.

2 - Individual reveals activity which is goal-directed, constructive and self initiated; reveals confidence and satisfaction with plans.

1 - Reveals some concern, acceptance of responsibility but no specific, active step, or reveals some self-initiated activity but lacks confidence and satisfaction with plans.

0 - Little concern with choice or no acceptance of responsibility; no confidence or satisfaction expressed.

4.) If you were given another chance, would you still make the same choice (of curriculum)?

2 - Indicates satisfaction with choice made and gives reason for its importance in his plans.

"Yes - it (business course) is challenging and interesting and it gives you a chance to think."

"Yes, I would like to go to college."

1 - Indicates satisfaction but does not elaborate OR indicates some dissatisfaction but still accepts responsibility for choice."

"Yes."

"No, I'd take drafting. Business was my second choice but I enjoy it."

0 - Dissatisfied with choice, no indication of responsibility.

"yes, but I didn't like the subjects. My whole course was planned wrong."

"No - it didn't work out the way I wanted it to."

13.) Have these results helped you make your decisions about the future? How?
If no tests taken - disregard this question.

2 - Indicates realization of the information value of scores and shows ability to turn facts into information.

"I was all set to be a stenographer anyway, but the scores gave me more confidence."

"Yes, they showed me where my strong points are."

1 - Indication of some realization of information value of scores.

"My scores must have been good; I got accepted to the school."

0 - No realization of importance of tests.

"Not really, no matter what I got, I'd probably do the same thing."

"No."

21.) How do you plan to reach your occupational goal? How will you prepare for it? How will you enter it?

2 - Well structured and co-ordinated plans - indication of self-direction.

"I'll prepare through school (U. Mass.), then apply at schools for a teaching position with a recommendation from U. Mass.,

"I already have a job promised in an insurance company as soon as I graduate."

1 - Plans are still somewhat vague, but indication of concern and some activity.

"Through schooling."

"Co-op school, they help to place you."

0 - Little concern indicated, no activity.

"Maybe its just a dream (plan to be meteorologist.)"

"I don't really know how to go about entering it, anyway I imagine my Father will get me a position."

26.) Do you feel that the occupation you enter is a matter of chance or choice? Explain: Could you tell me why you don't (or do) think it is a matter of chance?

2 - Indicates awareness of own role in determining the course of a

future career, and indicates that past decisions influence this.

"I'm the one that makes the choice; it wasn't just chance.
I want to be a teacher and that's what I've been working for."

"Choice - I'm the one that decides."

1 - Indicates awareness that the course of his career should be self-determined, but makes no reference to self as agent.

"Choice - what you like depends on it."

"Should be choice, if it's just chance, you won't like it very much."

0 - No awareness of the role of the individual in determining his career.

"I don't know."

"I can't reach my real choice - I'll probably end up in a job by chance, or my father will set me one somewhere."

39.) How certain are you about your educational and vocational plans we have been discussing? Would you tell me why you feel certain (or uncertain) about your plans?

2 - Expresses confidence in success of plans and can substantiate this.

"I'm really sure, I've given it lots of thought, It seems interesting, and I have a job promised me."

"I'm sure; it's what I've always worked for and I've been accepted to college."

1 - Has definite plans but has no positive assurance of success OR expresses confidence but does not back it up.

"I'm pretty certain now that I'm a senior - I've decided what I'm going to do."

"Everything will be O.K, if I get accepted at Chandler."

0 - Plans uncertain and indefinite.

"I'm not certain at all."

"I can do one thing or the other, but I don't know."

"I'm just not sure what I'm fit for."

Role - Playing

Questions 6, 8, 29, 31, 34, 35, 45.

The scorer should consider the extent to which the student has sought out available ways to implement a concept of himself. The role may be actual (e.g. a job, a school activity), inferred (e.g. the future scientist enjoys physics and chemistry class).

- 2 - Mentions several attempts at role playing, at least one of which is consistent with abilities and goals; the subject feels comfortable in the role.
- 1 - Mentions several roles which are consistent with ability but are not related to occupational plans.
- 0 - Role-playing is inconsistent with ability and/or occupational goal or no role-playing is evidenced.

6.) What do you feel you've done especially well?

- 2 - Satisfaction expressed in connection with performance in a role which is related to the occupational goal.

"I've learned machines at bowling alley and I like the work.
(shoe machine operator)

"I do a lot better in math and science the things that I like,
than in languages." (science teacher)

"I'm good in typewriting." (stenographer)

- 1 - Satisfaction with performance in a role which seems to have no direct relationship to occupational goal.

"I do very well in English literature." (secretary)

- 0 - No role playing, or no satisfaction expressed regarding any role.

"I don't know."

8.) What would you consider your most important experiences in the past two years in school?

2 - The experience cited has contributed substantially to the implementation of the chosen career

"I learned a lot from the yearbook work as advertising manager."
(business administration)

1 - Experience cited seems to have no relationship to the occupational goal.

"When I got a B in history. I'll never forget the day I brought that home; I used to get bad marks."

0 - Subject is unable to cite any important experiences "nothing" or no response.

29.) Which of these activities do you feel you've done well in?

2 - Satisfaction expressed in connection with activities which relate directly to aspirations.

"I'm good in weather forecasting." (meteorologist)

"Yearbook advertising - I handled the customers well and my advisor seemed pleased." (business administration)

1 - Activities seem unrelated to occupational goals, but reflect individuals abilities in other areas.

"Swimming and water skiing."

"Latin club." (science teacher)

0 - Dissatisfaction with all roles attempted.

"None, I haven't surpassed in anything."

31.) Would you tell me something about your strong points? The things you do well in.

2 - Points mentioned relate strongly to success in the chosen field.

"Math and bookkeeping. I enjoy these." (business)

"I'm best in science and possibly math. (science teacher)

1 - Points mentioned relate only slightly to success in the chosen field.

"I'm very good in history." (electronics)

"I'm doing very well in English and I have a good job as a waitress. - I get to know everybody." (stenographer)

0 - Points mentioned have no relation to success in the chosen field (and may be detrimental) OR can mention none.

35.) Would you tell me something about your weak points? The things you wish you could do better.

1 - Weak points do not detract substantially from attainment of the occupational goal.

"I wish I was better in math." (secretary)

"Languages- they're interesting though." (science teacher)

0 - Weak points seem to be a detriment to attainment of the occupational goal.

"Typing, you can't erase in school." (stenographer)

"General way of talking to people, wish I could express myself better." (teacher)

"Math." (electronics)

45.) What jobs have you had in the past two years? Which did you enjoy? Which did you dislike?

2 - Employment in positions which gave opportunities for role playing consistent with goals and abilities; expresses satisfaction with those roles.

"Baby sitting - I love doing things with kids." (teacher)

1 - Employment gave little opportunity for role playing related to chosen occupation OR employment related to occupational role-playing resulted in dissatisfaction

"Took telephone orders in a meat store, didn't really enjoy dealing with customers." (business)

"Waitress - it was fun, didn't seem like real work." (stenographer)

0 - No role playing.

"I've never had a job."

Morale

Questions: 43, 44, 46, 47, 48, 49, 50, 51, 52.

The scorer should consider the student's global feeling about the past two years and the attitude with which he faces the future - especially as regards his occupational goals.

- 2 - The student indicates strong positive feelings regarding the last two years and indicates progress towards fulfillment of occupational or educational goal; eagerness for goal now in sight.
- 1 - Indicates positive feelings regarding social and personal life with little or no mention of progress toward goal.
- 0 - Global feeling toward immediate past and **forseeable** future tends to lack enthusiasm, confidence or to be negative.

43.) Can you tell me something about how you feel about going to work?

- 2 - Strong positive feelings - can already envision the rewarding aspects of the chosen occupation.

"Very much so, It will be interesting and challenging. - millions of people going in and out. It's time for a change of pace."

"I'm all for it - it's a chance to use what I've learned and help people."

- 1 - Indicates positive feelings; no elaboration.

"Yes I'd like to go after twelve years of school it's time for a change."

"Yes I want to go to work, I'm looking forward to it."

- 0 - Indicates neutral, "inevitable" feelings OR negative feelings.

"There's really nothing else to do after school."

"I don't mind; it sort of depends on the kind of work I do."

44.) When you think about work is there anything you feel would be disagreeable about it?

2 - Mentions no drawbacks connected with feelings toward work or mentions some drawbacks, yet seems ready to face them with good spirits, willing to work to overcome; plus indication that some thought has been put into this assessment.

"No, except possibly the restrictions - but as long as its interesting I'll like it."

"No, I haven't been able to think of any thing really bad about it."

"There may be many discouragements in psychology because people's problems may be difficult, shocking - but it's still what I want."

1 - Mentions no difficulties connected with feelings toward work, but no indication of any intensive investigation into this.

"No, I can't think of anything off hand."

"No, but I'll let you know later on - when I'm working?"

"No, everybody has to do it."

0 - Indicates dislike for some major aspect of work in chosen occupation.

"Working with the public - everybody has off days and some are hard to please." (business-sales)

46.) What occupation would you like to be in five years from now?

2 - Occupation is consistent with abilities and with the education program followed.

"Teacher." (college preparatory)

"Electronics." (in trade school)

1 - Occupation is consistent with abilities but does not seem to be related to the educational program.

"Meteprologist." (business course)

"Professional bowler." (machine shop)

0 - Occupation is consistent with neither abilities nor the educational program.

e.g. Lawyer (in trade course)

47.) What occupation do you expect to be in five years from now?

2 - Occupation is the same as in question 46.

1 - Occupation is different than question 46, but is consistent with abilities and education.

0 - Occupation is consistent with neither question 46, education or ability. OR does not foresee occupational role with any certainty.

"Business, but, I'm not sure, it could be meteorology I'm not sure."

48.) If not the same, is there anything you could do to make them the same?

2 - Has envisioned a possible solution to the dilemma.

"After I work a while I'll have enough money to go to college."

1 - Feels a solution is possible but has not worked one out. OR can see no solution, but is satisfied with occupation cited in question 47.

"I bowl a lot and don't seem to get any better, but I like working with machines."

0 - Can see no solution whatsoever.

"No."

"Nothing I can think of."

49.) Would you say in general that these last two years have been good or bad years for you? Why?

2 - Global feeling suggests satisfaction and progress, especially in regard to occupational plans.

"Very good. I'm more sure of where I'm going, of what I'm doing. I enjoyed school these past years."

1 - Global feeling suggest satisfaction with social life without mention of progress toward the goal, OR dissatisfaction initially, beginning to be replaced by satisfaction and progress.

"I had a great time in school, especially the social part."

"These were good years, - besides my marks, I really can't complain about anything."

"The first year was bad, I just barely passed and had difficulties with the teacher - but this year everything seems better. I'm enjoying the work and like my teachers."

0 - Global feeling is unenthusiastic or negative.

"Fair - I didn't do very well in my work or in tests."

"Allright - I managed to get thru my classes and studies without flunking."

50.) What have been two or three of the best things about them?

2 - At least one of the things mentioned relates to the occupational goals.

"Science classes. I enjoyed some of my teachers." (electronics)

"School activities. Interesting classes like chemistry, biology and history. (science teacher)

1 - Names at least two good things about past two years.

"I enjoyed the activities I participated in and just being with the kids most of the time."

"Meeting new friends, going places, doing different things."

0 - No positive response.

"Don't know."

"Nothing."

51.) What have been two or three of the most difficult things?

2 - "Difficult things" will prove to be of little or no detriment to the occupational goal.

"History class was pretty hard." (electronics)

1 - "Difficult things" were related to the occupational goals, but came as part of decision process and have been resolved. OR are related to school and social life in general.

"Making decisions about college, where to apply, what courses to take."

"Decision on whether to go to college or not."

"Trying to figure out problems - in school and with my family."

0 - "Difficult things" related to skills needed in occupation. OR
no indication that importance of such things is realized.

"Nothing."

"Shorthand." (secretary)

52.) What advice would you give a boy or girl just about to enter high school that you wish someone had given you?

2 - Advice shows assessment of personal shortcomings and proposal of valid solutions.

"They should seriously start thinking about what they want to do after high school and set their mind to it, if they really want to get ahead."

"I had it given to me - try and do your best so you can get out earlier; I regret that I didn't try before."

"Do your best, don't wait until the last year to find out where you're going, learn as much as you can."

1 - Advice is valid but shows no relation to own situation or to occupational decisions."

"Try to get to college; you're better off in life that way."

"The college kids get all the breaks in school." (secretary)

"Get in as many activities as you can; that way you have more fun. Try to get along with the teachers and students."

0 - Can give no valid advice, or indicates the advice is useless.

"Work hard, but I don't think you can tell them - they have their own ideas."

"Have a good time."

Key Person

Questions: 3, 12, 16, 17, 20, 25.

The scorer should consider the use of informed adults as key person in facilitating the decision process. The use of uninformed persons (parents, friends, etc.) in addition to a counselor or teacher should not detract from the total score unless their influence is overwhelming. Reliance on oneself indicates acceptance of responsibility as long as reliable sources are consulted in major decisions.

2 - Individual sought as reference is a counselor a person in the occupation aspired to, or a teacher in a field related to that occupation.

1 - Individual sought for advice is an adult whose knowledge of the occupation is limited, but who is familiar with the interests and abilities of the student.

0 - No reliable source is used e.g. reliance on self or on friend.

3.) Who was especially influential in helping you make this decision?

2 - Reliance on a counselor or, an informed adult.

"Guidance counselor, parents, but the decision was my own."

"Myself mainly, but I talked with the guidance counselors in junior and senior high school."

"Home room teacher, guidance counselor, parents, other kids who have gone there (college)."

1 - Reliance on an uninformed adult.

"Mother and father."

0 - No key person involved.

"I just charged in."

"I can't really say."

"I did it myself, I knew I had to pick something else."

"Have to do it myself - it's really my own decision."

12.) Has anyone in school explained what these scores mean?

2 - Has sought out explanation from an informed adult and understands the importance of the scores.

"Guidance counselor. Showed where you stood with students throughout the country and how much chance you had of getting ahead."

"The guidance counselor, they're (college boards) important to tell your general knowledge, and they are important for college entrance."

1 - Scores have been explained - indicates and informed source or some understanding of score.

"Guidance counselor."

"They were explained on a percentile basis."

0 - No explanation sought OR no understanding indicated.

"No."

"They were explained but it didn't mean anything."

"They actually told me nothing."

16.) Whom did you talk with before making your plan?

2 - Informed adult.

1 - Uninformed adult.

0 - Self or friend.

17.) Are you planning to enter an occupation (or to to a school) your best friend is going to?

2 - Indicates no tendency to pattern after vocational plans of friends.

"No."

"Id. now."

1 - Indicates similar plans as friends but qualifies this as a coincidence, having no real relation to decision.

"Yes, but it was my own decision - it's what I'm really interested in."

0 - Indicates a tendency to imitate close associates.

20.) To whom have you talked about this occupation.

2 - Informed adult.

1 - Uninformed adult.

0 - Self or friend.

25.) What do your parents think of your educational and / or vocational plans?

2 - Knows parents feelings and has somehow reconciled them with his own plans.

"They'd rather I went to college, but I think I'd be better off working."

"They think it's a good idea, whatever I want most."

1 - Knows parents feelings but has not attempted to relate them to decision.

"They like it."

"They think it's far out, don't think I can do it."

0 - No knowledge of parental attitude.

"I don't know. They don't say much about it."

CAREER DEVELOPMENT STUDY

Training and Education Form

Your Name _____

1. Name of school or training program _____

2. Is this school or organization a (please check one)

_____ graduate or professional school?

_____ 4 year college?

_____ 2 year college?

_____ business, trade or technical school?

_____ Military training program?

_____ on-the-job or apprenticeship training?

_____ correspondence course?

_____ other (specify) _____

3. Major field or specialty _____

4. Location: _____
(street) (city) (state)

5. Dates attended from: _____ to: _____
(month) (year) (month) (year)

6. Were you assigned (through no choice of your own) this training as part of an apprenticeship or on-the-job training?

_____ Yes

_____ No

Why assigned? _____

By whom? _____

7. Since you selected your school and/or major, which did you select first?

_____ the school (training program) you wanted?

_____ your major (specialty?)

_____ both of the above at the same time?

Training and Education Form

8. How did you find out about this particular school or training program?

9. Whom or what did you consult for information or advice when choosing it?

10. What did you know about the institution itself (school or training program) that made you want to go there? _____

11. What evidence did you have that you had the necessary ability for this school or training program?

12. Why did you take this training? _____

13. What experiences helped you choose your major(s) or specialty (ies) In answering, please consider counseling or advice, previous training and jobs, etc.

Training and Education Form

17. a. Did this training help you to decide what job or field you would like to go into?

 No

 Yes. If Yes, what job or field? _____

What aspects of the training helped you decide? _____

b. Did this training help you decide what job or field you did NOT want to go into?

 No

 Yes. If Yes, what job or field? _____

What aspects of the training helped you decide? _____

18. Have you completed this training?

 Yes. If Yes, name the degree, diploma, or certificate you received: _____

 No. If No, give reasons for leaving the school or not completing training: _____

Do you intend to complete it? No Yes

When? _____

19. How did you finance this training? _____

20. a. If this training actually led to a job, state here what it was:

b. If this training did not lead to a job, please give brief explanation:

Training and Education Form

21. DIRECTIONS: Below are several short statements about training. Each statement is followed by places for two ways of showing your reactions to it: A - a place to describe HOW WELL you did it
B - a place to describe HOW SATISFIED YOU WERE WITH YOUR OWN PERFORMANCE.

In Columns A and B there are five possible ways of answering. In Column A from 1, "Poorly," to 5, "Very Well;" In Column B from 1, "Very Dissatisfied," to 5, "Very Satisfied."

Please circle for each statement in each column the number that best describes your performance. (For example, you might circle 2 in Column A if you felt that you didn't do very well, but you might circle 4 in Column B if you felt satisfied about your performance because the work was difficult and you handled it as well as you could.)

If you feel that you would like to comment further on the ratings you give any of the items below, check the item for your interviewer's attention.

- A. HOW WELL DID YOU DO THIS?
 1. Poorly
 2. Not Well
 3. Average
 4. Fairly Well
 5. Very Well
- B. HOW SATISFIED ARE YOU WITH YOUR PERFORMANCE?
 1. Very dissatisfied with how I did
 2. Fairly dissatisfied
 3. Neither satisfied nor dissatisfied
 4. Fairly satisfied
 5. Very satisfied

	A					B					
	HOW WELL					HOW SATISFIED					
	Poorly			Very Well		V.Dissat.			V.Sat		
a. <u>CARRYING THE LOAD OF WORK YOUR TRAINING PROGRAM REQUIRED</u> (For example, the amount of work you had to turn out, the hours you had to put in, and the speed at which you had to work.)	1	2	3	4	5		1	2	3	4	5
b. <u>PERFORMING THE REQUIRED TRAINING TASKS</u> (For example, laboratory or shop assignments, library research, the operation of machines, etc.)	1	2	2	2	5		1	2	3	4	5
c. <u>GETTING ALONG WITH THE PEOPLE WHO TAUGHT OR SUPERVISED YOU</u> (For example, getting along with instructors, advisors, deans, supervisors, etc.)	1	2	3	4	5		1	2	3	4	5
d. <u>GETTING ALONG WITH YOUR FELLOW STUDENTS OR TRAINEES</u>	1	2	3	4	5		1	2	3	4	5

22. DIRECTIONS: Below are listed some items describing various aspects of training. You are asked to rate each of the items on the two scales which follow each one. If you would like to explain further your ratings of certain of the following items in your interview, please check the item.

Please answer every item.

Scale I

Please check one of the three places below which best fits your training or education.

- a. Your grades or ratings. High Average Low
- b. Training expenses, such as tuition, books, carfare, lunches. High Average Low
- c. The amount you are expected to learn. Great Average Little
- d. The degree of difficulty of your training. Great Average Little
- e. How interesting the training is. Great Average Little

Scale II

Please check one of the five places below which best describes how satisfied you are with this aspect in your training or education.

- | Very Satisfied | Fairly Satisfied | Neither Satisfied Nor Dissatisfied | Fairly Dissatisfied | Very Dissatisfied |
|--------------------------|--------------------------|------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Training and Education Form

Very Satisfied	Fairly Satisfied	Neither Satisfied Nor Dissatisfied	Fairly Dissatisfied	Very Dissatisfied
----------------	------------------	------------------------------------	---------------------	-------------------

- | | | | | |
|---|-----------------------|----------------|--------------------|---|
| f. Pressure to meet deadlines, such as preparing for tests, writing reports, turning in homework. | <u>Great</u> | <u>Average</u> | <u>Little</u> | — |
| g. Amount of competition, such as competing with others for grades, honors, jobs, privileges. | <u>Great</u> | <u>Average</u> | <u>Little</u> | — |
| h. Usefulness of this training for your future. | <u>Great</u> | <u>Average</u> | <u>Little</u> | — |
| i. Opportunities to use your abilities. | <u>Many</u> | <u>Some</u> | <u>Few</u> | — |
| j. Hours in study or homework. | <u>Many</u> | <u>Some</u> | <u>Few</u> | — |
| k. The people who teach or supervise you. | <u>Well qualified</u> | <u>Average</u> | <u>Unqualified</u> | — |

Training and Education Form

	Very Satisfied	Fairly Satisfied	Neither Satisfied Nor Dissatisfied	Fairly Dissatisfied	Very Dissatisfied
1. The school or organization as compared with others you could have gone to.	—	—	—	—	—
m. Your major or specialty as compared with others you might have chosen.	—	—	—	—	—

1. The school or organization as compared with others you could have gone to.

m. Your major or specialty as compared with others you might have chosen.

Better About the Same Worse

Better About the Same Worse

(See Next Page)

Training and Education Form

23. a. How would you rate the quality of this training program, taken as a whole?

_____ Excellent _____ Poor
_____ Good _____ Very Poor
_____ Average

b. How would most of your fellow students rate it?

_____ Excellent _____ Poor
_____ Good _____ Very Poor
_____ Average

24. Did this training program turn out to be what you expected it to be?

_____ Yes
_____ No. If No, why not? _____

25. Taking your experiences in this training as a whole, do you feel that you really belonged in this program?

_____ I felt that I really belonged there.
_____ I got along all right, but sometimes it was a strain,
_____ I often felt that I really shouldn't have been there.

Comments: _____

26. How did this training or education contribute to your personal growth and career? _____

Your Name _____

Name of Job _____

Dates held: From _____ To _____
(Month) (Year) (Month) (Year)

Type of Business _____ Name of Firm _____

Description of Job _____

Main Duties _____

1. At the time you had this job, if you could have had your choice of full-time jobs, which would you have chosen? (Check one.)

_____ This job.

_____ A different job, but in the same field of work.

_____ A different job, and in a different field of work.

2. This job

_____ could be done by someone just starting out in this line of work.

_____ requires more skill, training, experience or time on the job than someone just starting out in this line of work would ordinarily be expected to have.

3. Comparing this job to the one you had immediately before, was it

_____ I had no job before this one

_____ a step-up; why? _____

_____ on the same level _____

_____ a step down; why? _____

_____ other (Please explain) _____

JOB FORM
(3)

	Very Satisfied	Fairly Satisfied	Neither Satisfied Nor Dissatisfied	Fairly Dissatisfied	Very Dissatisfied
g. Opportunity for promotion or advancement.	—	—	—	—	—
h. Company benefits, such as sick pay and pension plans.	—	—	—	—	—
i. Opportunities to attain your ambitions.	—	—	—	—	—
j. Opportunities to use your initiative or judgment.	—	—	—	—	—
k. Opportunities to use your knowledge and experience.	—	—	—	—	—
l. Opportunities to express yourself.	—	—	—	—	—
m. Opportunities to share interests with fellow-workers.	—	—	—	—	—
n. Freedom to do things the way I want to.	—	—	—	—	—

g. Opportunity for promotion or advancement.	Great	Average	Little
h. Company benefits, such as sick pay and pension plans.	Many	Some	Few
i. Opportunities to attain your ambitions.	Many	Some	Few
j. Opportunities to use your initiative or judgment.	Many	Some	Few
k. Opportunities to use your knowledge and experience.	Many	Some	Few
l. Opportunities to express yourself.	—	—	—
m. Opportunities to share interests with fellow-workers.	Many	Some	Few
n. Freedom to do things the way I want to.	Much	Some	Little

Job Form

5. When you first took this job, did you feel at the time that it was: (Please read all descriptions carefully and check only those that apply.)

- a. A way to earn money for a special purpose, such as tuition.
- b. Something to do as a stop-gap, such as between school and military service.
- c. A way to broaden yourself as in travel.
- d. A way to earn a living until something better came along (just another job.)
- e. Just a way to make good money.
- f. A way of getting a feel for different kinds of work settings, such as working outdoors, or in an office.
- g. A way to see if you would really like the kind of job you thought you'd like.
- h. A way of finding out if you were good enough at a kind of work you wanted to do.
- i. A steady job that you probably would want to stay with.
- j. A way of getting started in the field you wanted to work in. (Please name field) _____
- k. A way of getting ahead in the field you have already gotten started in. (Please name field) _____
- l. Other _____

Comments: _____

NOW WRITE IN THE LETTER OF THE ONE ABOVE THAT BEST DESCRIBES WHAT YOU FELT THE JOB WAS WHEN YOU TOOK IT: _____.

6. Did you later feel that this job was: (check only one)

Just what you thought it was going to be (in other words, the one you checked above in Question 5.)

Not what you thought it would be, but one of the other descriptions in Question 5. Letter that now seems to fit is _____.

Other _____

(3)

7. DIRECTIONS: Below are several short statements about jobs. Each statement is followed by places for two ways of showing your reactions to it: A - a place to describe HOW WELL you do it

B - a place to describe HOW SATISFIED YOU ARE WITH YOUR OWN PERFORMANCE.

In Column A and B there are five possible ways of answering. In column A from 1, "Poorly" to 5, "Very Well"; In column B from 1, "Very Dissatisfied" to 5, "Very Satisfied."

Please circle for each statement in each column the number that best describes your job performance. (For example, you might circle 2 in column A if you felt that you didn't do very well, but you might circle 4 in column B if you felt satisfied about your performance because the work was difficult and you handled it as well as you could.)

- | | |
|------------------------------|---|
| A. HOW WELL DID YOU DO THIS? | B. HOW SATISFIED ARE YOU WITH YOUR PERFORMANCE? |
| 1. Poorly | 1. Very dissatisfied with how I did |
| 2. Not well | 2. Fairly dissatisfied |
| 3. Average | 3. Neither satisfied nor dissatisfied |
| 4. Fairly well | 4. Fairly satisfied |
| 5. Very well | 5. Very satisfied |

	A HOW WELL					B HOW SATISFIED WITH PERFORMANCE				
	Poorly		Very Well			Very Dissat.			Very Satis.	
	1	2	3	4	5	1	2	3	4	5
a. <u>PERFORMING THE DUTIES OF YOUR JOB</u> (for example, you may have to operate machines, figure up accounts, design plans or procedures, or handle customers skillfully.)										
b. <u>CARRYING THE LOAD OF WORK YOUR JOB REQUIRES</u> (for example, the amount of work you have to turn out, the speed at which you have to work, the number of hours you have to work, and the things you have to lift or move.)										
c. <u>ADAPTING TO PHYSICAL CONDITIONS ON THE JOB</u> (getting work done in spite of interruptions or distractions, such as noise, heat, or crowded conditions, etc.)										

Job Form

7. (continued)

	A HOW WELL					B HOW SATISFIED				
	1	2	3	4	5	1	2	3	4	5
d. <u>GETTING ALONG WITH PEOPLE IN CHARGE</u> (for example, taking and carrying out orders from department heads, supervisors, inspectors, foremen, etc; making a hit with the boss.)										
e. <u>GETTING ALONG WITH YOUR FELLOW WORKERS</u>										
f. <u>GETTING ALONG WITH THE COMPANY'S WAY OF DOING THINGS</u>										
g. <u>GETTING PROMOTIONS AND SALARY INCREASES</u>										

8. Were you generally satisfied with this job?

Yes. Why?: _____

No. Why not? (check as many as you need to describe why you were not generally satisfied with this job and put two checks by your main reason for dissatisfaction.)

- My interests changed.
- I could not find an outlet for my interests.
- My abilities were not good enough for this job.
- There was no credit for doing a good job.
- My work load was too great.
- My family thought I could do better.
- Poor working conditions (for example, dirty, noisy, too hot, too cold, and so forth)
- No opportunity for advancement.
- Not enough benefits.
- I was treated unfairly.
- I had no job security.
- My abilities were better than those required for this job.
- Pay was too low.
- The other workers were hard to get along with.
- There was too much supervision, not enough freedom
- I didn't feel I was doing something really worthwhile.
- Other (Explain) _____

9. Do you now feel for any reason that you stayed with this job any longer than you should have? Yes No

Please explain: _____

10. Do you now have this job?

Yes.

No. If no, why did you leave it?

I was offered a better job in another company.

I did not have enough training for it so I quit.

The job ceased to exist (plant closed, lay off.)

I left to go to school.

I left to go into the service.

My family wanted me to leave.

I was dissatisfied with it so I quit.

I became sick.

I was promoted.

I was fired because (please explain) _____

Other (please explain) _____

11. How did you find this job? _____

12. Beginning Salary _____
Present or Final Salary _____

CAREER DEVELOPMENT STUDY

Extra Job Form

Your Name _____

1. Name of job _____

Dates held: From _____ To _____
(month) (year) (month) (year)

2. How did you find this job? _____

3. Describe your main duties on this job: _____

4. Why did you take this job? _____

5. Why did you leave it? _____

6. Did you like it? _____yes _____no

7. How much did you make each week?

Starting _____ Final _____

CAREER DEVELOPMENT STUDY

Military Form

Your Name _____

1. Branch of service _____

2. Dates of active duty From: _____ To: _____
(Month) (Year) (Month) (Year)

Dates of inactive duty From: _____ To: _____
Reserves or National Guard (Month) (Year) (Month) (Year)

3. Did you, or do you plan to, sign up for a second tour of active duty after your initial tour of duty?

_____ No

_____ Yes

If so, why? _____

4. Beginning grade or rank _____

5. Highest grade or rank attained _____

6. Final or present grade or rank on active duty _____

7. Did you at any time, before, during, or since your military service decide to make it your career?

_____ No

_____ Yes. If so, do you now intend to make the military service your career?

_____ Yes

_____ No. If not, why have you changed your mind?

8. a. Please give information requested below for ACTIVE DUTY; indicating your success and satisfaction with each major assignment by circling the appropriate number: 1-very low, 2-low, 3-average, 4-high, 5-very high.

<u>DATES</u> from to	<u>MAJOR ASSIGNMENT</u>	<u>DUTIES</u>	<u>LOCATION</u>	<u>YOUR SATISFACTION</u>	
				<u>WITH</u> <u>YOUR PERFORMANCE</u>	<u>WITH</u> <u>YOUR DUTIES</u>
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5

b. PLEASE FIVE THE SAME INFORMATION FOR INACTIVE DUTY: (Reserve or National Guard)

<u>DATES</u> from to	<u>MAJOR ASSIGNMENT</u>	<u>DUTIES</u>	<u>LOCATION</u>	<u>YOUR SATISFACTION</u>	
				<u>WITH</u> <u>YOUR PERFORMANCE</u>	<u>WITH</u> <u>YOUR DUTIES</u>
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5
_____	_____	_____	_____	1 2 3 4 5	1 2 3 4 5

(see next page)

9. What service schools have you attended while on active or inactive duty? Please list in chronological order, beginning with the first.

Name of school (if Basic Training, so state)	Time <u>Part</u> <u>Full</u>	<u>Course studied</u>	<u>Length of Course</u>	<u>From</u> <u>To</u>	<u>Certificate or Credit awarded</u>
a. _____	_____	_____	_____	_____	_____
b. _____	_____	_____	_____	_____	_____
c. _____	_____	_____	_____	_____	_____
d. _____	_____	_____	_____	_____	_____
e. _____	_____	_____	_____	_____	_____

(See Next Page)

10. What correspondence courses did you take while in the military service? (inactive or active duty):

- 1. _____

- 2. _____

- 3. _____

11. If you now intend to make the military service your career (full-time active duty), which of the schools mentioned in Question 9 have been most important for your military career?

12. If you do NOT intend to make the military service your career, are any of the schools mentioned in Question 9 important to your civilian career?

Name of School

Way it is important for your career

<u>Name of School</u>	<u>Way it is important for your career</u>
_____	_____
_____	_____
_____	_____
_____	_____

13. In general, how do you feel about your whole tour of duty?

_____ more satisfying than dissatisfying

_____ as satisfying as dissatisfying

_____ more dissatisfying than satisfying

Why? _____

14. As far as your civilian career is concerned, do you feel that the time you spent in the service (check only one)

_____ was more of a help than a delay

_____ helped about as much as it delayed

_____ was more of a delay than a help

Why? _____

Name: _____

INTEREST INVENTORY

In answering these items about occupations and activities, assume that you would have any necessary training or education that would be required. Disregard salary, social standing, permanence, etc., and answer in terms of how much you would like to do the work or the activity. We are not asking about your plans, but only about kinds of things you think you would enjoy doing. Work quickly and give your first impressions. Please answer all items. Write before each item the letter of the choice that best describes your feeling.

- A. I would like this very much
- B. I would like this fairly well
- C. Indifferent or don't know much about it
- D. I would dislike this a little
- E. I would dislike this very much

- | | |
|--|---|
| <input type="checkbox"/> 1. Bookkeeper | <input type="checkbox"/> 26. Office clerk |
| <input type="checkbox"/> 2. Bank teller | <input type="checkbox"/> 27. Plumber |
| <input type="checkbox"/> 3. Surgeon | <input type="checkbox"/> 28. Electrician |
| <input type="checkbox"/> 4. Chemist | <input type="checkbox"/> 29. Fireman |
| <input type="checkbox"/> 5. Civil engineer | <input type="checkbox"/> 30. Dish washer |
| <input type="checkbox"/> 6. Dentist | <input type="checkbox"/> 31. Maid |
| <input type="checkbox"/> 7. Toolmaker | <input type="checkbox"/> 32. Personnel administrator |
| <input type="checkbox"/> 8. Auto mechanic | <input type="checkbox"/> 33. Lawyer |
| <input type="checkbox"/> 9. Butcher | <input type="checkbox"/> 34. Reporter |
| <input type="checkbox"/> 10. Tailor or dressmaker | <input type="checkbox"/> 35. Sculptor |
| <input type="checkbox"/> 11. Dietician | <input type="checkbox"/> 36. Forester |
| <input type="checkbox"/> 12. Cab driver | <input type="checkbox"/> 37. Elementary school teacher |
| <input type="checkbox"/> 13. Longshoreman | <input type="checkbox"/> 38. Nurse |
| <input type="checkbox"/> 14. Foreman | <input type="checkbox"/> 39. Chemical engineer |
| <input type="checkbox"/> 15. College president | <input type="checkbox"/> 40. Doctor |
| <input type="checkbox"/> 16. Insurance agent | <input type="checkbox"/> 41. Aeronautical engineer |
| <input type="checkbox"/> 17. Stock salesman | <input type="checkbox"/> 42. Secretary |
| <input type="checkbox"/> 18. Foreign correspondent | <input type="checkbox"/> 43. Technician |
| <input type="checkbox"/> 19. Editor | <input type="checkbox"/> 44. Electronics technician |
| <input type="checkbox"/> 20. Musician | <input type="checkbox"/> 45. Bricklayer |
| <input type="checkbox"/> 21. Rancher | <input type="checkbox"/> 46. Riveteer |
| <input type="checkbox"/> 22. Social worker | <input type="checkbox"/> 47. House painter |
| <input type="checkbox"/> 23. Statistician | <input type="checkbox"/> 48. Building superintendent |
| <input type="checkbox"/> 24. Astronomer | <input type="checkbox"/> 49. President of a large company |
| <input type="checkbox"/> 25. Research scientist | <input type="checkbox"/> 50. Author of a novel |

- A. I would like this very much
- B. I would like this fairly well
- C. Indifferent or don't know much about it
- D. I would dislike this a little
- E. I would dislike this very much

- | | |
|--|--|
| <input type="checkbox"/> 51. Librarian | <input type="checkbox"/> 88. College professor |
| <input type="checkbox"/> 52. Professional athlete | <input type="checkbox"/> 89. Poet |
| <input type="checkbox"/> 53. Clergyman | <input type="checkbox"/> 90. Artist |
| <input type="checkbox"/> 54. Certified Public Accountant | <input type="checkbox"/> 91. Designer |
| <input type="checkbox"/> 55. Biologist | <input type="checkbox"/> 92. Farmer |
| <input type="checkbox"/> 56. Electrical engineer | <input type="checkbox"/> 93. High school teacher |
| <input type="checkbox"/> 57. Mining engineer | <input type="checkbox"/> 94. Religious worker |
| <input type="checkbox"/> 58. Typist | <input type="checkbox"/> 95. School principal |
| <input type="checkbox"/> 59. Laboratory technician | <input type="checkbox"/> 96. Member of President's cabinet |
| <input type="checkbox"/> 60. Repairman | <input type="checkbox"/> 97. Judge |
| <input type="checkbox"/> 61. Beautician | <input type="checkbox"/> 98. U. S. Senator |
| <input type="checkbox"/> 62. Railroad brakeman | <input type="checkbox"/> 99. Politician |
| <input type="checkbox"/> 63. Shoemaker | <input type="checkbox"/> 100. U. S. Congressman |
| <input type="checkbox"/> 64. Factory worker | <input type="checkbox"/> 101. Mayor |
| <input type="checkbox"/> 65. Deliveryman | <input type="checkbox"/> 102. President of the United States |
| <input type="checkbox"/> 66. Truck driver | <input type="checkbox"/> 103. Vice President of the U. S. |
| <input type="checkbox"/> 67. Building contractor | <input type="checkbox"/> 104. State Governor |
| <input type="checkbox"/> 68. Real estate agent | <input type="checkbox"/> 105. Public administrator |
| <input type="checkbox"/> 69. Interpreter | <input type="checkbox"/> 106. Take care of members of family |
| <input type="checkbox"/> 70. Writer | <input type="checkbox"/> 107. Make out income tax returns |
| <input type="checkbox"/> 71. Musical composer | <input type="checkbox"/> 108. Biology |
| <input type="checkbox"/> 72. Architect | <input type="checkbox"/> 109. Physics |
| <input type="checkbox"/> 73. Decorator | <input type="checkbox"/> 110. Study muscles and nerves |
| <input type="checkbox"/> 74. Sports umpire or referee | <input type="checkbox"/> 111. Calculus |
| <input type="checkbox"/> 75. Guidance counselor | <input type="checkbox"/> 112. Keep records for a store |
| <input type="checkbox"/> 76. Accountant or auditor | <input type="checkbox"/> 113. Invent new tools |
| <input type="checkbox"/> 77. Mechanical engineer | <input type="checkbox"/> 114. Fix furniture |
| <input type="checkbox"/> 78. Mathematician | <input type="checkbox"/> 115. Work on an auto assembly line |
| <input type="checkbox"/> 79. Switchboard operator | <input type="checkbox"/> 116. Wash and iron clothes |
| <input type="checkbox"/> 80. Machinist | <input type="checkbox"/> 117. Plan work for other people |
| <input type="checkbox"/> 81. Welder | <input type="checkbox"/> 118. Own your own business |
| <input type="checkbox"/> 82. Paper hanger | <input type="checkbox"/> 119. Reading |
| <input type="checkbox"/> 83. Carpenter | <input type="checkbox"/> 120. Fishing |
| <input type="checkbox"/> 84. Type setter | <input type="checkbox"/> 121. Basketball |
| <input type="checkbox"/> 85. Office manager | <input type="checkbox"/> 122. Tennis |
| <input type="checkbox"/> 86. Banker | <input type="checkbox"/> 123. Raise sheep or cattle for market |
| <input type="checkbox"/> 87. Salesman | <input type="checkbox"/> 124. Help your parents |

- A. I would like this very much
- B. I would like this fairly well
- C. Indifferent or don't know much about it
- D. I would dislike this a little
- E. I would dislike this very much

- | | |
|--|--|
| <ul style="list-style-type: none"> ___ 125. Work arithmetic problems ___ 126. Prepare cost estimates ___ 127. Typewriting ___ 128. Make a radio set ___ 129. Fix a clock ___ 130. Operate a power machine ___ 131. Fire a person ___ 132. Manage a large store ___ 133. Write letters ___ 134. Practice music all day ___ 135. Art galleries ___ 136. Football ___ 137. Track ___ 138. Operate farm machinery ___ 139. Operate a calculating machine ___ 140. Physiology ___ 141. Chemistry ___ 142. Play chess ___ 143. Solve puzzles ___ 144. Do clerical work ___ 145. Repair an auto ___ 146. Operate a crane or derrick ___ 147. Work in a steel mill ___ 148. Hire a person ___ 149. Supervise factory workers ___ 150. Sell furniture ___ 151. Trap wild animals ___ 152. Foreign language ___ 153. Teach children ___ 154. Help the poor ___ 155. Keep accounts | <ul style="list-style-type: none"> ___ 156. Algebra ___ 157. Learn about diseases ___ 158. Sell merchandise to stores ___ 159. Literature ___ 160. Write themes ___ 161. Symphony concerts ___ 162. Hunting ___ 163. Swimming ___ 164. Feed hogs and cattle ___ 165. Shop work ___ 166. Do odd jobs with small tools ___ 167. Direct people ___ 168. Arrange a strike settlement ___ 169. Poetry ___ 170. Play an instrument ___ 171. Visit museums ___ 172. Baseball ___ 173. Gardening ___ 174. Campaign for political office |
|--|--|

Name: _____

OCCUPATIONAL ASPIRATIONS

This set of questions concerns your interest in different kinds of jobs. There are eight questions. Each one asks you to choose one job out of ten listed. Read each question carefully. They are all different. Please answer all questions.

1. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU COULD GET (assuming your schooling is over)? Check one job.

<input type="checkbox"/> Lawyer	<input type="checkbox"/> Night watchman
<input type="checkbox"/> Welfare worker	<input type="checkbox"/> Sociologist
<input type="checkbox"/> Congressman	<input type="checkbox"/> Policeman
<input type="checkbox"/> Army Corporal	<input type="checkbox"/> County agricultural agent
<input type="checkbox"/> Supreme Court Justice	<input type="checkbox"/> Filling station attendant

2. Of the jobs listed in this question, which ONE would you choose if you were free to CHOOSE ANY of them you wished? Check one job.

<input type="checkbox"/> Corporation board	<input type="checkbox"/> Clothes presser
<input type="checkbox"/> Undertaker	<input type="checkbox"/> Accountant
<input type="checkbox"/> Banker	<input type="checkbox"/> Railroad conductor
<input type="checkbox"/> Machine operator	<input type="checkbox"/> Railroad engineer
<input type="checkbox"/> Physician	<input type="checkbox"/> Night club singer

3. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU COULD GET (assuming your schooling is over)? Check one job.

<input type="checkbox"/> Nuclear physicist	<input type="checkbox"/> Store clerk
<input type="checkbox"/> Reporter	<input type="checkbox"/> Biologist
<input type="checkbox"/> County judge	<input type="checkbox"/> Mail carrier
<input type="checkbox"/> Barber	<input type="checkbox"/> Labor union official
<input type="checkbox"/> State Governor	<input type="checkbox"/> Farm hand

4. Of the jobs listed in this question, which ONE would you choose if you were free to CHOOSE ANY of them you wished? Check one job.

<input type="checkbox"/> Psychologist	<input type="checkbox"/> Janitor
<input type="checkbox"/> Store manager	<input type="checkbox"/> Symphony musician
<input type="checkbox"/> State government official	<input type="checkbox"/> Carpenter
<input type="checkbox"/> Store clerk	<input type="checkbox"/> Radio announcer
<input type="checkbox"/> Federal cabinet member	<input type="checkbox"/> Coal miner

5. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU COULD HAVE by the time you are 30 YEARS OLD? Check one job.

- | | |
|---|--|
| <input type="checkbox"/> Civil engineer | <input type="checkbox"/> Share cropper (tenant farmer) |
| <input type="checkbox"/> Bookkeeper | <input type="checkbox"/> Author of novels |
| <input type="checkbox"/> Minister, Priest, or Rabbi | <input type="checkbox"/> Plumber |
| <input type="checkbox"/> Bus driver | <input type="checkbox"/> Newspaper columnist |
| <input type="checkbox"/> Diplomat | <input type="checkbox"/> Taxi driver |

6. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

- | | |
|--|---|
| <input type="checkbox"/> Airline pilot | <input type="checkbox"/> Garbage collector |
| <input type="checkbox"/> Insurance agent | <input type="checkbox"/> Army Captain |
| <input type="checkbox"/> Architect | <input type="checkbox"/> Garage mechanic |
| <input type="checkbox"/> Milk route man | <input type="checkbox"/> Owner-operator of a shop |
| <input type="checkbox"/> Mayor of a city | <input type="checkbox"/> Railroad section hand |

7. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU COULD HAVE by the time you are 30 YEARS OLD? Check one job.

- | | |
|---|---|
| <input type="checkbox"/> Artist | <input type="checkbox"/> Street cleaner |
| <input type="checkbox"/> Traveling salesman | <input type="checkbox"/> Building contractor |
| <input type="checkbox"/> Chemist | <input type="checkbox"/> Labor union official |
| <input type="checkbox"/> Truck driver | <input type="checkbox"/> Electrician |
| <input type="checkbox"/> College professor | <input type="checkbox"/> Restaurant waiter |

8. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

- | | |
|--|--|
| <input type="checkbox"/> Factory owner | <input type="checkbox"/> Shoeshiner |
| <input type="checkbox"/> Playground director | <input type="checkbox"/> Teacher |
| <input type="checkbox"/> Dentist | <input type="checkbox"/> Lunchstand owner-operator |
| <input type="checkbox"/> Lumberjack | <input type="checkbox"/> Machinist |
| <input type="checkbox"/> Scientist | <input type="checkbox"/> Dock worker |

Name: _____

WORK BELIEFS

This check-list is made up of statements people often say they believe. You will find that you agree with some of them and disagree with others. Write an "A" before the statements you tend to agree with, and a "D" before the statements you tend to disagree with. Please answer all items.

- ___ 1. The only purpose of working is to make money.
- ___ 2. I don't like people who are always right on time for every appointment.
- ___ 3. I would be unhappy living away from my relatives.
- ___ 4. I like to try new things.
- ___ 5. I believe that a person can get anything he wants if he's willing to work for it.
- ___ 6. I would rather work than go to school.
- ___ 7. I believe that a man needs to work in order to feel that he has a real place in the world.
- ___ 8. I feel sorry for people who have to do the same thing every day at the same time.
- ___ 9. I hope to move to another state within the next few years.
- ___ 10. On the whole, the old ways of doing things are the best.
- ___ 11. Man should not work too hard, for his fortune is in the hands of God.
- ___ 12. Money is made to spend, not to save.
- ___ 13. I feel sorry for people whose jobs require that they take orders from others.
- ___ 14. I don't like to have to make appointments.
- ___ 15. People who can't leave their hometowns are hard for me to understand.
- ___ 16. Life would be boring without new experiences.
- ___ 17. A man shouldn't work too hard because it won't do him any good unless luck is with him.
- ___ 18. I think there's something wrong with people who go to school for years when they could be out earning a living.
- ___ 19. Every man should have a job that gives him a steady income.
- ___ 20. I believe that promptness is a virtue.
- ___ 21. A man's first loyalty should be to his home community.
- ___ 22. I like people who are willing to change.
- ___ 23. With a little luck I believe I can do almost anything I really want to do.
- ___ 24. One gains more in the long run if he studies than if he gets a job.
- ___ 25. The happiest men are those who work only when they need money.
- ___ 26. I usually schedule my activities.
- ___ 27. When a boy becomes a man, he should leave home.
- ___ 28. On the whole, most changes make things worse.

A: Agree

D: Disagree

- ___ 29. A person shouldn't hope for much in this life.
- ___ 30. The more school a person gets the better off he is.
- ___ 31. Doing a good job day in and day out is one of the most satisfying experiences a man can have.
- ___ 32. I'd rather let things happen in their own way than have them scheduled by a clock.
- ___ 33. I like to see new things and meet new people.
- ___ 34. The happiest people are those who do things the way their parents did.
- ___ 35. If a man can't better himself it's his own fault.
- ___ 36. Generally speaking, things one works hard for are the best.
- ___ 37. A regular job is good for one.
- ___ 38. It makes me feel bad to be late for an appointment.
- ___ 39. New things are usually better than old things.
- ___ 40. Practically everything I try to do turns out well for me.
- ___ 41. When I get a little extra money I usually spend it.
- ___ 42. I feel sorry for rich people who never learn how good it is to have a steady job.
- ___ 43. I expect people who have appointments with me to be right on time.
- ___ 44. I usually fail when I try something important.

Name: _____

ACTIVITIES INVENTORY

This inventory contains questions about the things you usually do and the way you do them. Your careful answers will be helpful in our effort to understand your career development. Please try to answer every question. For each statement write in the space to the left the letter of the one of the five choices which best describes how the statement applies to you. Here are the five choices with their code letters:

Regarding the things I do and the way I do them,
this statement describes me

- A. extremely well.
- B. quite well.
- C. fairly well.
- D. slightly.
- E. not very well.

- ___ 1. I am the leader in my group.
- ___ 2. I am confident.
- ___ 3. I am never sloppy in my personal appearance.
- ___ 4. I make good use of all my time.
- ___ 5. I never seem to get things done on time.
- ___ 6. I talk a lot.
- ___ 7. I am a strong believer in customs and traditions.
- ___ 8. I like to spend a good deal of time by myself.
- ___ 9. I work fast and get a lot done.
- ___ 10. I am influential.
- ___ 11. When I say I'll do something I get it done.
- ___ 12. I can work or play outdoors for hours without getting tired.
- ___ 13. I'd rather be with a group of friends than home by myself.
- ___ 14. I like to tease people.
- ___ 15. I enjoy beautiful things.
- ___ 16. I work better with ideas than things.
- ___ 17. I believe that most things work out for the best in the end.
- ___ 18. I get along well with people.
- ___ 19. I often lose my temper.
- ___ 20. I have a definite place for all of my things.
- ___ 21. I'd enjoy speaking to a club group on a subject I know well.
- ___ 22. I feel that good manners are very necessary for everyone.
- ___ 23. I like to do things on the spur of the moment.
- ___ 24. It bothers me to leave a task half done.

Regarding the things I do and the way I do them,
this statement describes me

- A. extremely well.
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- ___ 25. I do what the group decides to do even if I don't particularly like it.
- ___ 26. I have held a lot of elected offices.
- ___ 27. Being around strangers makes me ill at ease.
- ___ 28. Before I start a task, I spend some time getting it organized.
- ___ 29. I can turn out a lot more work than average.
- ___ 30. I am hard-working.
- ___ 31. People consider me the quiet type.
- ___ 32. People consider me an individualist.
- ___ 33. People seem to think I make new friends more quickly than most do.
- ___ 34. People consider me an efficient worker.
- ___ 35. My friends say I'm "bossy."
- ___ 36. I do my job, even when I don't like it.
- ___ 37. I am a fast walker.
- ___ 38. I couldn't get along without having people around me most of the time.
- ___ 39. I never hurt another person's feelings if I can avoid it.
- ___ 40. I think culture is more important than wealth.
- ___ 41. Philosophy interests me.
- ___ 42. I can't find much to be cheerful about these days.
- ___ 43. I get along very well with my teachers or supervisors.
- ___ 44. I can usually keep my wits about me even in difficult situations.
- ___ 45. It bothers me to be with someone who dresses carelessly.
- ___ 46. I'm troubled by people making fun of me.
- ___ 47. I know what is socially proper.
- ___ 48. I usually act on the first plan that comes to mind.
- ___ 49. I find it hard to keep working toward long-range goals.
- ___ 50. I'd give up my place on a team if that would insure that the team wins.
- ___ 51. People naturally follow my lead.
- ___ 52. People seem to think my feelings are hurt too easily.
- ___ 53. I like to do things systematically.
- ___ 54. I am productive.
- ___ 55. As soon as I finish one project, I always have another to begin.
- ___ 56. I am talkative.
- ___ 57. People say I tend to do things in the traditional way.
- ___ 58. I am usually at ease.
- ___ 59. I seem to know how other people will feel about things.

Regarding the things I do and the way I do them,
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- A. extremely well.
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- ___ 60. I am a forceful person.
- ___ 61. I never volunteer for a tough job.
- ___ 62. I am full of pep and energy.
- ___ 63. I enjoy getting to know people.
- ___ 64. I sympathize with my friends when they have problems.
- ___ 65. I enjoy cultural things.
- ___ 66. I'd rather build things than develop theories.
- ___ 67. I am an optimist about most things.
- ___ 68. I like to help people get things done.
- ___ 69. People seem to think I get angry easily.
- ___ 70. My work suffers from lack of neatness.
- ___ 71. People think I am easily discouraged when criticized.
- ___ 72. I know the right thing to wear for social occasions.
- ___ 73. I feel that I am impulsive.
- ___ 74. I think that if something is worth starting it's worth finishing.
- ___ 75. I enjoy helping my group get ahead.
- ___ 76. I do things the best I know how, even if no one is checking up on me.
- ___ 77. People seem to think I lead a vigorous life.
- ___ 78. I like to be with people most of the time.
- ___ 79. People consider me a sympathetic listener.
- ___ 80. I am a cultured person.
- ___ 81. I spend a lot of time thinking.
- ___ 82. Most of the time I'm in a light-hearted mood.
- ___ 83. I go out of my way to help my friends.
- ___ 84. People seem to think I have good self-control.
- ___ 85. People consider me very careful about my personal appearance.
- ___ 86. I am often self-conscious.
- ___ 87. People seem to think that I have good taste.
- ___ 88. People seem to think I sometimes make decisions too quickly.
- ___ 89. I lose interest in most projects before I get them done.
- ___ 90. If I don't agree with the group's decision, I go my own way.
- ___ 91. People seem to think they can count on me.
- ___ 92. I am active.
- ___ 93. I go out of my way to be with friends.
- ___ 94. People consider me very tactful in dealing with other people.

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- ___ 95. I take part in the cultural activities in my community.
- ___ 96. I'd rather read a book than go to a party.
- ___ 97. I tend to look on the bright side of things.
- ___ 98. People seem to think I work well with others.
- ___ 99. people consider me level-headed.
- ___ 100. I am tidy.
- ___ 101. People consider me shy.
- ___ 102. People consider me courteous and polite.
- ___ 103. I am impulsive.
- ___ 104. People consider me persistent.
- ___ 105. I take great pride in the accomplishments of my group.
- ___ 106. I am dependable.
- ___ 107. I am vigorous.
- ___ 108. I prefer reading a good book to going out with friends.
- ___ 109. I am sympathetic.
- ___ 110. I tend to have good taste.
- ___ 111. People say that I tend to be a "thinker" rather than a "doer."
- ___ 112. People consider me good-natured.
- ___ 113. I am cooperative.
- ___ 114. I am even-tempered.
- ___ 115. I am neat.
- ___ 116. I am sensitive.
- ___ 117. I am refined.
- ___ 118. I don't believe in rushing into things.
- ___ 119. People have criticized me for leaving things undone.
- ___ 120. I am a team-player.
- ___ 121. I am conscientious.
- ___ 122. I am energetic.
- ___ 123. People consider me sociable.
- ___ 124. I am considerate.
- ___ 125. I get enthusiastic over the things I do.
- ___ 126. I tend to be theoretical.
- ___ 127. I am happy.
- ___ 128. People consider me helpful.
- ___ 129. I am calm.

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- ___ 130. I am orderly.
- ___ 131. I am often worried.
- ___ 132. I am sometimes crude.
- ___ 133. I am cautious.
- ___ 134. I am persistent.
- ___ 135. I am quiet.
- ___ 136. I am reliable.
- ___ 137. I like to make decisions.
- ___ 138. I am friendly.
- ___ 139. People consider me understanding.
- ___ 140. I get eager and enthusiastic about each new project I start.
- ___ 141. I am imaginative.
- ___ 142. I am cheerful.
- ___ 143. I am stable.
- ___ 144. I am usually self-controlled.
- ___ 145. I tend to be untidy.
- ___ 146. People seem to think I usually do a good job on whatever I'm doing.
- ___ 147. When I have a problem, I make up my mind and don't worry about it.
- ___ 148. It takes me quite a while to come to a decision.
- ___ 149. People consider me determined.
- ___ 150. Most of my opinions and beliefs are in line with those of everyone else