A STUDY OF INTEREST CHANGES WITH AGE

Thesis for the Degree of M. A. MICHIGAN STATE UNIVERSITY Bruce Sandor Vogel 1964





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ABSTRACT

A STUDY OF INTEREST CHANGES WITH AGE by Bruce Sandor Vogel Abstract of a Master's Thesis Completed Fall Term, 1964

Thirty-nine retired, male members of a day center for senior citizens in New York City were administered the Strong Vocational Interest Blank in order to study the effects of age and retirement on vocational interests. Assuming that adjustment to retirement and old age would influence previously held vocational interests and facilitate the acquisition of new interests, it was generally expected that variability rather than constancy of interests would prevail for the aged subjects employed in this investigation.

Those occupational groupings which reflect an erientation toward social interaction were expected to be increasingly preferred, those which reflect an orientation toward solitary activity were expected to decline with age.

A correlational analysis was performed with age and number of years retired related with the score obtained on the eleven occupational groupings of the Strong Blank. Significant correlations were obtained between age and seven of the eleven groupings. Number of years retired was significantly related to four of the occupational groupings.

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Bruce S. Vogel

The results were in accord with expectations, and were interpreted as reflecting the fact that the subjects in this study are more concerned about psychological deprivations than younger individuals who are employed and who consequently receive the benefits of status and recognition by virtue of their occupation. It was suggested that the growing awareness of a lack of self-esteem prompts greater social interests and social participation in the older person's attempt at overcoming the psychological deprivations consequent with old age.

The various studies which have attempted to derive age-related psychological variables that determine interests, activities and adjustment were criticized as not accounting for the interaction of multiple social variables when such interactions exist and for not validating the instruments used for research purposes against external criteria.

It was suggested that future investigations take account of socio-economic level in evaluating the relationship between changing interests and social and psychological variables. It was further indicated that these variables themselves need clarification.

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A STUDY OF INTEREST CHANGES WITH AGE

Bruce Sandor Vogel

A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

Department of Psychology

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Appreciation is also extended to Dr. Charles Hanley and Dr. Josephine Morse for their worthwhile suggestions.

To Dr. Wayne Dennis of Brooklyn College go especial thanks. The idea for the study was born in his class in developmental psychology and the data was collected under his supervision.

Finally, the author wishes to express sincere gratitude to the senior citizens who participated in the study. It is hoped that their contribution, as embodied in this thesis, will prove helpful in extending our knowledge of the developmental period that they represent.

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CHAPTER I

This study is concerned with the vocational interests of retired men in the seventh and eighth decades of life. It attempts to evaluate the perseverative tendency of interests in the later decades using the Strong Vocational Interest Blank (SVIB) for men.

Strong has defined vocational interest as the "sum total of all interests that bear in any way upon an occupational career" (Strong, 1951a). Interests are related to abilities, innate qualities and environmental learning. Strong has demonstrated that interests are remarkably stable, and that permanence of interest scores increase with age. He has found that the most rapid change in interests occurs between the ages of 15 and 25 years, with approximately two-thirds of this change between the ages of 15.5 years and 18.5 years, and that the thirty years between the ages of 25 and 55 years witness very slight changes in interests (Strong, 1943). All studies that have been done prior to 1963 indicate a high degree of permanence of interests (Strong, 1951a; 1952; 1955). Since interests are learned and since the efficiency with which people

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learn is considerably reduced in the later years, it might be expected that an individual's pattern of interests would change little in later maturity.

On the other hand, investigations of recent origin in the literature concluding that retirement ushers in a new way of life necessitating a new adjustment and the assumption of new roles, suggest that interests along with other psychological factors would change in the decades following retirement.

One such point of view has been labelled the "Disengagement Theory" (Henry & Cumming, 1959; Cumming, Dean, Newell, & McCaffrey, 1960). Its proponents view the withdrawal which occurs between the aged adult and society as prompted by mutual consent. These investigators would predict declining interests with age. The disengagement hypothesis is based on the assumption that the elderly cooperate voluntarily to progressively decrease their social interaction and activities, as the aging process unfolds. Implicit in this conception is the notion that a positive relationship exists between psychological adjustment in the aged and disengagement. Opposed to the "Disengagement Theory" are a group of investigators who subscribe to another point of view, (Cavan, Burgess, Havighurst & Goldhamer; 1949; Havighurst, 1961; Tobin & Neugarten, 1961; Davis, 1962; Goodstein, 1962;

Wallin, 1962). They assume that successful aging is dependent upon maintained activity and interests in the later years and view the older person as a passive victim of withdrawal and rejection by society. According to this view, expressed interests in people and activities would not be expected to change in the post-retirement years.

Of those studies which have used the SVIB to investigate constancy of interests with age, few have included subjects older than 55 years. However, Strong has shown, in a study employing a small number of men between the ages of 60 and 69 years, that interests, as measured by the SVIB, did not differ significantly from those of younger men (1951a). The subjects employed in this study (N = 84) were engaged in four occupations. The fact that they were not retired and were younger than 70 years of age limits the applicability of the findings with regard to the present study. Moreover, Strong's conclusion is only suggestive. "There are not sufficient data here to warrant a definite conclusion, but they suggest that there is very little if any change in interests between 55 and 65 (years)" (1951a, p. 161).

In two additional studies which employed older men (Powers, 1956; Verburg, 1952) it was found that their vocational interests tend to remain constant,

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regardless of age, apparently throughout adult life. Verburg (1952) tested the differences between retired and active YMCA secretaries. His retired group had a mean age of 66 years, his active group a mean age of 56 years. Twelve occupational scales of the SVIB were used. No differences between the mean standard scores for the active and retired groups on any of the scales were significant at or beyond the .05 level. Verburg therefore concluded that vocational interest scores seem to be maintained at least up to the age of 70 years and probably beyond that age. As far as YMCA secretaries are concerned retirement does not seem to be a variable affecting vocational interests. However, since vocational interests were not investigated beyond the age of 70 years, Verburg's study also has limited applicability to the present study.

Powers (1956) administered the SVIB to 109 adult males in 1931 and retested the same individuals ten years later. Her subjects ranged in age from 16 to 63 years at the time of the first administration of the SVIB. They were generally from middle and low socioeconomic groups. Test re-test correlations between the tests administered in 1931 and 1941 were remarkably high. Powers also noted stability of group patterns over the ten year period. These results led her to conclude "... that the vocational interests of adult

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males, regardless of age, aptitudes, education, vocational opportunity, and economic status tend to remain stable for ten years and presumably over the long span of adulthood". Such a conclusion seems unwarranted. Of the forty-four occupational scales used, significant differences on twenty of these occupations were found between the mean standard scores of the 1931 and 1941 administrations; fourteen of these were significant at the .01 level and six at the .05 level. Powers, however, interpreted the shift in letter grade equivalents rather than the shift in mean standard scores between the two testings. Strong has assigned an A letter grade to standard scores of 45 or higher, B+ to standard scores of 40 to 44, B to standard scores of 35 to 39, etc. A significant difference between the mean standard scores of two groups of individuals or of test re⊶tests on the same group can occur within the same letter grade rating. Since Powers found stable letter grade equivalents of the test remtest occupational scores she concluded that stability of vocational interests exists. But the stability of interests noted is heavily influenced by the regression caused by use of mean values and the further restriction as a result of using letter grade ranges. Because of the fact that generation differences often present in cross-sectional investigations can confound results, longitudinal studies, such as

the one by Powers, are generally more effective in revealing differences in interests with age. It is unfortunate that the actual differences found were masked by Powers' use of letter grade ranges.

The recently formulated "Disengagement Theory" previously cited (Henry & Cumming, 1959; Cumming et al., 1960) presents a point of view that is contrary to the findings of stability of interests in the later years.

The authors assume that crucial social and psychological differences exist between middle---- and old-aged individuals, which are expressed by a voluntary and gradual disengagement in social involvement beginning in the sixth decade of life. To investigate this theory of aging 211 individuals between the ages of 50 and 90 years, residing in the Kansas City Metropolitan Area were interviewed for the purpose of evaluating changes with age in the quality and amount of social interaction. The authors concluded that beginning in the sixth decade a progressive shift in self-perception takes place along with a constriction in the variety of social interactions. This is followed by a reduction in the number of hours spent in the company of others and a shift in the quality of interaction, which may be described as a more selfcentered style of behavior in aged adults (Cumming et

al., 1960). Although there is little disagreement among investigators that middle-aged individuals are generally more engaged with life external to themselves than are older people, the belief that the aged themselves redefine their interpersonal relationships is an aspect of the theory which has occasioned disagreement. Many investigators feel that the curtailment of interest in activities and people with age is socially produced, but is not the desire of the aged themselves (Gardner, 1948; Shonas, 1950; Davis, 1962; Wallin, 1962).

In a study by Tobin & Neugarten (1961) measures of social interaction which were developed by Cumming were used to investigate the relationship between disengagement and psychological well-being. The authors found that social interaction is positively associated with everyday pleasures, success in attaining life goals and positive self-image and that as age increases so does the association.

To resolve the issue of whether the attitude of the older person toward disengagement is voluntary or involuntary, Zborowski investigated the preferences of older people for recreational activities (1962) and for social participation (Zborowski & Eyde, 1962).

The subjects used in both studies, 204 male and female members of a day center in New England, ranged in age from 51 to 92 years. They had a median education

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of 13.4 years, a median income of \$2,764 and were predominantly Protestant and native-born. Approximately one-half of the subjects were retired. The questionnaire procedure employed indicated that recreational patterns and preferences and social contacts and participation are generally maintained with age. The authors concluded that voluntary withdrawal from society in the later years does not occur. Those individuals oriented toward social isolation in middleage remained so motivated in old-age, those oriented toward activity and social involvement likewise maintained these preferences in advanced age.

If aging individuals do maintain the orientation toward activity and social participation that they had in middle-age it would be expected that scores on the SVIB would reflect constancy of interests with age in the advanced years. On the other hand, if retirement ushers in a new way of life which is often psychologically traumatic, as Pollak suggests (1948), vocational interests might be expected to change in accord with the psychological adjustment taking place within the aging individual. Which of these alternatives is the more likely is a complex issue, difficult to resolve at the moment. There is a dearth of studies investigating the psychological factors involved in adjusting to retirement and old age are not

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clearly understood. Whether the crucial psychological differences between the middle-aged and the elderly are found to lie along a dimension of social involvement as in Cumming's investigations (Henry & Cumming, 1959; Cumming et al., 1960), or whether such differences are irrelevant for differentiating the two groups as Zborowski concluded (1962; Zborowski & Eyde, 1962) may depend on the socio-economic level of the subjects in any particular investigation. Zborowski's subjects as well as Verburg's in the study previously cited (1952) were from relatively high socio-economic educational Individuals with a high level of education groups. and a relatively high income level may possess greater internal resources so that constancy of social interactional patterns and interests may prevail. Individuals who are not so richly endowed may find adjustment to old age difficult if not traumatic. Personality changes may occur for such individuals and interests may be modified or changed. In addition to socio-economic and educational level, such social variables as ethnic and cultural background, country of origin, sex, etc., must be carefully considered before generalizations can be offered with regard to psychological factors operating in a particular age group.

The studies in this area are also deficient in

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that the instruments used are not validated against external criteria. For example, "happiness" is often defined in part by "participation in hobbies" on instruments used to assess adjustment in old age. The fact that so called "happy" or well adjusted older people are then found to differ from poorly adjusted aged adults in time spent at hobbies becomes true only by definition and says nothing about the causative or necessary prerequisites of adjustment in the later years.

In addition to the failure of many investigations to consider interactions of multiple social variables, but to generalize results nevertheless, and their failure to validate the measures used against external criteria, a third objection may be raised. Studies of age-related determinants of behavior arc frequently cause and effect investigations. Before one can profitably study changing motivational patterns which influence adjustment to retirement and to old age, one must knew first if motivational patterns change in the later years and then in which direction this change occurs. It is because such associations have not been clearly established that contradictory assertions have been made with regard to engagement or disengagement as a causative factor of sound adjustment in later maturity. A correlational
analysis is considered a necessary first step in specifying the psychological factors that are associated with this developmental period.

Those investigations cited above (Strong, 1951; Verburg, 1952; Powers, 1956) which have used the SVIB to evaluate the perseverative tendency of interests in the later years, have attempted to specify one agerelated psychological variable by means of correlational designs. These studics are limited however, in that they did not employ subjects older than 70 years of age. Although in all three studies it was concluded that interests remain constant with age, the subjects used were not retired from their occupations, with the exception of those in Verburg's (1952) investigation in which retirants of recent origin were used. The act of retirement per se would probably not effect motivational or interest changes. However, retirement when evaluated as a period of life occurring over time, might be expected to influence changes in previously held vocational interests, if that which had occupied a great investment in time and effort has become increasingly replaced by other activities and timeconsuming endeavors.

Problem

The present study was conducted at a day center for senior citizens in New York City. Observations made

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cver a three year period suggested several differences in the behavior of the newly retired members and those individuals who had been retired longer and were considerably older. It was noted, for example, that the younger an individual the more likely was he to be passively, rather than actively engaged in day center activities. The older members sparked, and became actively involved in group discussions and ran for the elected offices in the center. For the most part, the older individuals sought social interaction whereas the younger retirants preferred to remain more socially isolated.

In accord with these observations it would be expected that interest patterns on the SVIR should reflect changes with age. More particularly, there should be a marked directional shift in interests in the later decades of life. Those occupational groupings which reflect an orientation toward social interaction should be increasingly preferred, whereas those occupational groupings which reflect an orientation toward solitary activity, ought to decline with age.

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CHAPTER II

METHOD

The Day Center

More than thirty day centers have now been established by the New York City Department of Welfare for the purpose of providing social, educational and recreational opportunities for retired senior citizens. The centers are all non-sectarian, non-profit and are free of charge. The day center in which this study took place comprises a community of individuals above the age of 60 years who use their leisure hours to satisfy diversified interests by sewing, painting, dancing, engaging in ceramic and leather work, and by participating in discussion groups and educational classes. The latter include classes in dramatics, creative writing, and human relations.

The center is managed in large part by the members themselves. Officers are elected annually. The Department of Welfare provides professional staff to conduct the various group activities and perform the necessary administrative work. The day center is open three days each week between the hours of 9 and 5.

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The average daily attendance is approximately 300 members of which two-thirds are women. Although the center is non-sectarian, it is located in a predominantly Jewish neighborhood and attracts individuals primarily of this faith. At the present time, approximately 90 percent of the membership is Jewish.

Subjects

The 39 male subjects are quite homogeneous with regard to such factors as religion, socioeconomic level, country of origin, work experience, political affiliation and educational background (see Tables 1 and 2).

Table 1

Occupational Classificatory Categories and Code Numbers for Subjects, Derived from the Dictionary of Occupational Titles, 1955 Supplement

Occupational Category	No. of Subjects	Code Number	Percentage of N
Professional and			
Managerial	3	0	7•7
Sales and Clerical	2	1	5.1
Service Occupations	2	2	5.1
Farm Occupations	0	3	0.0
Skilled Occupations	18	4-5	46.2
Semi-skilled Occupations	7	6-7	17.9
Unskilled Occupations .	7	8-9	17.9
	N=39		99•9

The subjects all immigrated from Russia and Austria after the turn of the century. Most have •

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learned English by attending night classes shortly after arriving in the United States. All of them speak English, but many have difficulty reading and writing. They are all literate, however; those that do not read and write English, read newspapers and write in Yiddish.

Table 2

Age, Education, and Social Characteristics of Subjects.

Age	M=71.6, Range =	62 - 83
Years Retired	M= 6.9, Range =	1#27
No. of years in School	M = 4.7, Range =	4-16
Country of Origin:		
Russia	82% 18%	
Religious Preference:		
Hebrew	100% 0%	
Socio-Economic Level:		
Low-Middle	92% 8%	

The Strong Vocational Interest Blank for Men

The Strong inventory consists of 420 items that reflect the characteristic interests of men successfully engaged in 45 different occupations. The items of the questionnaire concern occupational preferences, school subjects, amusements, sundry activities, peculiarities of people, estimates of abilities and characteristics and miscellaneous items. The higher one's rating on an occupational scale the greater is the probability that one has the interests of individuals successfully engaged in that occupation. (Strong, 1959).

The SVIB was used to measure interest preferences, since it has proven to be a reliable and valid measure of vocational interests over the more than thirty years of its use as a research instrument (Berdie, 1955).

Reliability Studies

Three different methods have been used to measure reliability of the SVIB. In one study the "odd-even" technique gave an average coefficient of reliability of .877 (Strong, 1943). Test re-test correlations of various occupational scales reported in several different studies gave correlations that ranged from .64 to .91 (Strong, 1952; Strong and Tucker, 1952; Stordahl, 1954; Powers, 1956). A third method, correlations between ranked scores on two administrations, gives a measure of permanence of interests for an individual over the time that bas elapsed. In a study over a twenty-two year interval, using this technique, Strong found a median test retest correlation of .75 for 228 college seniors (Strong, 1951b). • •

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Validity Studies

An occupational interest scale is valid if it successfully differentiates members of an occupation from people-in-general. This can be indicated by the difference in mean scores of the occupational group and people-in-general or by total overlapping of the two groups on the occupational scales. Strong has shown that the average percentage of overlapping between his occupational criterion and men-in-general groups is 31.5 (Strong, 1959).

Berdie (1955) cited ninety different studies on the validity of the Strong Blank. He indicates that the SVIB is an excellent predictor of the occupation an individual will enter.

Darley has done extensive work with pattern interpretation of the SVIB (Darley, 1941; Darley & Hagenah, 1955). Patterns or larger groupings of individual scales are based upon those occupational scales which are highly intercorrelated with each other. Darley has found that use of pattern interpretation has been particularly effective in discriminating clusters of interests or interest types (1955).

Procedure

Random selection of subjects was not feasible, since the male attendance at the center is relatively low. Instead, each of the 109, active, male, day

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center members was sent a postal card requesting that he appear at the center in order to participate in the present study. Of the 45 individuals who responded to this request, 39 later cooperated in keeping the appointments that had been arranged for the administration of the Strong questionnaire. The inventory was administered orally to groups of two and three at a time. The items were read to the subjects so that difficulties in reading would not be a variable influencing the responses. IBM answer sheets were filled in by the subjects and were scored by machine. Testing time for the complete administration was approximately two hours per group.

The 45 occupations on the SVIB comprise the eleven groups which have been named by Darley (1941; see Table 3, page 21). In order to reduce the task of dealing statistically and interpretively with these specific occupations, Darley's patterns have been employed in the correlational analyses herein presented. Dominant interest patterns can thus be interpreted rather than scores on specific occupations.

The variables involved in the Pearson productmoment correlations were age and number of years retired; age with each of the eleven Group scores, and number of years retired with each of the Group scores. Any subject's score on each of the eleven groups con-

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sisted of the mean of his scores on the individual scales within that group. These were the interest scores that entered into the Pearson product-moment correlations.

CHAPTER III

RESULTS

The data shows strong evidence that preferences for particular groups of occupations are highly correlated with age and with number of years retired, thus supporting the general assumption of changing interests in the later decades of life (see Table 3).

The chronological age of the subjects was found to be highly associated with the number of years that they had been retired (r=.581, p<.005). However, the less than perfect correlation indicates that these two variables are not identical in the extent of their relationship to occupational interest scores.

Preferences for seven of the eleven occupational groups are associated with age. Scores on only four of these groups are related to number of years retired and three of these to a lesser extent. This suggests that retirement is but one interest-related variable and that other aspects of aging are also related to changes in interest preferences.

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Correlations for Age and Number of Years Retired with SVIB Group Scores

Occupation	M	S.D.	Age	No. years retired
-			r	r
Biological				
Sciences	22.31	5.31	058	•049
Science	17.97	7.88	-•314 ^a	170
Production Mgr. Tech. and/or	35.10	7.70	•386°	•199
Skilled Trades	23.27	10.76	•423 ^d	•394 [°]
Soc. Services	24 71	16 57	530 ^d	400 ^c
Musician	31.79	7.78	• .051	.134
C.P.A.	25.72	7.48	052	186
Admin.	32.96	7•98	•486 ^d	.251
Sales or Busi- ness Contact	38.61	7.90	047	222
Verbal or Linguistic	33.95	9.34	 516 ^d	410 ^d
Pres. Manufact. Concern	39.61	11.50	291 ^a	345 ^b
	Occupation Biological Sciences Engineer & Phys. Science Production Mgr. Tech. and/or Skilled Trades Soc. Services or Welfare Musician C.P.A Business Detail- Admin Sales or Busi- ness Contact Verbal or Linquistic Pres. Manufact. Concern	Occupation M Biological Sciences 22.31 Engineer & Phys. Science 17.97 Production Mgr. 35.10 Tech. and/or Skilled Trades 23.27 Soc. Services or Welfare 24.71 Musician 31.79 C.P.A 25.72 Business Detail- Admin 32.96 Sales or Busi- ness Contact 38.61 Verbal or Linquistic 33.95 Pres. Manufact. Concern 39.61	OccupationMS.D.Biological Sciences22.315.31Engineer & Phys. Science22.315.31Production Mgr.35.107.70Tech. and/or Skilled Trades23.2710.76Soc. Services or Welfare24.7116.57Musician31.797.78C.P.A.25.727.48Business Detail- Admin.32.967.98Sales or Busi- ness Contact38.617.90Verbal or Linquistic33.959.34Pres. Manufact. Concern39.6111.50	Occupation M S.D. Age Biological Sciences 22.31 5.31 058 Engineer & Phys. Science 17.97 7.88 314 ^a Production Mgr. 35.10 7.70 .386 ^c Tech. and/or Skilled Trades 23.27 10.76 .423 ^d Soc. Services or Welfare .25.72 7.48 052 Business Detail- Admin. .25.72 7.48 052 Business Detail- Admin. .32.96 7.98 .486 ^d Sales or Busi- ness Contact .38.61 7.90 047 Verbal or Jinquistic .33.95 9.34 516 ^d Pres. Manufact. Concern .39.61 11.50 291 ^a

a. p < .10
b. p < .05
c. p < .02
d. p < .01

Table 3 offers support for the expected direction of the shift in interests in specific occupational groupings. Since we are at an early stage in our understanding of interest changes in the post-retirement years, the .10 level of statistical significance has been employed and is considered meaningful for purposes of further exploration and discussion. Group V

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occupations which reflect social interactional types of activities are preferred by the older retirants, those which reflect solitary types of activities such as Group X, are preferred by the more recently retired day center members.

The differences between the mean scores indicate differential preferences on the part of all subjects for the various occupations. Thus, Groups III, IX, and XI are more highly preferred by the subjects generally, than are the other occupations. This is not surprising in light of the similarity of these occupational groups to the types of occupations in which the subjects had been employed (see Table 1). That these interests do not all remain constant with age however, is indicated by a significant decline of Group XI scores with age and number of years retired.

The standard deviations of the eleven occupational groups as given in Table 3 indicate that those scores which vary most are also most highly correlated with age. This is not accidental. Scores on individual scales within Group V for example, varied from lows of -10 for many of the younger retirants to scores in the 50s and 60s for scme of the older subjects. It is the strong preference for Group V occupations by the older retirants and the absence of such interests by the younger retirants that causes both the correlation

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coefficient and the standard deviation to be so high. On those occupations where interest differences between older and younger retirants were less extreme, variations among their scores were also less appreciable.

In order to further highlight the differences between the younger and older retirants on each of the 45 occupations, the subjects were split into two age ranges as indicated in Table 4.

Table 4

Mean Standard Scores of Occupations on the SVIB for Younger Subjects (N=16) as Compared with Older Subjects (N=23).

		Mean Standard Scores		
Group	Occupational Scales	Younger group	Older group	
I	Artist	32.31	19.91	
	Psychologist	16.69	23.57	
	Architect	25.69	16.39	
	Physician	18.81	20.61	
	Osteopath	22.81	31.09	
	Dentist	26.88	25.48	
	Veterinarian	14.75	17.35	
11	Mathematician	20.75	13.70	
	Physicist	15.69	9.96	
	Engineer	23.44	21.96	
	Chemist	19.19	20.65	
111	Production Manager ••••	32.50	37.70	
IV	Farmer	28.50	28.17	
	Aviator	17.94	22.17	
	Carpenter	28.25	30.74	
	Printer	31.00	37.13	

(Table continued on next page)

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Table 4 Continued

<u></u>		Mean Standar	d Score
Group	Occupational Scales	Younger	Older
		group	group
	Math. Phy. Science Teacher	16.88	33.48
	Industrial Arts Teacher	8.19	21.70
IV	Vocational Agri'l Teacher	12.13	20.61
	Policeman	26.94	37•39
	Forest Service Manager •••	4.88	12.70
	Y.M.C.A. Phys. Director	13.56	31.48
	Personnel Director	15.88	36.04
	Public Administrator •••••	18.56	35.26
v	Y.M.C.A. Secretary	16.38	35.35
	Soc.Science H.S. Teacher .	20.69	37.56
	City School Superintendent	13.75	24.83
	Social Worker	18,38	33.83
	Minister	13.63	30.13
VI	Musician (Performer) \dots	31.75	31.83
VII	Certified Public Accountan	ts 24.13	27•30
	Senior C.P.A	15.44	32.00
	Accountant	20.88	36.74
	Office Manager	30.94	45.52
VIII	Purchasing Agent	32.44	30.91
	Banker	35.81	35.52
	Mortician	36.56	36.04
	Pharmacist	36.50	36.09
	Sales Manager	35.19	34.65
IX	Real Estate Salesman	46.06	39.26
	Life Insurance Salesman 🐽	38.13	38.35
	Advertising Manager •••••	38.44	31.78
х	Lawyer	34.94	27.22
	Author-Journalist	42.44	28.83
II	President-Manufacturing Co	43.13	36.09

^aThe ages of the subjects in the younger group ranged from 62 to 69 years with a mean age of 67.4 years; those in the older group ranged from 70 to 83 years with a mean age of 74.5 years.

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The comparison of the mean standard scores of the younger and older subjects on Groups III and XI occupations, indicates that the older retirants did not differ in their preferences for either occupation. The difference in the directions of the correlations and the difference in the mean scores as noted in Table 3, are due to a decided preference on the part of the younger retirants for Group XI type interests relative to their endorsement of Group III interests. Thus, the recently retired individuals differed markedly from the older retirants by maintaining such higher aspirations as are reflected in interests that are similar to those of presidents of manufacturing companies, as contrasted with interests of individuals employed as production managers.

Lower aspirations by the older subjects are suggested in the results obtained on Groups IV and VIII. Scores on these relatively lower-status occupational groups indicate that interests associated with technical trade occupations and the type of work in which one engages when employed in a business office, are more often endorsed by the older than by the younger retirants. The older subjects generally endorsed interests associated with positions that do not offer as much prestige, but ones which nevertheless involve such supervisory responsibilities as would be required

by the occupations in Groups III, IV, V, and VIII. The more recently retired, younger subjects received higher scores in Groups II, X, and XI.

More specifically, the younger retirants in contrast to the older ones had interests which were similar to those of mathematicians, physicists, engineers, lawyers, author-journalists and presidents of manufacturing companies, whereas the older retirants expressed interests more similar to those of printers, various kinds of teachers, personnel directors, public administrators, social workers, ministers, office and production managers (see Table 4).

In Strong's study on the change of interests between 25--- and 55 year-old men (1951a), he found that although interests remain generally constant over this period, older people are not quite as interested in the various occupations on the SVIB as are the younger men. As may be noted in Table 4, contrary findings were obtained in the present study. On the basis of chance consideration, 22.5 of the 45 occupations might be expected to be more frequently preferred by the older subjects. Although the older retirants received higher mean scores on 28 of the 45 occupational scales, a chi square analysis failed to indicate significance in the difference between chance expectancies and the obtained results.

The present findings are however, in close accord with expectations. They do not necessarily imply that interests change prior to the usual age of retirement (65 years), but do indicate that in the years following retirement various changes in interest patterns occur. Interests that are strongly held prior to retirement would seem for the most part to be increased with age, although some apparently decline. Other interests would seem to be born anew and to be progressively endorsed throughout the later years.

CHAPTER IV

DISCUSSION

As indicated in Chapter I, a correlational analysis was considered a necessary first step in the study of interests in the later decades. It is meaningless to attempt to find causes for effects that are not yet known to be conclusive. We must know what happens before we can attempt to explain why it happens. The disengagement hypothesis maintains that the decline in activities and in social interaction that often occurs in the later years is desired by the aged and is conducive to adjustment (Henry & Cumming, 1959; Cumming et al., 1960). The present investigation indicates that it is particularly those vocational interests which require a high degree of social participation and involvement e.g., Group V occupations, which are increasingly preferred throughout the later years.

The older retirants in the present investigation would apparently choose social interaction rather than disengagement if given a choice. They would also apparently choose activities that are similar to their occupational experiences and more in accord with their

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actual abilities or what they perceive these abilities to be, than would more recently retired individuals. Such are the implications that may be drawn from the associations that have resulted between vocational interests and age.

The fact that the participants in this study were voluntary subjects may have contributed to the obtained results. If non-voluntary subjects were employed the results might have supported the disengagement hypothesis. However, although it is plausible to assume that non-voluntary older subjects may not be interested in social activities and interaction, there is no reason to assume that non-voluntary younger retirants would differ in this respect. It should be noted that in the present study both the younger and the older retirants volunteered to participate and that the recently retired individuals attained consistently low scores on all of the Group V occupations whereas the reverse occurred with the older subjects (see Table 4). If willingness to participate is the crucial factor determinative of scores on specific occupational scales then it would be expected that the younger retirants would perform in a manner similar to the performance of the older retirants. However, this was not the case. The present findings are more likely attributable to the socio-economic and cultural

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characteristics of the respondents and to the needs and deprivations of this ethnic group in the post-retirement years.

Although the obtained results are contrary to the findings of constancy of SVIB interests in the later decades, and contrary to what might be predicted by the disengagement hypothesis, they offer support to the previously considered remarks pertaining to the relationship between socio-economic level and adjustment to retirement. Individuals from lower socio-economic and educational levels, e.g., the day center members, do not possess the internal resources to facilitate a transition into retirement that is without pitfalls and difficulties in adjustment. Prior to retirement, investment of time and effort had been devoted almost exclusively to the occupation in which each individual had been employed. Few other interests were acquired or cultivated. Such individuals post-retirement must acquire new motivational patterns of behavior designed to gratify needs for recognition, status and self-esteem, i.e., needs previously gratified through identification with a particular occupation, but frustrated since retirement began. Such motivational changes would be expected to effect previously held interest preferences, some favorably and some unfavorably, as well as to stimulate new interests and facilitate the acquisition of new abilities.
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For the Jewish individuals who participated in this study, retirement had been pleasantly anticipated and looked upon as a well-earned reward; a period in life when they hoped to receive recognition and status for the contribution that had been made during the working years. Such expectations were reinforced by Talmudic teachings which advise that with advanced age one has acquired the experience and wisdom to lead others and should be so recognized. Contrary to expectations, these individuals found that they were shunted aside and rejected by offspring, employers, and society in general as the aging process continued into the postretirement years. With time they began to acknowledge that society does not appreciate them for past efforts, or previously acquired status. The fact of rejection merely increases the need for recognition and esteem that the older person feels is his due. Continued inactivity and rejection from others disputes more than the wisdom they feel they have acquired. They also begin to lose the sense of self-worth experienced prior to retirement as a contributing member of society. Eventually, they must abandon reliance upon the past status granted by virtue of their identification with particular occupational groups. They must then adapt to a new environment. Retirement is a developmental period in life that cannot be successfully faced with

inactivity or with previously adaptive, but now outdated, patterns of behavior.

The subjects in this study, in their efforts at successful adjustment to retirement apparently strive to cultivate new interests and modify or disregard old ones in order to gratify persisting if not increasing needs for status, recognition, and self-esteem. The new motivational patterns of behavior which apparently develop could account for changes in interests with age. Whereas consequent with retirement they prefer to be the isolated but successful individual in those occupations afforded greatest prestige, e.g., scientist, lawyer, author-journalist, in the post-retirement years they strive to be recognized by others for their wisdom and skills in social interaction. This might be accomplished by leading others as in administrative positions in business and social service. Accordingly, their interests tend to become similar to those of teachers, personnel directors, social workers, ministers, office and production managers. A behavioral pattern has evolved which is people oriented, and a motivational pattern that is characterized by a drive for recognition from others.

This explanation for the present results is consistent with the findings of several studies. Davis (1962) concludes that self-concept is influenced by the nature of social relationships and that personal

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adjustment in older people is related to both social functioning and self-concept. Gardner (1948) had indicated earlier that social isolation is frustrating to old people and Albrecht (1951) had found a significant correlation between personal adjustment and social participation in aged adults. As indicated carlier, Gavan et al. (1949) and Tobin & Neugarten (1961) also found that engagement rather than disengagement is more closely related to psychological well-being. These studies all assume that old age is a difficult time of life requiring changes of behavior in the interests of psychologically sound adjustment. That such findings and their underlying determinants can not be attributed to aged retirants generally has been indicated by Zborowski's investigations cited previously (Zborowski, 1962; Zborowski & Eyde, 1962). Whether or not retirement is experienced as disruptive of self-esteem, thus necessitating changes in interests and patterns of behavior may well be highly dependent upon socio-economic and educational level. Individuals who have acquired avocational interests pre-retirement, as would seem to be the case in the higher socioeconomic levels, can provide their own sources for self-esteem post-retirement. Such older individuals do not regard retirement as a threatening or disruptive experience as do individuals from lower socio-economic

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levels. Since avocational interests have already been developed, such individuals do not need to change as much. Consequently, orientation and behavior toward people and things are maintained throughout the later years.

With full recognition to the fact that chronological age per se is not a causal condition but merely a convenient means for ordering developmental data, such age-related psychological variables as organic deficits, and changing motivational patterns, which are of primary importance as determinants of interests, activities and adjustment, should be further clarified. Additional investigations are necessary if we are to clarify the possibility of new interests emerging late in life and the relationship of such interests to social variables and to changing goals, needs and personality in general.

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CHAPTER V

SUMMARY

Thirty-nine retired, male members of a day center for senior citizens in New York City were administered the Strong Vocational Interest Blank in order to study the effects of age and retirement on vocational interests. Assuming that adjustment to retirement and old age would influence previously held vocational interests and facilitate the acquisition of new interests, it was generally expected that variability rather than constancy of interests would prevail for the aged subjects employed in this investigation.

Those occupational groupings which reflect an orientation toward social interaction were expected to be increasingly preferred, those which reflect an orientation toward solitary activity were expected to decline with age.

A correlational analysis was performed with age and number of years retired related with the score obtained on the eleven occupational groupings of the Strong Blank. Significant correlations were obtained between age and seven of the eleven groupings. Number of years retired was significantly related to four of

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the occupational groupings.

The results were in accord with expectations, and were interpreted as reflecting the fact that the subjects in this study are more concerned about psychological deprivations than younger individuals who are employed and who consequently receive the benefits of status and recognition by virtue of their occupation. It was suggested that the growing awareness of a lack of self-esteem prompts greater social interests and social participation in the older person's attempt at overcoming the psychological deprivations consequent with old age.

The various studies which have attempted to derive age-related psychological variables that determine interests, activities and adjustment were criticized as not accounting for the interaction of multiple social variables when such interactions exist and for not validating the instruments used for research purposes against external criteria.

It was suggested that future investigations take account of socio-economic level in evaluating the relationship between changing interests and social and psychological variables. It was further indicated that these variables themselves need clarification.

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APPENDICES

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APT-LADICES

APPENDIX A

Strong Vocational Interest Blank for Men

A STUMMAR

Strong Vocational Interest plank for New

STRONG VOCATIONAL INTEREST BLANK FOR MEN (Revised)

By EDWARD K. STRONG, JR., Stanford University

It is possible with a fair degree of accuracy to determine by this test whether one would like certain occupations or not. The test is not one of intelligence or school work. It measures the extent to which one's interests agree or disagree with those of successful men in a given occupation.

	Date
1.	Name
4.	Address to which correspondence should be sent.
If y	<i>ou are still attending school or expect to return to school, answer items 5–12; if you have left school, answer items 13–2</i> Any additional remarks may be entered at 21.
5.	Grade I am now in: Grammar School 1 2 3 4 5 6 7 8 High School 1 2 3 4 College 1 2 3 4 5 6 (PUT A CIRCLE AROUND APPROPRIATE GRADE)
6.	School grade I expect to complete
7.	School subjects I am now most interested in
8.	School subjects I expect to specialize in later on
9.	Occupation I am planning to enter
11.	Jobs I have been employed at (e.g., clerical, retail selling, farming, giving number of months employed at each)
12.	Occupations I have formerly considered entering
	To be Answered by Those Who Have Left School
13.	Last grade you finished in school (e.g., Grammar 6th, High School 2nd, College 4th)
14.	What technical or business courses have you taken? (Underline those you finished)
1 <mark>5</mark> .	Occupation (e.g., Carpenter)
17.	Just what do you do?
18.	Why did you select the above occupation?
<mark>1</mark> 9.	What occupations, other than your present one, have you at one time or another engaged in?
<mark>2</mark> 0.	What occupations, if any, have you in mind entering? Why?
21.	Remarks



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Part I. Occupations. Indicate after each occupation listed below whether you would like that kind of work or not. Disregard considerations of salary, social standing, future advancement, etc. Consider only whether or not you would like to do what is involved in the occupation. You are not asked if you would take up the occupation permanently, but merely whether or not you would enjoy that kind of work, regardless of any necessary skills, abilities, or training which you may or may not possess.

Draw a circle around L if you like that kind of work

Draw a circle around I if you are indifferent to that kind of work

Draw a circle around D if you dislike that kind of work

Work rapidly. Your first impressions are desired here. Answer all the items. Many of the seemingly trivial and irrelevant items are very useful in diagnosing your real attitude.

1	Actor (not movie)	L	Ι	D	46 Jeweler	L	I	D
2	Advertiser	L	1	D	47 Judge	L	1	D
3	Architect	L	I	D	48 Labor Arbitrator	L	I	D
4	Army Officer	L	I	D	49 Laboratory Technician	L	I	D
- 5	Artist	L	I	D	50 Landscape Gardener	L	I	D
6	Astronomer	L	I	D	51 Lawyer, Criminal	L	I	D
7	Athletic Director	L	I	D	52 Lawyer, Corporation	L	I	D
8	Auctioneer	L	I	D	53 Librarian	L	I	D
9	Author of novel	Ē	T	D	54 Life Insurance Salesman	L	I	D
10	Author of technical book	Ĺ	Ī	D	55 Locomotive Engineer	Ĺ	Ī	D
11	Auto Solosmon	т	т	D	56 Machinist	т	т	D
11	Auto Balesman	T	÷	D	57 Magazine Writer	Ť	÷	n
12	Auto Racer	L	1 I	D	59 Manufacturer	L	÷	D
13	Auto Repairman		1	D	50 Manufacturer		1	D
14	Aviator	L	1	D	59 Marine Engineer		1	D
15	Bank Teller	L	1	D	60 Mechanical Engineer	L	1	D
16	Bookkeeper	L	I	D	61 Mining Superintendent	L	I	D
17	Building Contractor	L	Ι	D	62 Musician	L	I	D
18	Buyer of merchandise	L	I	D	63 Music Teacher	L	I	D
19	Carpenter	L	Ι	D	64 Office Clerk	L	I	D
20	Cartoonist	L	Ι	D	65 Office Manager	L	I	D
21	Cashier in bank	L	Ι	D	66 Orchestra Conductor	L	I	D
22	Certified Public Accountant	L	Ι	D	67 Pharmacist	L	I	D
23	Chemist	L	Ι	D	68 Photo Engraver	L	I	D
24	Civil Engineer	L	ī	Đ	69 Physician	L	Ī	D
25	Civil Service Employee	Ĺ	Ī	D	70 Playground Director	Ĺ	I	D
26	Clargyman	Т	Т	D	71 Poet	T.	T	D
20	College Professor	T	Ť	n	72 Politician	ĩ	÷.	D
24	Concel	T	Ť	D	73 Printer	ĩ	÷.	D
20	Dentist	T	Ť	D	74 Private Secretary	T	÷	Ď
29	Deathanan		T	D	75 Deilmen Conductor	T	+	Ď
30	Draftsman	L	1	D	75 Rallway Conductor	L	1	D
31	Editor	L	I	D	76 Rancher	L	Ι	D
32	Electrical Engineer	L	Ι	D	77 Real Estate Salesman	L	I	D
33	Employment Manager	L	Ī	D	78 Reporter, general	L	T	D
34	Explorer	L	ī	D	79 Reporter, sporting page.	L	ī	D
35	Factory Manager	L	Ī	D	80 Retailer	L	Î	D
36	Factory Worker	L	т	р	81 Sales Manager	L	T	D
37	Farmer	ī	Ť	D	82 School Teacher	ī	÷ .	ñ
30	Floorwalker	I	Ť	D	83 Scientific Research Worker	ĩ	T	D
20	Floor walker	L	1 T	D	84 Seulaten	L	+	'n
39	Florist		1	D	of Sculptor		+	n
40	r oreign Correspondent	L	1	D	os Secretary, Chamber of Commerce	L	1	D
41	Governor of a State	L	Ι	D	86 Secret Service Man	L	I	D
42	Hotel Keeper or Manager	L	Ι	D	87 Ship Officer	L	I	D
43	Interior Decorator	L	Ι	D	88 Shop Foreman	L	I	D
44	Interpreter	L	I	D	89 Social Worker	L	I	D
45	Inventor	L	Ι	D	90 Specialty Salesman	L	I	D

-2-

Part I. Occupations, continued.

91	Statistician	L	Ι	D
92	Stock Broker	L	Ι	D
93	Surgeon	L	Ι	D
94	Toolmaker	L	Ι	D
95	Traveling Salesman	L	Ι	D
96	Typist	L	Ι	D
97	Undertaker	L	Ι	D
98	Watchmaker	L	Ι	D
99	Wholesaler	L	I	D
100	Worker in Y.M.C.A., K. of C., etc	L	I	D

Part II. School Subjects. Indicate as in Part I your interest when in school.

101	Algebra	L	I	D
102	Agriculture	L	I	D
103	Arithmetic	L	I	D
104	Art	L	I	D
105	Bookkeeping	L	I	D
106	Botany	L	I	D
107	Calculus	L	I	D
108	Chemistry	L	I	D
109	Civics	L	I	D
110	Dramatics	L	I	D
111	Economics	L	I	D
112	English Composition	L	I	D
113	Geography	L	I	D
114	Geology	L	Ī	D
115	Geometry	L	Ī	D
116	History	L	I	D
117	Languages, ancient	L	I	D
118	Languages, modern	Ē	Ĩ	D
119	Literature	Ĩ.	ī	D
120	Mathematics	Ĺ	Î	D
121	Manual Training	L	I	D
122	Mechanical Drawing	L	Ī	D
123	Military Drill	ĩ	ī	D
124	Music	Ĩ.	ī	D
125	Nature Study	Ĺ	Î	D
126	Philosophy	L	I	D
127	Physical Training	L	I	D
128	Physics	L	I	D
129	Psychology	L	I	D
130	Physiology	L	Ī	D
131	Public Speaking	L	I	D
132	Shop work	L	I	D
133	Sociology	L	I	D
134	Spelling	L	I	D
135	Typewriting	L	Ī	D
136	Zoölogy	L	I	D

Part III. Amusements. Indicate in the same manner as in Part I whether you like the following or not. If in doubt, consider your most frequent attitude. *Work rapidly*. Do not think over various possibilities. Record your first impression.

137 Golf 138 Fishing 139 Hunting 140 Tennis	L L L	I I I I	D D D D
141 Driving an automobile.142 Taking long walks.143 Boxing144 Chess145 Poker	L L L L L	I I I I I	D D D D D
 146 Bridge 147 Observing birds (nature study) 148 Solving mechanical puzzles 149 Performing sleight-of-hand tricks 150 Collecting postage stamps 	L L L L	I I I I I	D D D D D
 151 Drilling in a company 152 Chopping wood 153 Amusement parks 154 Picnics 155 Excursions 	L L L L	I I I I I	D D D D D
 156 Smokers 157 "Rough house" initiations 158 Conventions 159 Full-dress affairs 160 Auctions 	L L L L	I I I I I	D D D D D
161Fortune tellers162Animal zoos163Art galleries164Museums165Vaudeville	L L L L	I I I I	D D D D D
166 Musical comedy167 Symphony concerts168 Pet canaries169 Pet monkeys170 Snakes	L L L L	I I I I I	D D D D D
171 Sporting pages 172 Poetry 173 Detective stories 174 "Time" 175 "Judge"	L L L L L	I I I I I	D D D D D
 176 "New Republic" 177 "System" 178 "National Geographic Magazine" 179 "American Magazine" 180 "Popular Mechanics" 	L L L L L	I I I I I	D D D D D
 181 "Atlantic Monthly" 182 Educational movies 183 Travel movies 184 Social problem movies 185 Making a radio set 	L L L L L	I I I I I	D D D D D

Part IV. Activities. Indicate your interests as in Part I.

D D D D D

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186 187 188 189 190	Repairing a clock Adjusting a carburetor Repairing electrical wiring Cabinetmaking Operating machinery	L L L L L	I I I I I	
191 192 193 194 195	Handling horses Giving "first aid" assistance Raising flowers and vegetables Decorating a room with flowers Arguments	L L L L L	I I I I I	
196 197 198 199 200	Interviewing men for a job Interviewing prospects in selling Interviewing clients Making a speech Organizing a play	L L L L L	I I I I	
201 202 203 204 205	Opening conversation with a stranger Teaching children Teaching adults Calling friends by nicknames Being called by a nickname	L L L L L	I I I I	
206 207 208 209 210	Meeting and directing people Taking responsibility Meeting new situations Adjusting difficulties of others Drilling soldiers	L L L L L	I I I I	
211 212 213 214 215	Pursuing bandits in sheriff's posse Doing research work Acting as yell-leader Writing personal letters Writing reports	L L L L	I I I I I	
216 217 218 219 220	Entertaining others Bargaining ("swapping") Looking at shop windows Buying merchandise for a store Displaying merchandise in a store	L L L L	I I I I I	
221 222	Expressing judgments publicly regardless of criticism Being pitted against another as in	L	I	
223 224 225	a political or athletic race Methodical work Regular hours for work Continually changing activities	L L L L	I I I I	
226 227 228 229 230	Developing business systems Saving money Contributing to charities Raising money for a charity Living in the city	L L L L L	I I I I I	
231 232 233	Climbing along edge of precipice Looking at a collection of rare laces. Looking at a collection of antique furniture	L L L	I I I	
		-	-	

Part V. Peculiarities of People. Record your first impression. Do not think of various possibilities or of exceptional cases. "Let yourself go" and record the feeling that comes to mind as you read the item.

234 Progressive people 235 Conservative people	L L	I I	D D
236 Energetic people	L	I	D
237 Absent minded people	L	I	D
238 People who borrow things	L	Ī	D
239 Quick-tempered people	Ĩ.	ī	D
240 Optimists	Ĺ	Î	D
241 Pessimists	L	I	D
242 People who are natural leaders	L	T	D
243 People who assume leadership	ĩ	ī	D
244 People easily led	Ĩ.	ĩ	Ď
245 People who have made fortunes in	-	-	-
business	L	Ι	D
246 Emotional people		т	D
240 Emotional people	-	+	D
247 Infinty people	Ļ	1	D
246 Spendinrins	L.	1	D
249 Talkative people	L.	1	D
250 Religious people	L	I	D
251 Irreligious people	L	T	D
252 People who have done you favors	Ĩ.	î	Ď
253 People who get rattled easily	ĩ	î	n
254 Gruff men	ĩ	÷.	n
255 Foreigners	ĩ	÷	n
	-	•	2
256 Sick people	L	I	D
257 Nervous people	L	I	D
258 Very old people	L	I	D
259 Cripples	L	I	D
260 Side-show freaks	L	Ι	D
261 People with gold teeth	T	T	D
262 People with protruding jawa	ĩ	- ÷	n
263 People with booked poses	Ť	+	n
264 Blind neople	÷.	+	n
265 Deef muter	÷	+	D D
205 Dear mutes	L	1	U
266 Self-conscious people	L	I	D
267 People who always agree with you.	L	I	D
268 People who talk very loudly	L	I	D
269 People who talk very slowly	L	I	D
270 People who talk about themselves	L	Ī	D
271 Fashionably dressed people	T	т	D
272 Carelessly dressed people	ĩ	+	n
273 People who don't believe in evolution	ĩ	÷	D D
274 Socialists	Ĩ	1	ק
275 Balehoviete	T	1	
	. г	1	U
276 Independents in politics	L	Ι	D
277 Men who chew tobacco	L	I	D
278 Men who use perfume	L	I	D
279 People who chew gum	L	I	D
280 Athletic men	L	I	D

Part VI. Order of Preference of Activities. Indicate which three of the following ten activities you would enjoy most by checking $(\sqrt{})$ opposite them in column 1; also indicate which three you would enjoy least by checking opposite them in column 3. Check the remaining four activities in column 2.

	1		2	}	3		
281	()	()	()	Develop the theory of operation of a new machine, e.g., auto
282	()	()	()	Operate (manipulate) the new machine
283	()	()	()	Discover an improvement in the design of the machine
284	()	()	()	Determine the cost of operation of the machine
285	()	()	()	Supervise the manufacture of the machine
286	()	()	()	Create a new artistic effect, i.e., improve the beauty of the auto
287	()	()	()	Sell the machine
288	()	()	()	Prepare the advertising for the machine
289	()	()	()	Teach others the use of the machine
290	())	()	()	Interest the public in the machine through public addresses

Indicate in the same way what you consider are the three most important factors affecting your work; also the three least important factors. Check the remaining four items in column 2. Be sure you have marked three items under 1, three items under 3, and four items under 2.

	1		2		3	
291	. ()	())	()	Salary received for work
292	: ())	()	Steadiness and permanence of work
293) ()	())	()	Opportunity for promotion
294) ()	())	()	Courteous treatment from superiors
295	()	())	()	Opportunity to make use of all one's knowledge and experience
296	; ()	())	()	Opportunity to ask questions and to consult about difficulties
297	Ċ)	())	()	Opportunity to understand just how one's superior expects work to be done
298	()	())	()	Certainty one's work will be judged by fair standards
299	()	()		()	Freedom in working out one's own methods of doing the work
300) ())	()	Co-workers-congenial, competent, and adequate in number

Indicate in the same way the three men you would most like to have been; also the three you would least like to have been. Check the remaining four men in column 2.

			- 4	6	5		
301	()	()	()	Luther Burbank, "plant wizard"
302	()	()	()	Enrico Caruso, singer
303	()	()	()	Thomas A. Edison, inventor
304	Ć)	Ć)	Ċ)	Henry Ford, manufacturer
305	()	()	()	Charles Dana Gibson, artist
306	()	()	()	J. P. Morgan, financier
307	Ć)	Ć)	ĺ)	J. J. Pershing, soldier
308	Ć)	Ċ)	Ċ)	William H. Taft, jurist
309	()	Ċ)	Ċ)	Booth Tarkington, author
310	Ċ)	Ì)	Ì)	John Wanamaker, merchant

Indicate in the same way the three positions you would most prefer to hold in club or society; also the three you least prefer to hold. Check the remaining four in column 2.

		1	2	2	3		
311	()	()	()	President of a Society or Club
312	()	Ć)	ĺ)	Secretary of a Society or Club
31 3	()	()	Ć)	Treasurer of a Society or Club
314	()	Ć)	()	Member of a Society or Club
315	()	Ć)	Ì)	Chairman, Arrangement Committee
316	()	()	()	Chairman, Educational Committee
317	()	Ć)	Ċ)	Chairman, Entertainment Committee
318	()	Ć)	Ċ)	Chairman, Membership Committee
319	()	Ć)	Ć)	Chairman, Program Committee
320	()	Ċ)	Ċ)	Chairman, Publicity Committee

Part VII. Comparison of Interest between Two Items. Indicate your choice of the following pairs by checking $(\sqrt{})$ in the first space if you prefer the item to the left, in the second space if you like both equally well, and in the third space if you prefer the item to the right. Assume other things are equal except the two items to be compared.

Wor	rk rapidly.							
321	Street-car motorman	()	()	()	Street-car conductor
322	Policeman	()	()	()	Fireman (fights fire)
323	Chauffeur	()	()	()	Chef
324	Head waiter	í)	Ì)	í)	Lighthouse tender
325	House to house canvassing	()	Ì)	í	ĵ	Retail selling
	6		,		<i>`</i>	·		
3 2 6	House to house canvassing	()	()	()	Gardening
327	Repair auto	()	()	()	Drive auto
328	Develop plans	()	()	()	Execute plans
329	Do a job yourself	()	()	()	Delegate job to another
330	Persuade others	Ì)	í)	(1	Order others
331	Deal with things	()	()	()	Deal with people
332	Plan for immediate future	()	()	()	Plan for five years ahead
333	Activity which produces tangible returns	()	()	()	Activity which is enjoyed for its own sake
334	Taking a chance	()	()	()	Playing safe
335	Definite salary	Ì)	í	ý	i)	Commission on what is done
			,	Ì				
336	Work for yourself	()	()	()	Carry out program of superior who is respected
337	Work which interests you with modest income	()	()	()	Work which does not interest you with large income
3 38	Work in a large corporation with little chance				Ċ		·	, , ,
	of becoming president until age of 55	()	()	()	Work for self in small business
339	Selling article, quoted 10% below competitor.	()	()	()	Selling article, quoted 10% above competitor
340	Small pay, large opportunities to learn during							Good pay, little opportunity to learn during next
	next 5 years	()	()	()	5 years
341	Work involving few details	()	()	()	Work involving many details
342	Outside work	()	()	()	Inside work
343	Change from place to place	()	()	()	Working in one location
344	Great variety of work	()	()	()	Similarity in work
345	Physical activity	()	í)	()	Mental activity
346	Emphasis upon quality of work	()	()	()	Emphasis upon quantity of work
347	Technical responsibility (head of a department							Supervisory responsibility (head of a department
	of 25 people engaged in technical, research							of 300 people engaged in typical business
	work)	()	()	()	operation)
348	Present a report in writing	ì	Ś	ì	í	i	í	Present a report verbally
349	Listening to a story	ì	Ś	ì	1	ì	ń	Telling a story
350	Plaving baseball	ì	í	í	í	ì	ś	Watching baseball
		`	'	`	'	`	'	
351	Amusement where there is a crowd	()	()	()	Amusement alone or with one or two others
352	Nights spent at home	().	()	()	Nights away from home
353	Reading a book	i	í	i	í	í	í	Going to movies
354	Belonging to many societies	ì	í	ì	í.	ì	í	Belonging to few societies
355	Few intimate friends	ì	í	ì	í	ì	í	Many acquaintances
		`	'	`	'	`	'	,1
356	Many women friends	()	()	()	Few women friends
357	Fat men	()	()	()	Thin men
358	Tall men	()	()	()	Short men
359	Jealous people	í)	Ì)	í)	Conceited people
360	Jealous people	Ì	j	Ì)	Ì)	Spendthrifts
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	•		•		•		

**Part VIII. Rating of Present Abilities and Characteristics.** Indicate below what kind of a person you are right now and what you have done. Check in the *first* column ("Yes") if the item really describes you, in the *third* column ("No") if the item does not describe you, and in the *second* column (?) if you are not sure. (Be frank in pointing out your weak points, for selection of a vocation must be made in terms of them as well as your strong points.)

		YE	CS .	1	?	NC	)
361	Usually start activities of my group	(	)	(	)	(	)
362	Usually drive myself steadily (do not work by fits and starts)	ì	í	ì	5	ì	í
262	Win frinch and the myself steading (do not work by his and starts)		<	~	{	2	{
303	win Triends easily	ļ	2	(	?	ļ	!
364	Usually get other people to do what I want done	(	)	(	)	(	)
365	Usually liven up the group on a dull day	(	)	(	)	(	)
	전 가장 같은 것은 것은 것을 통해 있는 것이 가장 같은 것이 같은 것이 같이 있는 것이 같이 많이 많이 많이 많이 없다. 것이 집에 있는 것이 같이 많이						
366	Am quite sure of myself.	(	)	(	)	(	)
367	Accent just criticism without getting sore	ì	5	ì	í	ì	í
260	The set of	2	{	2	{	1	{
300	Have mechanical ingenuity (inventiveness)	ļ	?	ļ	?		2
369	Have more than my share of novel ideas	(	)	(	)	(	)
370	Can carry out plans assigned by other people	(	)	(	)	(	)
371	Can discriminate between more or less important matters.	(	)	(	)	(	)
372	Am inclined to keen silent (retigent) in confidential and semi-confidential affairs	ì	1	ì	i	ì	í
272	Am denne to keep sich gerunden in confidential and semi-confidential analist.	1	<		~	ì	{
515	Am always on time with my work	5	2	ļ	2	Ś	2
314	Remember faces, names, and incidents better than the average person	(	)	(	)	(	)
375	Can correct others without giving offense	(	)	(	)	(	)
376	Able to meet emergencies quickly and effectively	(	)	(	)	(	)
377	Get "rattled" again	ì	í	ì	í	i	í
270	Conversion of the second	ì	Ś	ì	1	ì	1
370	Can write a concise, well-organized report.	1	2	5	?	5	2
379	Have good judgment in appraising values	(	)	(	)	(	)
380	Plan my work in detail	(	)	(	)	(	)
381	Follow up subordinates effectively	(	)	(	)	(	)
382	Put drive into the organization	ì	ń	ì	í	ì	í
393	Stimulate the ambition of my accepitor	ì	ś	ì	ś	ì	5
203	Standard the ambition of my associates.	2	{	1	1	2	?
384	Show hrmness without being easy	(	)	ļ	)	ļ	)
385	Win confidence and loyalty	(	)	(	)	(	
		•		•		•	,
						`	,
386	Smooth out tangles and disagreements between people	(	)	(	)	(	)
386 387	Smooth out tangles and disagreements between people	(	)	(	)	(	)))
386 387 388	Smooth out tangles and disagreements between people Am approachable Discuss my ideals with others	( ( (	)))	((	))))	( ( (	))))
386 387 388	Smooth out tangles and disagreements between people Am approachable Discuss my ideals with others	(((	)))	( (	) )	(((	))))
386 387 388 Che	Smooth out tangles and disagreements between people Am approachable Discuss my ideals with others	( ( (	) ) )	( ( ( in	) ) )	( ( (	))))
386 387 388 Che	Smooth out tangles and disagreements between people Am approachable Discuss my ideals with others $(\vee)$ in the first, second, or third column at the right according as the first, second, or third state	( ( ( teme	) ) )	( ( ( in	) ) )	( ( ( ite	))))
386 387 388 Chee	Smooth out tangles and disagreements between people Am approachable Discuss my ideals with others ck ( $\vee$ ) in the first, second, or third column at the right according as the first, second, or third stat below applies to you.	( ( ( teme	) ) ) ent	( ( ( in	) ) ) each	( ( ( iter	)))) m
386 387 388 Che	Smooth out tangles and disagreements between people Am approachable Discuss my ideals with others ck ( $\vee$ ) in the first, second, or third column at the right according as the first, second, or third stat below applies to you.	( ( teme	) ) ) ent st)	( ( ( in (21)	) ) ) each	( ( ( ( ( ( 3rd	)))) m ))
386 387 388 Chee 389	Smooth out tangles and disagreements between people.Am approachableDiscuss my ideals with others.Discuss my ideals with others.ck ( $\checkmark$ ) in the first, second, or third column at the right according as the first, second, or third statebelow applies to you.(1) Feelings easily hurt(2) Feelings hurt sometimes(3) Feelings rarely hurt.	( ( teme (1:	) ) ) ent st) )	( ( ( in (21 (	) ) each nd)	( ( ( iter (3rd	ノ ))) m い)
386 387 388 Chee 389 390	Smooth out tangles and disagreements between people.Am approachableDiscuss my ideals with others.Discuss my ideals with others.ck ( $\checkmark$ ) in the first, second, or third column at the right according as the first, second, or third statebelow applies to you.(1) Feelings easily hurt(2) Feelings hurt sometimes(1) Usually ignore the feelings(2) Consider them sometimes(3) Carefully consider them.	( ( teme (1: (	) ) ) ent st) )	( ( ( ( ( ( (	) ) each nd) )	( ( ( ( ( 3rd ( (	ノ ))) m い))
386 387 388 Cheo 389 390	<ul> <li>Smooth out tangles and disagreements between people</li></ul>	( ( teme (1) (	) ) ) ent st) )	( ( ( ( ( ( (	) ) each nd) )	( ( ( (3rd ( (	ノ ))) m ))))
386 387 388 Chee 389 390	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.</li> <li>(1) Feelings easily hurt (2) Feelings hurt sometimes (3) Feelings rarely hurt (1) Usually ignore the feelings (2) Consider them sometimes (3) Carefully consider them</li> </ul>	( ( teme (1: (	) )) )) sent st) )	( ( ( ( ( ( (	) ) each nd) )	( ( ( ( ( 3rd ( (	ノ ))) m い)) 、
386 387 388 Chee 389 390	Smooth out tangles and disagreements between people.         Am approachable         Discuss my ideals with others.         Discuss my ideals with others.         ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.         (1) Feelings easily hurt       (2) Feelings hurt sometimes       (3) Feelings rarely hurt         (1) Usually ignore the feelings       (2) Consider them sometimes       (3) Carefully consider them         (1) Loan money to acquaint-       (2) Loan only to certain       (3) Rarely loan money	( ( teme (1) ( (	) ) ) sent st) ) )	( ( ( ( ( ( (	) ) each nd) ) )	( ( ( ( 3rd ( (	)))) m ())))))
386 387 388 Chee 389 390 391	Smooth out tangles and disagreements between people.         Am approachable         Discuss my ideals with others.         Discuss my ideals with others.         ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.         (1) Feelings easily hurt       (2) Feelings hurt sometimes       (3) Feelings rarely hurt         (1) Usually ignore the feelings       (2) Consider them sometimes       (3) Carefully consider them         (1) Loan money to acquaint- ances       (2) Loan only to certain people       (3) Rarely loan money	( ( ( ( ( (	) ) ) ent st) ) )	( ( ( ( ( ( ( ( (	) ) each nd) ) )	( ( ( ( 3rd ( ( (	)))) m ())))))
386 387 388 Chee 389 390 391 392	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third statbelow applies to you.</li> <li>(1) Feelings easily hurt</li> <li>(2) Feelings hurt sometimes</li> <li>(3) Feelings rarely hurt</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Rarely loan money</li> <li>(4) Rebel inwardly at orders</li> <li>(2) Carry out instructions with</li> <li>(3) Enter into situation and en-</li> </ul>	( ( ( tema ( 1: ( (	) )) )) ))	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) each nd) ) )	( ( ( ( 3rd ( ( (	)))) m ())))))
386 387 388 Chee 389 390 391 392	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>Discuss my ideals with others.</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third statbelow applies to you.</li> <li>(1) Feelings easily hurt</li> <li>(2) Feelings hurt sometimes</li> <li>(3) Feelings rarely hurt</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(4) Loan money to acquaintances</li> <li>(5) Loan only to certain people</li> <li>(6) Rebel inwardly at orders</li> <li>(7) Carry out instructions with from another obey when</li> </ul>	( ( ( ( ( (	) )) )) ))	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) each ad) ) )	( ( ( ( ( (	ノ ))) m い)) )
386 387 388 Chee 389 390 391 392	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third statbelow applies to you.</li> <li>(1) Feelings easily hurt (2) Feelings hurt sometimes (3) Feelings rarely hurt (3) Carefully consider them</li> <li>(1) Loan money to acquaintances (2) Loan only to certain people (2) Loan only to certain people (2) Carry out instructions with little or no feeling (3) Enter into situation and entropy out</li> </ul>	( ( ( tema ( 1: ( ( (	) ) ) ) ent st) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) each ad) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	))) m i))) ) 、
386 387 388 Chee 389 390 391 392	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.</li> <li>(1) Feelings easily hurt</li> <li>(2) Feelings hurt sometimes</li> <li>(3) Feelings rarely hurt</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Rarely loan money</li> <li>(4) Rebel inwardly at orders from another, obey when necessary</li> <li>(5) Carry out instructions with little or no feeling</li> <li>(6) Carry out instructions with little or no feeling</li> <li>(1) Carry out instructions with little or no feeling</li> <li>(2) Carry out instructions with little or no feeling</li> <li>(3) Enter into situation and enthusiastically carry out program</li> </ul>	( ( ( tema ( 1) ( ( (	) )) )) ))	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) each ad) ) )	( ( ( ( 3rd ( ( ( (	)))) m ()))))))))))))))))))))))))))))))
386 387 388 Chee 389 390 391 392 393	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.</li> <li>(1) Feelings easily hurt <ul> <li>(1) Feelings easily hurt <ul> <li>(2) Feelings hurt sometimes</li> <li>(3) Feelings rarely hurt</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(4) Loan money to acquaintances</li> <li>(5) Carry out instructions with little or no feeling</li> <li>(1) When caught in a mistake</li> <li>(2) Seldom make excuses</li> <li>(3) Practically never make excuses</li> </ul> </li> </ul></li></ul>	( ( ( ( ( ( (	) )) )) )) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) each ad) ) ) )	( ( ( ( ( ( ( (	))) m ()))))))))
386 387 388 Chee 389 390 391 392 393	<ul> <li>Smooth out tangles and disagreements between people.</li> <li>Am approachable</li> <li>Discuss my ideals with others.</li> <li>Discuss my ideals with others.</li> <li>ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.</li> <li>(1) Feelings easily hurt <ul> <li>(2) Feelings hurt sometimes</li> <li>(3) Feelings rarely hurt</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(3) Carefully consider them</li> <li>(4) Loan money to acquaintances</li> <li>(5) Carry out instructions with little or no feeling necessary</li> <li>(1) When caught in a mistake usually make excuses</li> </ul> </li> </ul>	( ( ( ( ( ( ( (	) ) ) ent st) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) ad) ) ) )	( ( ( ( ( ( ( ( (	))) m b))) ) )
386 387 388 Chee 389 390 391 392 393 394	Smooth out tangles and disagreements between people.         Am approachable         Discuss my ideals with others.         Ck (√) in the first, second, or third column at the right according as the first, second, or third state below applies to you.         (1) Feelings easily hurt       (2) Feelings hurt sometimes         (1) Usually ignore the feelings of others       (2) Feelings hurt sometimes         (1) Loan money to acquaintances       (2) Loan only to certain people         (1) Rebel inwardly at orders from another, obey when necessary       (2) Carry out instructions with little or no feeling necessary         (1) When caught in a mistake usually make excuses       (2) Seldom make excuses         (1) Best-liked friends are su-       (2) Equal in ability	( ( ( ( ( ( ( ( (	) )) ent st) )) )) )) ))	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) ad) ) ) ) )	( (( (3rd () () () () ()	ノ ))) m i)) ) ))
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386 387 388 Chee 389 390 391 392 393 393 394	<ul> <li>Smooth out tangles and disagreements between people</li></ul>	( ( ( teme (1) ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) each ad) ) ) ) )	( ( ( ( ( ( (	
386 387 388 Chee 389 390 391 392 393 394 395	Smooth out tangles and disagreements between people.         Am approachable         Discuss my ideals with others.         Discuss my ideals with others.         ck (√) in the first, second, or third column at the right according as the first, second, or third stat below applies to you.         (1) Feelings easily hurt       (2) Feelings hurt sometimes         (1) Usually ignore the feelings of others       (2) Feelings hurt sometimes         (1) Loan money to acquaintances       (2) Loan only to certain people         (1) Rebel inwardly at orders from another, obey when necessary       (2) Carry out instructions with little or no feeling necessary         (1) When caught in a mistake usually make excuses       (2) Seldom make excuses         (1) Best-liked friends are superior to me in ability       (2) Equal in ability         (2) Become annoyed at times       (3) Lose my temper at times.	( ( ( teme (1) ( ( ( ( ( (	) )) )) )) )) ))	( ( ( ( ( ( ( (	) )) ) )) )) )) ))	( ( ( ( ( ( ( ( ( (	
386 387 388 Chee 389 390 391 392 393 394 395	Smooth out tangles and disagreements between people	( ( ( teme (1) ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( (	) )) each nd) ) ) ) ) )	( ( ( ( ( ( ( ( ( (	
386 387 388 Chee 389 390 391 392 393 394 395	Smooth out tangles and disagreements between people	( ( ( terme (1) ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) )) each nd) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( ( (	
386 387 388 Chee 389 390 391 392 393 394 395 396	Smooth out tangles and disagreements between people	( ( ( teme (1: ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( (	) )) each nd) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( (	
386 387 388 Chee 389 390 391 392 393 394 395 396	Smooth out tangles and disagreements between people	( ( ( teme (1; ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( (	) )) )) )) )) )) ))	( ( ( ( ( ( ( (	
386 387 388 Chee 399 390 391 392 393 394 395 396 397	Smooth out tangles and disagreements between people	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) )) )) )) )) )) ))	( ( ( ( ( ( ( (	
386 387 388 Chee 399 390 391 392 393 394 395 396 397 398	Smooth out tangles and disagreements between people	( ( ( tema (1) ( ) ( ) ( ) ( ) ( ) ( )	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( (	) )) )) )) )) )) )) ))	( (item (3rd ( ( ( ( ( ( ( ( ( ( (	))))))))))))))))))))))))))))))))))))))
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386 387 388 Che 389 390 391 392 393 394 395 396 397 398 399 400	Smooth out tangles and disagreements between people	() () () () () () () () () () () () () (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) )) ) )) )) )) )) )) ))	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	)     )     )       )     )     )       )     )     )
386 387 388 Che 389 390 391 392 393 394 395 396 397 398 399 400	Smooth out tangles and disagreements between people.         Am approachable         Discuss my ideals with others.         Discuss my ideals with others.         Ck ( $$ ) in the first, second, or third column at the right according as the first, second, or third stabelow applies to you.         (1) Feelings easily hurt       (2) Feelings hurt sometimes         (1) Usually ignore the feelings of others       (2) Consider them sometimes         (1) Loan money to acquaint- ances       (2) Loan only to certain people         (1) Rebel inwardly at orders from another, obey when necessary       (2) Carry out instructions with little or no feeling necessary         (1) When caught in a mistake usually make excuses       (2) Seldom make excuses         (1) Best-liked friends are superior to me in ability       (2) Become annoyed at times out getting irritated         (1) Borrow frequently (for personal use)       (2) Seldom tell jokes         (1) Tell jokes well       (2) Seldom tell jokes         (1) My advice sought by many       (2) Seldom tell jokes         (3) Practically never tell jokes         (1) Worry considerably about       (2) Worry very little	() () () () () () () () () () () () () (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( (	) )) ) )) )) )) )) )) ))	( ( ( ( ( ( ( ( ( ( )	)     )     )       )     )     )       )     )     )
386 387 388 Chee 389 390 391 392 393 394 395 396 397 398 399 400	Smooth out tangles and disagreements between people.         Am approachable         Discuss my ideals with others.         Discuss my ideals with others.         ck (√) in the first, second, or third column at the right according as the first, second, or third statelow applies to you.         (1) Feelings easily hurt       (2) Feelings hurt sometimes         (1) Usually ignore the feelings of others       (2) Consider them sometimes         (1) Loan money to acquaintances       (2) Loan only to certain people         (1) Rebel inwardly at orders from another, obey when necessary       (2) Carry out instructions with little or no feeling program.       (3) Enter into situation and enthusiastically carry out program.         (1) When caught in a mistake usually make excuses       (2) Seldom make excuses       (3) Inferior in ability         (1) Best-liked friends are superior to me in ability       (2) Become annoyed at times out getting irritated       (3) Lose my temper at times.         (1) Borrow frequently (for personal use)       (2) Seldom tell jokes       (3) Practically never tell jokes         (1) Tell jokes well       (2) Seldom tell jokes       (3) Practically never asked         (1) My advice sought by many       (2) Sought by few       (3) Practically never asked         (1) Worry considerably about mistakes       (2) Worry very little       (3) Do not worry	() () () () () () () () () () () () () (	))))))))))))))))))))))))))))))))))))))	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) ) )	( ( ( ( ( ( ( ( ( ( )	)))     m     )))       ))))     )))))

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ticularly the Second Columns on Pages 2, 3, and 4.

	1	1			1	1					
Occupation	Artist	Psychologist	Architect	Physician	Psychiatrist	Osteopath	Dentist	Veterinarian	Mathema- tician	Physicist	Chemist
Raw Score											
Standard Score											
Pating											
Kathig											
Occupation	Engineer	Production Manager	Farmer	Carpenter	Forest Service Man	Aviator	Printer	Mathematics- Science Teacher	Policeman	Army Officer	Y.M.C.A. Physical Director
Raw Score											
Standard Score											
Rating											
Occupation	Personnel Manager	Public Adminis- trator	Vocational Counselor	Physical Therapist	Social Worker	Social Science Tcacher	Business Education Teacher	School Superintend- ent	Minister	Musician	Music Teacher
Raw Score											
Standard Score											
Rating											
											t
Occupation	C.P.A. Owner	Senior C.P.A.	Accountant	Office Work <mark>e</mark> r	Credit Manager	Purchasing Agent	Banker	Pharmacist	Mortician	Sales Manager	Real Estate Salesman
Raw Score											
Standard <mark>Score</mark>											
Rating											
Occupation	Life Insurance Salesman	Advertising Man	Lawyer	Author- Journalist	President, M'f'g. Concern	Occupational Level	Speciali- zation Level	Masculinity Femininity	Interest Maturity		
Raw Score											
Standard Score											
Rating			•								

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APPENDIX B

Raw Scores

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# ALLENDIX B

### Raw bcores

T	ab	1	•	- 5
	_	_	_	-

Mean	Standard	Scores	of 3	9 Subjects
on	45 SVIB	Occupati	onal	Scales"

Ne	A			Gr	oup	I				Group II				
MO.	Age		Ъ	с	d	•	f	8	•	b	С	d		
1	62	34	32	40	38	33	37	15	19	19	28	29		
2	66	50	07	35	15	18	32	05	32	27	29	22		
3	66	53	12	35	16	22	38	12	33	29	30	24		
4	66	45	06	39	16	15	35	13	34	28	33	27		
5	67	40	07	26	12	19	30	15	25	16	23	15		
6	67	30	09	17	05	10	11	80	19	11	15	05		
7	67	20	18	22	24	34	33	11	22	19	31	29		
8	68	11	19	11	27	35	24	28	06	03	19	16		
9	68	38	14	30	09	10	21	80	30	26	31	23		
10	68	32	28	27	28	26	29	12	24	17	26	22		
11	68	35	30	35	37	39	46	16	30	27	31	36		
12	69	14	15	05	80	12	06	13	-08	-10	04	00		
13	69	32	19	23	14	26	26	11	09	03	11	80		
14	69	38	20	24	17	18	18	17	29	17	23	16		
15	69	15	8	12	15	35	21	26	2	1	14	12		
16	69	30	23	30	27	13	23	31	27	18	27	23		
17	70	11	17	20	05	80	13	09	18	12	26	15		
18	70	49	09	36	12	15	35	06	35	25	30	24		
19	71	39	01	25	00	80	26	80	19	17	22	14		
20	71	18	33	20	19	20	15	11	15	10	19	15		
21	71		21	22	24	21	25	26	15	10	20	17		
22	72	22	30	20	30	38	35	20	14	05	15	18		
23	72	17	53	24	47	38	24	12	29	26	35	36		
24	72	33	18	22	15	17	25	12	25	13	16	11		
25	72	16	09	09	14	38	28	25	09	16	29	26		
20	73	19	20	12	20	41	24	15	02	06	21	17		
27	74	08	24	13	21	24	23	07	10	01	15	TT		
20	74	17	10	00	13	31	20	10	09	03	10	11		
29	74	19	32	17	27	12	12	25	22	11	10	17		
30	74	07	24	00	21	44	22	20	01	-07	21	224		
10	79	11	39	09	25	30	23	14	00	00	30	33		
32	70	11	31		24	53	20	24	05	05	23	27		
22	()	12	20	12	20	51	32	29	09	10	23	20		
24	11	30	37	30	27	40	42	10	12	10	30	10		
ン	/0	21	21	12	22	29	20	21	15	03	14	TO		
<b>مر</b>	/0	20	21	14	22	27	20	TO	10	10	17	17		
57	/0	20	22	17	22	37	20	20	09	12	29	27		
50	02	13	13	10	TO	33	28	10	09	07	20	21		
39	Ö3	18	21	10	20	43	29	15	06	12	24	21		

C arour	2	9	L	ď	ស	Т
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Subjects	39	Jo	SOL62	brabus	ste	hean
Scales	: <b>1</b>	iona	occupati	) EIVa	45	on

]	LI qi	ωυ				1	C qua	Gro				~ ~ ~
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29	28	19	19	15	37	33	36	ړتن	32	3 ¹ i	62	<u>,</u>
22	29	27	3.2	05	32	18	15	35	70	50	66	2
2'	30	29	33	12	33	22	16	35	12	53	66	3
72	33	26	4	13	35	15	16	39	ΰO	45	99	$\mathbf{t}_{l}$
1.5	23	16	25	15	30	61	12	26	50	40	50	5
05	15	1.1	19	03	11	10	05	17	60	30	59	9
63	13	61	22	<b>1</b> . <b>1</b>	33	$3^{4}$	$5'_{t}$	22	<b>1</b> 3	20	67	2
ΪŰ	θĽ	υj	00	23	24	35	72	11	61	11	63	3
23	31	26	ცე	60	21	01	60	30	1 / <del>1</del>	38	89	6
22	ΣÚ	17	£4	12	29	26	28	27	23	32	60	<b>]</b> . O
36	31	72	30	16	46	39	37	35	30	35	ΰα	11
00	4/ O	0[	- 80-	13	90	12	80	05	15	7,7	૯૦	12
03	11.	ξΟ	60	11	2ú	26	J. /t	23	61	32	69	13
16	23	17	29	17	13	18	1.7	24	20	36	69	14
12	ĿТ	1	2	26	21	35	15	12	0	15	69	1.5
23	27	13	72	31	23	13	72	30	23	30	69	θL
15	26	<b>12</b>	1.3	୧୦	ĹĴ	ິບບີ	05	20	17	1.1	07	17
54	30	25	35	<b>0</b> 0	35	15	12	ΰε	60	67	70	δL
₹ <u>7</u> °E	<b>22</b>	17	19	60	26	60	00	25	01	65	17	61
15	19	0T	15	11	15	02	1.9	20	33	1.3	71.	20
17	20	10	15	26	25	21	24	22	21	23	12	21
13	15	05	14	20	35	38	30	20	30	22	72	22
36	35	26	63	12	$2'_{t}$	33	47	24	53	17	72	23
11	16	13	25	<b>12</b>	25	17	15	<b>22</b>	13	33	72	$2^{l_{\pm}}$
26	29	ð L	60	25	23	38	1 4	60	60	16	72	25
17	21	ΟÚ	02	15	24	<i>l</i> ŧ 1	20	<b>12</b>	20	19	73	26
11	15	01	10	70	23	24	21	13	54	03	74	27
11	10	63	60	16	26	31	13	90	18	17	7 ^{/±}	28
17	16	11	22	25	15	15	27	19	32	19	74	29
22	J. S	-70-	01	26	22	ι, <del>1</del> 7	21	00	24	70	472	30
33	30	<b>03</b>	60	14	23	38	25	60	39	11	74	31
27	33	05	05	$2_{4}$	23	53	24	90	31	11	56	32
97	23	90	60	29	32	51	23	12	<b>28</b>	12	77	33
31	90	ίL	15	16	42	1,6	72	30	37	30	77	34
8.1	14	63	15	21	20	29	22	15	21	21	67	35
ΥE	17	10	ðτ	<b>1</b> 6	20	27	22	<b>14</b>	21	20	78	36
72	29	12	60	26	23	37	22	17	22	20	37	37
21	02	70	60	13	23	23	ЦŚ	10	13	13	23	33
21	24	31	90	15	29	4.5	02	10	21	13	83	39

Table	5	Cont	inued
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Ne	Age	Greup III	Group IV									
NO.	Age	a	a	b	с	d	e	f	g	h	i	
1	62	38	16	13	22	33	21	08	05	24	06	
2	66	22	30	13	14	13	<del>••</del> 06	-10	-09	04	-10	
3	66	22	31	14	18	16	-09	-02	-09	80	-10	
4	66	32	30	13	31	25	05	-06	02	24	-03	
5	67	35	24	07	20	17	04	-06	00	13	-10	
6	67	22	27	07	17	17	07	-07	23	14	-10	
7	67	38	38	31	46	61	42	26	18	44	26	
8	68	42	35	30	49	50	43	37	35	55	- 29	
9	68	37	37	25	32	27	12	04	11	31	14	
10	68	36	26	16	27	41	24	10	11	25	04	
11	68	26	34	22	38	36	35	24	14	31	03	
12	69	43	22	11	25	35	22	13	20	34	06	
13	69	32	08	07	17	20	07	-06	-06	25	-03	
14	69	22	24	18	25	34	13	01	11	21	-04	
15	69	41	37	27	38	42	34	30	34	46	25	
16	69	32	37	26	33	- 34	21	15	34	32	19	
17	70	39	25	16	29	30	32	14	20	30	17	
18	70	24	27	11	14	13	-07	-10	-04	05	-10	
19	71	32	25	05	24	13	02	-10	-03	17	-10	
20	71	40	31	15	29	43	40	30	33	34	20	
21	71	37	31	19	29	27	19	09	18	35	16	
22	72	30	35	24	29	47	47	26	29	47	23	
23	72	40	37	37	34	50	58	44	46	40	29	
24	72	24	23	<b>0</b> 6	23	31	16	-09	11	29	02	
25	72	36	37	32	45	41	35	25	23	45	04	
26	73	45	19	19	27	33	27	22	12	38	03	
27	74	39	22	20	29	41	42	19	17	39	16	
28	74	38	27	17	43	47	38	32	26	43	11	
29	74	35	45	26	30	45	44	27	49	<b>4</b> 4	36	
30	74	49	23	38	41	47	42	38	23	53	21	
31	74	51	21	29	32	<b>4</b> 0	46	36	20	44	16	
32	76	41	27	30	32	41	45	29	16	46	19	
33	77	40	29	33	35	44	44	35	24	46	23	
34	77	35	23	27	29	43	37	24	12	39	16	
35	78	32	32	23	29	39	34	21	30	40	20	
36	78	29	38	24	20	35	35	19	20	28	07	
37	78	48	20	15	32	25	24	17	<b>08</b>	36	o a	
38	82	38	32	24	43	47	42	37	30	45	05	
39	83	45	19	20	29	32	28	24	10	37	00	

			1Υ	dno.	Gr				Group III	o	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
ł	٢ŧ	8	J	9	Ь	Э	ď	ß	ß	9 g A	•011
90	24	20	63	21	33	22	13	16	33	62	1
<b>–</b> 10	04	60-	01-	00 <b></b>	13	14	13	30	22	99	2
-10	0U	60-	-02	60-	16	13	14	31	85	66	3
<b>-</b> 03	$2^{4}$	02	U <b>0-</b>	05	25	31	13	30	32	ðð	$\mathbf{Y}_{I}$
<b>~1</b> 0	13	00	d0-	$\mathbf{V}_{IO}$	77	20	20	54	35	<u>7</u> 0	5
-10	14	23	-07	70	17	17	20	27	22	67	9
26	$t_1 t_1$	13	56	$l_1 \Sigma$	61	46	31	38	ະເ	29	5
29	55	35	37	43	50	64	30	35	42	63	8
ŧ, τ	31	11	10	12	27	32	25	37	37	00	6
40	25	11	10	2'1	1 7	27	16	26	36	30	10
63	31	1 [/] ±	24	35	30	33	22	3 ¹ ±	26	63	11
ΰŬ	34	20	13	<b>22</b>	35	25	11	22	43	60	12
<b>-</b> 03	22	90-	90-	<b>7</b> 0	20	17	20	08	32	<b>e</b> .)	13
<b>-</b> 04	21	11	10	13	34	20	31	$\mathbf{T}_{I}\mathbf{Z}$	22	(U	14
25	<b>46</b>	3 ⁴ t	30	34	42	36	្រុន	37	1 <del>1</del> 1	69	<u>Š</u> T
<b>1</b> (	32	34	15	21	$3^{t}$	33	20	37	32	62	51
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-10	17	-03	-10	02	13	24	05	25	22	17	(1)
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16	35	18	60	61	27	29	61	18	78	7 /	12
23	47	63	26	47	47	29	₩3	35	30	2)	22
63	40	46	44	82	50	34	37	15	40	27	23
20	29	11	60-	01	18	23	00	<u>ر</u>	12 20	2) 017	#3 30
04	15	23	25	35	41	45	28	10	02		20
OJ	30	12	22	12	55	12	( <u>1</u>	61	Ch.	12	20
01	92	Ϋ́Τ	61	92	1P	62	~ r	22		ν τ)	14 80
11	43	02	55	11	74	43	) D	75	0C	72	02
08	44	49	$\sum_{\alpha \in \alpha}$	44	C# 5-4	υζ Γ.Δ	50	C# 60	<u>رد</u> ۲۵	μ <u>τ</u> /	05
72	60	<u></u>	οr De	74	75	7 C C		(2) 10	(r.	74	10
91	44			27	101 1	<u>сс</u>	29 00	20		94 EJ	0.E
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CO 00	54.) 14.)			Se Se	11		00	ωC		20 80	65
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Table 5 Continued
Ne			Group V						VI	VII	
•		a	b	с	d	•	f	g	h	a	
1	62	18	27	29	22	23	23	28	23	40	37
2	66	-10	<b>+10</b>	01	-10	-04	-06	<b>10</b>	-03	17	27
3	66	-10	<b>-10</b>	-06	-10	05	-09	-10	-04	24	29
4	66	-05	<b>⊷</b> 02	01	-06	04	05	-07	-07	27	23
5	67	<b>-09</b>	-07	03	04	05	08	04	02	23	23
6	67	02	11	15	18	20	15	12	13	18	19
7	67	32	- 34	31	32	35	19	28	28	37	26
8	68	- 38	43	45	41	48	30	42	33	37	18
9	68	02	10	18	02	15	06	07	-08	24	20
10	68	14	21	27	17	25	16	28	20	40	31
11	68	22	17	23	20	25	14	27	30	47	18
12	69	32	37	29	42	42	30	40	28	33	21
13	69	15	31	27	25	23	18	32	22	36	33
14	69	11	08	12	07	16	13	18	06	39	26
15	69	45	25	27	44	41	18	31	35	31	08
16	69	20	19	24	14	22	20	24	03	35	27
17	70	21	33	- 34	36	36	26	28	21	22	40
18	70	-10	-10	-07	-10	<b>"</b> 04	-07	<b>n10</b>	-10	20	32
19	71	-06	00	06	07	10	oi	<del>~08</del>	03	21	24
20	71	36	44	45	47	44	43	42	42	39	25
21	71	21	26	30	26	25	21	28	20	34	29
22	72	47	42	42	52	55	42	48	51	49	16
23	72	48	55	59	47	46	54	52	46	40	34
24	72	26	11	16	28	26	24	22	33	37	33
25	72	20	30	24	24	28	04	19	20	22	17
26	73	40	44	36	42	38	27	39	39	30	25
27	74	42	51	<b>4</b> 6	47	55	33	45	34	32	35
28	74	39	36	31	<b>4</b> Ġ	48	29	39	41	37	17
29	74	32	35	45	43	45	40	38	34	39	22
30	74	46	48	54	41	48	19	49	29	27	31
31	74	47	64	56	43	46	28	53	36	32	30
32	76	47	50	51	45	49	24	50	41	29	22
33	77	43	48	52	42	<b>4</b> 6	24	48	37	34	22
34	77	36	43	42	32	35	25	40	37	20	22
35	78	22	31	33	32	43	22	33	22	34	25
36	78	14	31	30	3]	36	26	22	23	ጋ <del>ግ</del> 94	20 20
37	78	35	38	27	20	26	18	~~)	25	23 98	21
38	82	40	36	30	42	47	25	22	25	25	10
30	83	38	42	20	 	26		26	22	22	± 4 0 1

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Caule 5 Continued

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72	21	£0 <b>-</b>	01-	0ú-	<u>-04</u>	-10	10	<b>-</b> 10	<b>-1</b> 0	99	2
24	4 ¹	1·0-	-10	60-	-05	01-	00-	() [ 🛏	01-	66	3
22	27	70-	-07	05	$\mathbf{C4}$	00 <b>-</b>	10	<u> 10-</u>	-05	99	i'
23	2.2	20	04	C3	05	ОĄ	ΟJ	-07	60-	67	5
ξ.L	1:5	13	12	15	20	<u>ះ</u> ខ	15	11	20	70	9
02	37	25	2,2	19	35	32	31	$3^{t}$	32	20	7
13	37	33	4 2	$0 \in$	43	Th	45	43	33	30	8
02	4/3	50 <b></b>	67	90	15	20	13	10	02	68	Ŕ
3.L	04	02	82	91	72	5L	72	21	i C	63	10
Û I.	47	30	25	4-1	25	02	23	17	22	8ð	11
21	23	62	0 <b>1</b> /	<u>3</u> 0	4.2	$\Im f_{f}$	29	37	32	69	12
23	36	22	32	13	23	25	27	31	15	હરે	13
20	ęč	ə9	3 S	13	àL	70	12	03	1.1	69	14
<u>90</u>	10	35	21	θĽ	$\mathbf{T}^{\mathbf{i}_{l}}$	$\mathbf{t},\mathbf{t}$	72	22	45	69	Ę1
73	35	03	475	02	22	14	<b>2</b> - <b>1</b>	Q 1.	02	69	.l€
04/	22	21	23	èς	36	36	34	33	21	07	17
32	20	01-	0.L <b>~</b>	-67	₽0 <b>-</b>	-10	70 <b>-</b>	0 <b>1-</b>	-10	70	3 C
24	12	60	80 <b>-</b>	<b>61</b>	10	70	90	00	90-	12	61
22	29	$\mathbf{t}_{\mathbf{t}}$	42	43	VG	2.¥J	55	<b>1 1</b>	36	23	02
65	ńс	02	20	17	25	20	30	02	10	71	1.2
UI.	64	51	43	24	55	52	42	42	47	22	22
54	40	46	52	54	91	2. ¥	59	55	110	72	55 2
33	37	33	22	42	93	33	<u> 16</u>	11	θΩ	72	24
71 - T	22	20	6T -	$\mathbf{F}_{\mathbf{f}}$ O	83	24	47.7	95	-98	72	25
25	Oξ	39	- 39	72	8ε	54	26	<i>L</i> t <i>l</i> i	04	73	26
35	32	34	45	23	55	24	67	51	42	47 -	79
7.5	37	41	39	63	63	40	31.	36	૧૬	1, 2	23
33	3.9	ЪĘ	-23	ΟĘ	45	¹ 13	45	3.5	32	1, 2	63
10	72	62	64	£1.	34	Τ4	54	43	1:0	7/2	ંદ
00	20	36	53	23	94	⁴ ±3	50	49	7.É	74 7	31
20	65	41	50	2'1	CF-	45	51	50	2V	76	32
33	P.C.	37	43	2.4	46	42	52	43	4 3	77	33
33	eĉ.	57	40	25	35	32	42	43	36	77	34 S
26	18	22	33	22	43	32	23	3.L	22	37	35
02	11.7	23	23	26	36	31	30	3.L	1/F	37	36
19	Č1	25	33	$8\pi$	ð2	29	27	38	35	73	37
12	₹?	35	31	25	47	42	05	36	0Ý	62	62
23	<u>85</u>	34	36	23	36	41	62	43	30	63	39

Table	5	Continued

No.	A = -		Group VIII						
	Age		b	С	đ	e	ſ	g	
1	62	• 22	18	27	33	23	29	34	
2	66	•05	04	06	28	34	31	28	
3	66	10	00	03	26	32	33	29	
4	66	. 01	12	21	33	40	37	- 34	
5	67	• ••07	06	15	31	36	41	- 40	
6	67	• 03	09	25	28	45	41	29	
7	67	• 41	43	55	37	36	29	40	
8	68	• 45	47	63	36	41	42	- 44	
9	68	• 06	17	21	33	33	30	26	
10	68	• 25	30	35	37	31	33	44	
11	68	• 22	24	34	21	26	26	33	
12	69	• 24	36	51	38	44	44	42	
13	69	. 12	18	34	39	36	53	51	
14	69	. 11	15	29	39	39	36	45	
15	69	. 27	37	51	32	37	44	28	
16	69	• 30	18	25	28	40	36	37	
17	70	. 39	50	54	44	44	37	38	
18	70	• • • • • • • •	03	68	29	39	30	31	
19	71	• •02	12	24	44	42	44	40	
20		• 33	39	41	26	39	24	21	
21		26	31	37	31	42	39	- 74	
22	72	35	29	47	14	26	32	29	
23	72	48	40	35	15	22	15	22	
24		16	20	31	28	38	36	29	
25			38	51	40	40	<b>A</b> A		
26		• 30	30	50	35	30	45	16	
27	74	50	55	50	40	42	25	37	
28	74	- 30	20	56	20	40	)) 44	27	
29	74		34	40	25	44	21 91	21	
30	74	• <del>1</del> 0	55	61	28	20	40		
21	74	• 11	56	E 0	24	27	26		
20	76	• 40	<b>50</b>	27	27	21	50	- <b>TA</b> - ko	
22		• 74 he	47	50	مر مر	21		- 74	
2		• <b>7</b> 7	71	フフ	20	10	777 21	72	
72 25	78	• 40	22	70	<b>64</b>	10 10	<u>j4</u>	シン	
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27	78	• ))	<b>ار</b>	71 6 a	20	4U 21	27	27	
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20		• 54	41	<b>70</b>	0	37	54	ەر	
37	03	<u> </u>	32	4ð	35	29	40	5	

Table 5 Continued

Age a b c f g   a b c f g g   a b c f g g	62 66 66 66 67	1 2 4
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	60 66 66	2 4
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•••••••••••••••• <b>~10</b> 00 03 26 32 33 29	60 67	4
•••••••••••••••••••••••••••••••••••••	29	
••••••••••••••••••••••••••••••••••••••		5
••••••••••••••••••••••••••••••••••••••	20	J
••••••••••••••••••••••••••••••••••••••	10	Ž
<b>45 47 63 36 41 42 44</b>	63	8
••••••••••••••••••••••••••••••••••••••	63	6
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	63	01
22 24 34 21 26 26 33	00	11
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•••••••••••• 12 13 34 39 36 53 51	69	13
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••••••••••••••••••••••••••••••••••••••	69	<u>i</u> S
30 18 25 28 40 36 37	69	01
39 50 54 44 44 44 37 36	07	21
	07	51
••••••••••••••••••••••••••••••••••••••	17	61
••••••••••••••••••••••••••••••••••••••	4 A	20
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	27	1.2
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TO TO ALLO TO	37	
$C_{2}  C_{2}  C_{3}  C_{4}  C_{4}  C_{5}  C_{6}  C_{7}  C_{7$	57	50 70
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24 32 48 35 29 46 51	23	PF

Table 5 Continued

No.	1.50	Gro	up I	X	Group X			XI	
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	A	b	с	A	b	c		
1	62	40	39	32	40	34	39	45	
2	66	26	49	36	46	49	58	50	
3	66	26	52	35	48	49	60	53	
4	66	32	47	37	40	40	50	51	
5	67 •••••	34	52	44	42	43	50	53	
6	67 •••••	36	58	51	42	37	44	44	
7	67 •••••	22	35	25	24	21	25	31	
8	68	33	40	32	26	19	19	21	
9	68	34	46	33	39	38	45	47	
10	68	36	41	33	39	34	37	54	
11	68	21	35	28	31	28	37	40	
12	69	55	53	53	39	29	28	42	
13	69 •••••	54	55	57	52	41	44	54	
14	69	40	52	39	45	44	48	41	
15	69	36	38	40	25	16	22	28	
16	69	38	45	35	37	37	36	- 36	
17	70	49	44	44	33	25	24	46	
18	70	28	53	38	45	46	58	56	
19	71	44	59	48	44	36	47	- 54	
20	71	32	29	27	31	25	27	31	
21	71	39	49	44	35	35	35	36	
22	72	24	29	36	26	29	28	18	
23	72	16	18	15	23	23	24	20	
24	72	35	42	42	36	42	45	35	
25	72	29	44	35	24	17	23	42	
26	73 ••••	44	41	48	34	2 5	27	50	
27	74	41	36	37	26	27	19	33	
28	74	34	39	· 39	30	22	26	32	
29	74	24	28	21	26	25	26	08	
30	74	41	42	43	28	19	19	37	
31	74	40	35	38	34	25	23	40	
32	76	33	38	45	29	26	22	34	
33	77 •••••	32	39	41	29	24	22	36	
34	77 •••••	33	39	41	41	34	37	38	
35	78	28	40	37	31	21	30	24	
36	78	25	35	31	28	25	26	29	
37	78	46	46	50	35	31	28	49	
38	82	32	32	33	28	20	22	32	
39	83	48	46	49	35	24	25	50	
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^aThe letter designations refer to the names of the occupational scales within each group, in the order given in Table 4.

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0r	37	64	اي ن	36	9.6	26		3
22	- 05	63	$L_{\rm G}$	35	52	02	66 	Ę
12	07	54	634	ΪČ	47	60	••••••••••	I,
5 6	50	43	4.2	ê P	5.2	μĈ	•••••••••••	5
44	1'1'	37	4.2	51	83	36		Ú
31	25	21	12	25	55	22	67	7
23.	19	1.9	20	SE.	40	53		6
17	45	38	39	33	45	34		6
	70	34	29	33	11	36		10
40	52	23	51	32	7.8	12		1.1
\dot{a} 3	28	29	42	53	53	53	69	12
54	44	i i	52	57	55	4	••••••••••	13
ŤŤ	43	44	45	39	52	1,1		1 ⁷ i
23	00	16	25	01	23	36	69	15
02	30	37	37	35	45	85	••••••••••••	01
40	24	72	33	44	4.1	64		17
56	53	40	45	36	53	29	70	13
54	24	35	44	84	59	$l_1 l_1$	71	. er
12	52	25	31	27	62	32	71	20
36	35	20	35	4 /2	ê.	33		21
13	23	02	22	èr	<u>(2</u>)	24	72	22
20	42	23	23	15	Ĉ.	91	72	23
35	24	6.2	36	64	41	77	72	42
42	23	71	24	20	$\mathbf{r}_{\mathbf{r}}$	65	72	25
65	7.		3 1	48	11	44	73	- Se
33	0 L		26		00	41	74	27
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fable 5 Continued

^aThe letter designations refer to the newes of the occupational scales within each group, in the order given in Table 4.