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A study of the relationship of aesthetic interests to vocational maladjustment

Zelda A. Nelson
University of Nebraska at Omaha

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A STUDY
OF
THE RELATIONSHIP OF AESTHETIC INTERESTS
TO
VOCATIONAL MALADJUSTMENT

Submitted by
Zelda L. Nelson

In partial fulfillment of the requirements
For the Degree of Master of Arts
Department of Psychology
University of Omaha

1951
DEDICATION

To the many young men and women who have accorded me the privilege of assisting with their vocational planning, this study is affectionately dedicated.
ACKNOWLEDGMENT

A study of this nature would be impossible without the assistance of many persons, and especially without that group of individuals, the applicants, who furnished the data. For their readiness to report for interviews, as well as their cooperation in revealing their inmost interests and reactions, I am most grateful.

Equally encouraging and helpful were my graduate advisor, Dr. W. H. Thompson, my instructors and fellow students, at the University of Omaha.

Appreciation is extended to the administrators and my coworkers in the Omaha, Lincoln, and Norfolk offices of the Nebraska State Employment Service who assisted in compiling the necessary data; and to the officers of the Nebraska State Nurses' Association and Mrs. Catharine Gehrman, Executive Director, for their cooperation in allowing me time to complete the final details of the work.
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CHAPTER I
BACKGROUND OF THE PROBLEM

Development of Interest in the Problem

Literature in the field of Employment Psychology not only reveals the fact that many persons are poorly adjusted to their jobs, but it is also replete with references to the serious effects of vocational maladjustment to both the individual and society. Note the following:

There have been cases of individuals who have suffered major conflicts over vocational maladjustment and failure, which led to excessive drinking, suicide, mental disorder, and crime. 1

Menninger claims that

Perhaps three-fourths of the patients who come to psychiatrists are suffering from an incapacitating impairment of their satisfaction in work or their ability to work. In many, it is their chief complaint. 2

Again:

There is no waste so far-reaching as misdirected human activity, and waste in industry hits all of us, including the worker himself. 3

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And,

... The frustration and waste which the blight of vocational maladjustment visits upon youth ... will not be generally recognized in its true importance unless there is a shortage of manpower. 4

Apropos of the reference to manpower shortage, Miss Dorothy V. Wheeler, Director of Nursing Service for the Veterans' Administration, declared that she believes job dissatisfaction, not insufficient remuneration, is the cause of the shortage of nurses. 5

Just how far-reaching the effects of job dissatisfaction may be is carried to the ultimate by Robert Hoppock:

Whether or not one finds his employment sufficiently satisfactory to continue in it, either permanently or until he has prepared himself for greater responsibilities, is a matter of the first importance to employer and employee. To the state the problem is no less significant: subject any group of normal persons to intolerable working conditions and revolt is inevitable; first in strikes; if they fail, in riots; finally, if necessary, in political or social revolution. 6

Another factor which creates interest in and points to the value of further study in this field is the interdependence of job adjustment and adjustment to life in general.

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According to Hepner:

Most modern vocational psychologists do not try to study a youth in order to predict what he should do but to help him improve his adjustments to life by means of a vocation. 7

A United States Employment Service training supervisor says:

Remember that a man's whole adjustment to life usually depends upon his job. His job may determine where he lives, what he eats, how he dresses. It may determine his health, his recreation, his friends. It may also determine his happiness and his value to society. 8

It may be observed in passing that the reverse of the latter paragraph might also be true. Certainly one's health, his food, and where he lives have a marked influence on his preparation for, opportunity in, and adjustment to the World of Work.

Vocational adjustment or maladjustment may be the result of vocational choice. How tremendously significant that choice may be is most impressively told by William Lowe Bryan, President Emeritus, Indiana University.

It is no light matter to choose your life work. It is to elect your physical and social environment. It is to choose where you will work - in a scholar's cloister, on a farm, or in the cliffs of a city street. It is to choose your comrades and rivals. It is to choose what you will attend to, what you will try for, whom you will follow. In a word, it is to


elect for life, for better or worse, some one part of the whole social heritage. These influences will not touch you lightly. They will compass you with subtle compulsions. They will fashion your clothes and looks and carriage, the cunning of your hands, the texture of your speech and the temper of your will. And if you are wholly willing and wholly fit, they can work upon you this miracle: they can carry you swiftly in the course of your single life to levels of wisdom and skill in one sort, which it has cost the whole history of your guild to win. 9

Such interpretation of the responsibilities of the vocational counselor has been a strong motivation toward further investigation of this nebulous problem of vocational maladjustment, a problem with many facets, each a challenge for individual study.

Interest in the special subject of this study, "the relationship of aesthetic interest to vocational maladjustment," developed over a period of ten years of experience in vocational counseling and the supervision and training of vocational counselors in a public employment office.

In this dual function attention was directed to three aspects of the problem:

(1) The apparent difficulty of persons with high aesthetic interest to make a satisfactory job adjustment.

(2) The sense of futility and frustration expressed by counselors in assisting the "artistic" applicant to make a suitable job choice.

(3) The possible lack of opportunity for training and employment in the field of the arts.

Observations directing attention to these problem areas were twofold: the proportionate number of counselees expressing an interest in the arts seemed significantly high; and even more provocative was their manner of expression. There seemed to be a tendency to repress an interest in the arts, or to mention it shyly and confidentially as if it might not be accepted. In fact, a vocational preference for the field of the arts was often prefaced by some such remark as, "You'll probably laugh but I'd like to write, or paint, or be a concert singer."

Also noting this tendency of repression of true interests, Sadie M. Shallow asks:

Is he afraid of the field of aesthetics even though he may have talent and ability in the field of art? Does he have a large feminine component in his personality which he is trying to repress? 10

Once the wish for an aesthetic outlet was expressed, however, encouragement and interest on the part of the counselor usually brought forth a flow of conversation,

accompanied by evident emotional release, revealing reasons for this attitude of repression and failure of young persons to even attempt to seek a vocation in line with their dominant aesthetic interests.

A young man who said his desire to express himself musically was so intense that he could "feel it flowing to his finger-tips" was forbidden by his parents to sing on a radio program. He was not permitted to play the classical records he was collecting. He had no piano. Although his grandfather had been an opera singer in Germany, his parents insisted that he find a "practical" means of earning a livelihood.

Another boy's father burned the short stories he had written. And no doubt a more sensitive individual would have given up writing as a career had her father, like the father of Marie Sandoz, said that he considered writers the "maggots of society." 11

These remarks indicate that perhaps too often where the arts are concerned these parents still hold to the view expressed by John Locke three centuries ago, when he declared:

If a child has a poetic vein, the parents so far from cherishing it should labor to have it stifled and suppressed as much as may be. . . The Air of Parnassus may be pleasant but its soil is barren. 12


Another equally disconcerting factor was the expression of futility by the vocational interviewers and counselors when confronted with the "artistic" applicant. Seldom did aesthetic interest receive serious consideration. There was a tendency on the part of some counselors to avoid interviewing an applicant found to be aesthetically inclined, and, if this were impossible, they too, apparently in sympathy with John Locke's appraisal of a vocation utilizing aesthetic interests, tried to persuade the individual to be "practical."

The counselor reasoned thus: "Even if the applicant did have ability as well as interest, opportunities for employment as a musician, artist, or writer are almost non-existent."

These observations provoked many questions: could the frustrations resulting from the suppression of artistic interest be one of the causes of vocational maladjustment? Might the counselor's lack of ingenuity in relating aesthetic interests and artistic abilities to the World of Work be a factor? If this problem were removed, would not the limited opportunity for both training and for vocational outlets in the field of the arts still be a factor contributing to vocational maladjustment? Might the percentage of those with aesthetic interests working in jobs differing widely from these interests be significant to this problem?
Interest in pursuing further the problems inherent in these questions led to a review of investigations already made in the field.

Previous Research

Before turning directly to the studies relating to vocational maladjustment, it seems desirable to trace the paths of research which lead to these particular investigations.

Apparently the financial, social, and personal implications of the problems involved in the lack of adjustment of the worker to his job as indicated earlier in this chapter have long been recognized.

J. M. Brewer points out that as early as 1670 Pascal stated the importance of a wise occupational choice. 13 Brewer adds:

All the cults having to do with prediction and prescription - the astrologers, the palm and card readers, the phrenologists, the physiognomists, mediums, and seers - recognized the importance of and were concerned with vocational adaptations. 14

But it remained for those engaged in the more professional aspects of the work to attempt to find clues to the causes and solution of the problems of vocational maladjustment by means of scientific studies. This scientific approach by psychologists, vocational counselors, educators, and others meeting the problems

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in the course of their work, opened a new field of en-
deavor - the field of vocational guidance.

It is to this field that research in vocational
maladjustment seems eventually to lead. The relation-
ship is clarified by the following brief review of the
vocational guidance movement as reported by Brewer:

Frank Parsons is justly called the
founder of the vocational guidance move-
ment, for it was he who began the work
which has led to the present spread of
interest. Parsons discarded the pseudo-
sciences, used the systematic study of
occupations, and was sane and painstaking
in the investigations of ability and
character which he made. Further, he
wrote about his work, and thus gave to
the followers in the movement an oppor-
tunity to build on his gains. His book,
Choosing a Vocation, will perhaps have
a permanent place in the guidance
bibliographies.

... The Civic Service House,
Boston, in which Professor Parsons began
his counseling, was organized in 1901
by Meyer Bloomfield. ... On April 23,
1908, the organization of the Vocation
Bureau was completed ... with a sub-
stantial board of directors as sponsors
of the movement. 15

The need for such a movement was stated in an
English document, Bloomfield's Readings on Vocational
Guidance, published in 1747, more than a century prior
to its organization. Said Bloomfield, "For the great
masses of men, life is organized around work." 16

15 Ibid.
But it was not until nearly thirty years after Parsons initiated the organized vocational guidance movement that Harry D. Kitson defined its objectives as "assisting an individual to select, prepare for, enter upon, and progress in an occupation." 17

Research in this field of Twentieth Century origin is necessarily limited both in number of studies and in type of approach, which was found to be principally through studies of job satisfaction. However, that these might be related to the subject of vocational maladjustment was given encouragement by Fitch, who reports in a follow-up study of the results of vocational guidance, "The service rendered the worker that was mentioned more often than any other was adjustment." 18

And Hepner say, "The choosing of a vocation means that we must choose the one that requires the least amount of adjustment and gives us the greatest amount of satisfaction." 19

Particularly pertinent at this point in the discussion of the relationship of interests, adjustment, and satisfaction, is this quotation from Fryer:

The subjective interests and aversions, the likes and dislikes of the individual, are an important part of his mental life.

Personnel workers have regarded these interests and aversions as closely bound up with the individual's vocational and educational adjustment. 20

Fortunately, any authority in the field, Dr. Robert Hoppock, Professor of Education at New York University, has not only made studies of job satisfaction, but also has compiled a bibliography of studies made by others on this subject.

Dr. Hoppock with his associates has reviewed studies in this field periodically since 1935 when his comprehensive book, *Job Satisfaction*, was published.

Brief summaries and reviews of studies of job satisfaction have been published in Occupations Magazines in the following issues: April, 1938; October, 1940; February, 1943; April, 1945; April, 1948; December, 1948; December, 1949; and October, 1950.

Studies of the general subject of satisfaction and adjustment are reported as early as 1902. Following World War I, the number of similar studies with emphasis on job satisfaction show a marked increase — reaching their greatest activity from 1929 to 1935 when it appears that the unemployment occasioned by the economic depression heightened interest in investigations in the field. Since World War II, these studies have again increased.

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Some understanding of the scope of these investigations can be obtained by scanning these two lists of relationships studied in the years 1948 and 1949 respectively.

Reported in December, 1949 Occupations Magazine, 1948 investigations

... suggest the presence or absence of relationship between job satisfaction and achievement, advancement, age, attitudes toward company and management, benefits, community conditions, cooperation with unions, co-workers, delegation of authority, departmental cooperation, education, efficiency on the job, employee relations programs, family, hobbies and avocations, interest, length of service, living conditions, marital status, nature of the work, number of dependents, number of previous jobs held, opportunity to voice grievances, personal needs, pride in workmanship, productivity, recognition, responsibility, salary, security, sex, social needs, social status, steady work, supervisors, tools and equipment, variety of work, work adjustment, working conditions, and working hours. 21

The study which is considered most outstanding is appraised by the authors thus:

The study by Friend and Haggard presents a penetrating investigation of the effects of family influences on occupational adjustment of the worker. It is one of those rare books which say something that has not been said before. 22

Reported in the October, 1950 issue of Occupations Magazine, 1949 investigations


. . . suggest the presence or absence of relationship between job satisfaction and the following topics:
age, advancement, attitudes toward company and management, benefit programs, co-workers, communication between workers and management, creative activity, credit standing, education, efficiency, favoritism and discrimination, home situation, importance of the job, independence, intelligence, job interest, job preparation, length of employment, nature of the work, occupational stratification, opportunity to voice grievances, outdoor work, personal development, physical plant conditions, previous jobs, productivity, recognition, responsibility, scores on the General Aptitude Test Battery of the USES and on the Kuder Preference Record, security, selling performance, seniority, sex, skill, social needs, supervision, turnover, type of machinery, union, utilization of abilities, wages, work equipment and supplies, working conditions, and working hours. 23

While only one study relates to job interest, all of the research here reviewed is considered pertinent to this study since it is fully recognized that no single factor is the cause of vocational maladjustment and that the results of this study of the relationship of aesthetic interests to vocational maladjustment can be more accurately interpreted in the light of these previous and contemporary studies.

Emphasizing the need for consideration of interests in any study of vocational maladjustment, Walter V. Bingham says:

Since people tend to find the keenest satisfaction in those activities which challenge their sustained attention, there is abundant reason for canvassing their interests systematically and for helping them arrive at a clear picture of their "affective tendencies." 24

The relation of interests and aptitudes is further discussed by Bingham:

When an individual's present interests are ascertained, they are appropriately construed as symptoms of his probable future interest... a person is inclined to enjoy doing what he can do well. His vocational interests do tend in some degree to correspond to his potential abilities. But the relationship is not necessarily very close. 25

Donald Super, in his study on the relation of Avocations to Job Satisfaction found that "men in vocations not related to their avocations tend to desire a change particularly to those occupations which resemble their avocation." 26

He concluded that job adjustment was not so much dependent upon the balance of activities in vocations

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25 Ibid.
and avocations, but was more dependent upon the existence of outlets for dominant interests in one's major activities and particularly in one's work.

In relation to the particular emphasis of this study, the authors conclude:

The relationship to job satisfaction of avocations and other leisure time activities needs additional investigation. These studies might provide data which would be overlooked by the more traditional studies of on-the-job factors of job satisfaction. 28

The studies reviewed to date all support the conclusion that the factors in job satisfaction are so varied that each situation must be viewed separately and almost independently. 29

These comments and references to avocations are considered applicable because Art, Literature, and Music are outlets for much avocational activity. In fact, some of the subjects in this study preferred to relegate their aesthetic activities to avocational rather than vocational pursuits.

Whether or not workers were satisfied with their jobs was also given attention in Germany.

Levanstein mailed 8000 questionnaires to miners in the Ruhr, the Saar, and Silesia, to textile workers in Berlin-Forst, to metal workers in Berlin, Solingen, and Oberstein. Sixty-three

27 Ibid.
28 Ibid.
29 Ibid.
per cent of the blanks were returned between 1907 and 1911. Among the questions was, "Does your work give you pleasure or have you no interest in it?" ("Macht Ihnen Ihre Arbeit Vergnügen, oder haben Sie kein Interesse an der selben?") In response to this, 60 per cent of 2084 miners, 75 per cent of 1153 textile workers, and 57 per cent of 1027 metal workers indicated lack of pleasure in their work. In response to the question, "What type of work would you most like to do?" ("Welche Art Arbeit möchten Sie am liebsten verrichten?") 10 per cent of the miners, 10 per cent of the textile workers, and 8 per cent of the metal workers chose mining, textile, and metal work respectively. 30

Initial activities of guidance workers in the studies were concerned with the more objective factors involved in vocational adjustment. According to C. Gilbert Wrenn:

Two decades ago . . . compensatory behavior, overambition, frustrated behavior, wish fulfillments, diagnostic constructs, and other matters of human motives and worries engaged the interest of only that esoteric group known as psychoanalysts. 31

The authors of the Yale Labor and Management Studies state:

There was for many years a strong tendency to stress the efficacy of monetary incentives in attracting and holding labor. . . . More recently students of human relations in


industry have emphasized the importance of non-wage conditions of employment. 32

The early studies of Job Satisfaction, by Robert Hoppock and Robert H. Shaffer considered such factors as age, tenure, earnings, and promotional opportunities but did not approach the problem from the interest angle. 33

However, a survey of more recent investigations indicates the influence of dynamic psychology on the thinking of guidance and research workers. Referring again to the comments of C. Gilbert Wrenn on this subject, he states:

We are here concerned with attempts to deal with the totality of the individual as opposed to dealing with segments or fragments of the totality and from these fragments inferring some meaning as to the function of the whole. The dynamic psychologists are firm believers in the dictum that the whole is greater than the sum of its parts. 34

Speaking at the Counseling Institute of the Omaha Guidance Council on April 13, 1945, Clifford Erickson, Professor of Education, Michigan State College said, "We are just beginning to think in terms of adjusting jobs to the emotional and social situation of the individual."

Prefacing a report of the "Job Satisfaction Researches of 1948," Hoppock and Robinson make this observation:

As these reviews have been written over a period of years, it has become obvious that growing attention has been paid to the relation between job satisfaction and the entire emotional life of the worker. More than ever before, this year's research features the emotional life of the individual worker. 35

While all of the foregoing investigations give a rather comprehensive picture of the work that has been done in an attempt to find the factors underlying and contributing to vocational maladjustment, even perfunctory analysis verifies the statement of Donald Super that "there is a paucity of studies relating interest and maladjustment." 36

G. Frederic Kuder makes a similar observation in his Kuder Preference Manual, namely:

The important question of the relation of preferences to job satisfaction has received little attention, although it is probably the most pertinent from the standpoint of predicting vocational adjustment from a measure of preference. 37

Also deploring the inattention to the role of interests in guidance is Dr. Edward K. Strong, Jr., another

who seriously considered the role of interests in vocational guidance. One of the results of his work was the development of the Strong Vocational Interest Blank.

Dr. Strong remarks:

The newer point of view, taught by Rousseau, was that education comes from within, through the workings of natural instincts and interests and not through response to force. The new doctrine of interest is in conflict with the old doctrine of discipline. The proper resolution of the two doctrines has not yet been achieved. 38

The following incident related by Dr. Strong emphasizes his support of the relationship of vocational interest and vocational adjustment:

Several of the older men . . . were under the care of psychiatrists when I saw them. One later gave up a law practice yielding as much as $60,000 in one year to enter Red Cross work at a starting salary of $3,000. A few months later he telephoned that he was sleeping soundly and enjoying his work for the first time in his life. Both he and his wife felt that he had escaped a complete mental breakdown. 39

The only published study on job satisfaction in the Armed Forces is that of Hahn and Williams who studied the relation of job satisfaction of three clerical groups of women Marine Corps Reservists to scores on Preference Record scales. On the clerical scale, they found

significant differences between satisfied and dissatisfied workers in all three groups.

A Fortune Magazine survey found that 44% of a group of young people would have chosen a different occupation if they could start life over again.

Reynolds and Shister considered job satisfaction a factor in labor mobility.

The satisfaction which people derive from the work they do is probably more important than that which they derive from spending their incomes.

Daniel Starch made a national survey of a cross section of average Americans and found that "32.7% would have chosen a different job if they had had their life to live over again."

Even in the few studies in which interest has been a factor, none has investigated the relationship of a particular interest to vocational maladjustment. Therefore, so far as it can be determined from reported literature, no other study of the relationship of aesthetic interest to vocational maladjustment has been made.

Timeliness of the Study

Adjustment of veterans to civilian occupations following World War II and job changes occasioned by the reconversion of industry from war to peace-time production resulted in a marked increase of public interest in the problems of vocational adjustment.

Psychological testing facilities, heretofore reserved for use primarily in educational institutions, were made available in most employment and counseling centers. Applicants, having been made aware of the advantages of scientific measurements in military centers and defense plants, accepted the procedures involved with varying degrees of enthusiasm and confidence, many still preferring to select their vocations entirely by the trial and error method.

With the introduction of the Kuder Preference Record as one of the testing tools of the Nebraska State Employment Service, it was possible to measure and compare the levels of interest in nine categories, three of which, art, literature, and music, have been selected as the aesthetic interests to be used in this study. (See Appendix)

The General Aptitude Test Battery, a development of United States Employment Service research, includes a G-factor which serves as a measure of general learning ability. (See Appendix)
Another significant contribution to this study was the increased emphasis on the client-centered counseling technique. With the burden of the interview placed on the applicant and the counselor assuming a non-directive role, the true interests of the counselee are more likely to be revealed.

In reporting the study of Friend and Haggard, Robert Hoppock and H. Alan Robinson make a similar observation: "Perhaps the non-directive counselor who concentrates on the emotions solves problems that others muff."

The application of the clinical approach to vocational counseling brings to the job consideration of the individual's total needs, another factor which made a timely contribution to the study.

Summary

Literature relating to the problem of this study emphasizes the serious effects of vocational maladjustment to both the individual and to society.

Interest in the problem developed as a result of actual on the job experience.

Scientific study of the problem was stimulated by the vocational guidance movement.

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A review of these investigations, for the most part studies of job satisfaction, showed the changing emphasis from objective to subjective causes of maladjustment, but revealed no study paralleling the one under consideration.

However, several authors suggested the need for further study of the relationship of interest to adjustment.

Two closely related problems were observed; namely, the counselor's sense of futility in counseling the applicant with dominant aesthetic interests, and the question of the adequacy of vocational opportunities for these applicants.

Both are problems meriting further investigation, but are not included in this study.

Accounting for the timeliness of the study is the fact that facilities for the study became available as an outcome of the counseling services for veterans and displaced defense workers following World War II.
CHAPTER II
THE PROBLEM

Statement of the Problem

The problem of this study is to determine whether or not persons with significantly high aesthetic interests as measured by the Kuder Preference Record are more likely to be maladjusted vocationally as defined in this study than are persons selected from a criterion population without consideration of their aesthetic interests.

Definitions

This attempt to clarify the meanings of the terms aesthetic, interest, vocational, and maladjustment might better be designated as discussions than definitions. Each term might well be, or has been, the subject of an entire book. However, to explain the connotations of the terms for the purpose of this study and for supporting the premise that a study of job satisfaction is one possible approach to a study of vocational maladjustment, the following are offered as definitions.

Aesthetic, according to Winston's New Simplified Dictionary, means "sensitive to the beautiful in art or nature, or having a cultivated artistic taste." ¹

For the purpose of this study, this "sensitivity" may be expressed through any of the three media as measured by Kuder: art, literature, and music.

In classifying occupations according to major interests, Kuder lists under Art, among others, the fields of Advertising, Architecture, Designing, Photography, and Window Dressing.

Under Literature, in addition to those occupations requiring the ability to write, he lists Actor, Lawyer, and Language Teacher.

And in the Music category, he includes both instrumental and vocal music, and dancing.

Interest, as defined by Bingham, is a tendency to become absorbed in an experience and to continue it. Or, more fully, he says, "Interest means a tendency to engage in an activity or field of employment as opportunity offers, to concentrate attention on it, and to prolong it because of the satisfaction it yields."

The introspective approach of structural psychology has given us our understanding of interest as complex experience dominated by feeling. . . while . . . Gestalt psychology which would investigate the interest

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experience as a whole . . . leads to the estimation of the experience as liked or disliked. 5

Regarding the measurement of interests, Fryer makes a similar point:

In a measurement sense, subjective interests are likes which are estimated experiences characterized by feelings of pleasantness. 6

It is important to note that the method by which the Kuder Preference Record measures interest is that of asking the testee to designate those activities which he likes most and least.

For the purpose of this study reference to persons with aesthetic interests will mean those who have indicated by their choice of activities in the Kuder Preference Record that they are among those persons who have a tendency to become absorbed in the arts - to engage in activities offering an opportunity to express their sensitivity to beauty and to concentrate on and prolong such activity because of the satisfaction it yields.

The term vocation, from which vocational is derived, literally means "a calling" from the Latin vocare. A remnant of this thinking that a person is designed by his Creator for a special work may still be prevalent in

in some of the professions, but most authorities agree with McKinney that "an individual is not 'cut out' for a specific vocation at birth."  

Crabb says; "A vocation means the business to which the natural talents or tastes lead a man."

And Kitson makes this observation:

As was said before, it (vocation) connotes the idea 'calling', a sacred mission which one must carry out whether or no. It carries with it the idea of permanency. . . . in a society as fluid as that of the United States, a word denoting such fixity is not truly representative of the facts.  

Webster gives these two viewpoints: a vocation is "the work for which one is especially fitted," and, "one's regular employment."

In view of the varied types of employment with which this study deals, the most suitable definition for vocational seems to be, that which is "pertaining to one's regular employment."

This connotation is comparable to Hoppock's preferred term, job. He says:

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The term job has been used throughout this investigation because it has the advantage of daily usage among workmen themselves and a connotation which includes the total situation. 11

As an approach to the understanding of maladjustment some discussion of the term adjustment might be helpful.

McKinney refers to adjustment as a process, the essence of which is:

... a motivating condition...

... a condition which thwarts or conflicts with the motive... and the discovery of stimuli which bring out a response that satisfies the motivating condition. 12

He continues:

Emotional maladjustment is due to failure to find stimuli to satisfy motivating situations. You are a well-adjusted individual if you can meet your needs with the resources available in your environment. 13

Turning again to Webster:

Adjustment is the establishment of a satisfactory relationship as representing harmony, conformance, adaptation, and the like. 14

Maladjustment is poor adjustment. 15

---

Traxler points out the need for a goal as a factor in adjustment. He says:

In the last analysis, the best integrated and adjusted individuals seem to be those who have established some reasonable goals in line with their interests and abilities and who have settled down to work toward these goals seriously and steadily but without unusual tension. 16

A similar view is held by Hepner, who uniquely points out the method of selection and the value of a goal:

One of the best ways for the intelligent person to choose a vocation is to select a problem that needs a solution. Then he relates the vocational goal to personal adjustment . . . to the well-adjusted intelligent worker, the pull of the future (toward the solution of a problem) should be more stimulating than the push from the past (his own adjustment tendencies.) 17

From these definitions of adjustment, it seems to follow that maladjustment might indicate poorly selected or wrong goals, out of harmony with one's interests and abilities.

In reference to vocational maladjustment, Fred McKinney says:

Maladjustments . . . assume different forms such as unhappiness, inefficiency on


the job, labor turnover, and major social problems. 18

In discussing the maladjusted worker, Crow and Crow state that he is "dissatisfied." 19

Robert Hoppock relates job dissatisfaction to maladjustment in this way:

Maladjustment, whatever it relates to, breeds within dissatisfaction and thwarts the search for happiness and success. 20

Another sign of vocational maladjustment is frequent change of job, which Kitson supports in this statement:

In continuation of our search for vocational maladjustment, we must direct our attention to the frequent changes made by the worker. 21

Recalling McKinney's reference:

Maladjustments assume different forms . . . such as . . . labor turnover. 22

Harry Hepner attributes frequent job shifting to maladjustment although assuming that the maladjustment may not originate in dissatisfaction on the job, when he says:

22 Fred McKinney, Loc. cit.
Perhaps a great deal of vocational shifting ... is largely one of the ways in which individuals are making adjustments to psychological problems within themselves as well as to the problem of making a living. 23

Fisher and Horne also have concluded that a large part of vocational maladjustment is but a reflection of personal maladjustment. 24

However, these remarks still are pertinent to this study in that it seeks to learn only whether or not persons with high aesthetic interests do show signs of vocational maladjustment without any attempt to assign cause and effect.

A wide discrepancy between activities of the job and interests and abilities of the individual is likely to be a symptom of maladjustment according to Walter Pitkin, who says:

Dissatisfaction and boredom often result from disharmony between one's natural attention type and the kind of attention required by an activity. 25

This discussion has pointed out four signs of vocational maladjustment, namely:

The maladjusted worker

1. Is unhappy and dissatisfied.
2. Changes jobs frequently.

3. Lacks a vocational or life goal.
4. May be working in a job requiring activities widely divergent from those which he prefers.

In this study vocational maladjustment may be defined as dissatisfaction with and lack of a goal for one's life work, resulting in general unhappiness and frequent change of job.

An observation essential to the understanding of the processes of this study is that investigations of job satisfaction, labor mobility, and others with which this study is compared have used criteria similar to those herein defined as signs of vocational maladjustment.

Limitations

The number of cases in the study is limited to one hundred by the fact that the test records had, at the time the material was collected, been available for only about one year, and because personal interviews, essential for adequate information, are very time-consuming. Testing was strictly on a voluntary basis which was also a limiting factor.

The study is limited to white males of employable age. While legally a youth may be employed at fourteen years in Nebraska, the minimum age has been set at sixteen for the reason that employment records are not available for youth under sixteen. No arbitrary maximum age was set, but apparently no applicant over forty, the
maximum age recorded, was interested in seeking the solution to his problem of vocational adjustment through the aid of the testing and counseling service of the Nebraska State Employment Service.

However, the selections were not limited by socioeconomic factors, nor veteran status. Both veterans and non-veterans are included.

Likewise, the family situation was not the basis for selection, for young men from financially sound homes as well as those from underprivileged families, make up the group studied. Some are from broken homes, others from homes in which both parents are a part of the family group.

Another limitation, and perhaps a serious one, is the fact that personality tests were not included as a part of the study. The reason for this omission is that no personality tests were available as a regular procedure of the Employment Service, and it was not possible to ask all applicants to return for such a test after working hours.

Robert Roppock observes that "the problem is complicated by the ephemeral and variable nature of satisfaction,"26 and, it might be added, by the nature of interest and adjustment.

Summary

In this chapter the problem is stated.

The terms aesthetic interest and vocational maladjustment are discussed and definitions with connotations appropriate to this particular study are derived.

From the definitions of terms, the approach to the study of vocational maladjustment through studies of job satisfaction seems hopeful inasmuch as those characteristics indicating lack of job satisfaction are those herein defined as indications of vocational maladjustment.

Since the studies selected for comparison approach the problem in this way, this observation is important to the study.

Limits of the study are recognized and explained.
CHAPTER III

SOURCES OF DATA AND PROCEDURES

As an introduction to the subject of this chapter, it may be well to review the general purpose and approach to this study which was undertaken to determine whether or not there is a significant relationship between aesthetic interest and vocational maladjustment:

(a) By determining the percentage of persons in a sample population selected on the basis of significantly high aesthetic interests as indicated by the Kuder Preference Record who are maladjusted vocationally as defined in Chapter II.

(b) And by then comparing the proportionate number of vocationally maladjusted persons in this sample with the proportionate number of maladjusted persons in a criterion population on which studies of job satisfaction and labor mobility have been made.

Sources

Sources of data for this study may be divided into two categories:

(a) Those providing data pertaining to the sample cases to be studied.

(b) Studies yielding data for comparative study of the number of cases of vocationally maladjusted persons in the sample group with the group selected from the criterion population.

Furnishing data for the cases to be studied as the sample group were the test records and application card files of the Lincoln, Norfolk, and Omaha offices of the Nebraska State Employment Service. These data were
supplemented by information given verbally by the applicants themselves.

The two tests used were those available in the Nebraska State Employment Service: the Kuder Preference Record (revised 1946) and the General Aptitude Test Battery, developed by the Occupational Analysis Industrial Services Division of the United States Employment Service over the decade 1937-1947.

Kuder Preference Record

The Kuder Preference Adult Profile, form BB for men, was used in the study. The nine interest categories measured appear on the profile sheet in the order listed: mechanical, computational, scientific, persuasive, art, literature, music, social service, and clerical. Three of these: art literature, and music are the designated aesthetic interests with which this study is concerned. In support of the validity of this test, the author writes:

The results indicate in general that the names assigned to the various scales are appropriate in terms of the type of occupation entered as well as in terms of the activities for which the scale is scored. Chemists are found to be particularly high on the scientific scale, writers on the literary scale, musicians on the musical scale, accountants on the computational scale, and so on. 1

The average reliabilities for the different scales are all close to .90. The median for the entire table of reliabilities is .91.

The USES General Aptitude Test Battery

This General Aptitude Test Battery was released in 1947 for use in those offices of the state employment service having a staff member qualified to administer and interpret the tests according to certain standards.

Miss Beatrice J. Dvorak, USES Washington, D. C., who assisted in constructing the battery, says:

The General Aptitude Test Battery consists of fifteen tests chosen as a result of factor analysis studies of a large number of tests. It measures ten aptitudes which in varying degrees and combinations contribute to occupational success: G - intelligence, V - verbal ability, N - numerical ability, S - spatial ability, F - form perception, Q - clerical perception, A - aiming, T - motor speed, F - finger dexterity, and M - manual dexterity. Of the fifteen tests, eleven are paper-and-pencil tests and four are apparatus tests. The entire battery requires about two and one-fourth hours for administration.

The battery is being standardized on samples of workers employed in various occupations. Norms are being developed for groups of occupations established according to similarities in abilities. The standardization process begins with a job analysis. The purpose of this is to identify the job and to serve as the basis for the selection of the experimental sample. Persons are then included in the experimental sample who are performing the same kind
of work, have passed the learning stage in their proficiency on the job, and are regarded as satisfactory workers by their foremen or supervisors. All such workers in a given occupation in any plant are included, whenever possible, to avoid the possibility of a biased sample resulting from the supervisor's selection of either his best or his poorest workers for testing. When the number of workers performing the same job in one plant is very large and permission cannot be obtained to test all of them, attention is given to the selection of a representative sample. The standardization program provides for obtaining samples of workers in each occupation from more than one locality. The entire battery is administered to each occupational sample.

... After the General Aptitude Test Battery has been administered to a counselee, his scores are expressed as an Individual Aptitude Profile. This consists of ten aptitude scores, each of which is obtained from one or more of the fifteen tests in the battery. The score for intelligence (G), for example, is obtained from three tests; the verbal ability (V) score, is obtained from one test; and the numerical (N) score from two tests. Tables have been established for converting each raw test score into a weighted standard score for an aptitude. The weights are based on the factor loadings of each test and were obtained by the Wherry-Doolittle method. Thus they represent the significance of each of the tests in measuring a given aptitude. The aptitude score is the sum of the weighted standard scores for each of the tests measuring that aptitude. 2

Limitations

. . . One limitation is that the ten aptitudes measured do not include such important traits as artistic aptitude, musical aptitude, eye-hand-foot coordination, etc. Many occupations require these aptitudes and dexterities, and additional tests will no doubt need to be added to the battery to make it more applicable. A second limitation of the battery is that it does not cover all of the jobs existing in American industry today. 3

Reliability coefficients for the GATE Aptitudes range from .812 for the F factor (finger dexterity) to .914 for the T factor (aiming).

In a Comparative Evaluation of the Professional Aptitude Test and GATE, Ralph and Taylor, University of Utah, found:

The three-aptitude battery composed of the Verbal, Spatial and Numerical aptitudes of the GATE shows promise of being an efficient predictive instrument for use in the selection of medical students. Further investigations, particularly of the follow-up type, should be undertaken to check the validity of this predictive battery on other samples before applying it to medical selection programs. 4

The three-aptitude battery referred to above is the portion of the GATE which is designated as the G-factor used in this study as the measure of intelligence.


Over a period of two years of use, it was observed that results of this test compared favorably with the scholastic achievement of the applicants tested.

Data for Comparative Study

Data with which to compare the findings of this study may be found in Job Horizons, second in a series of the Yale Labor Management series; in Job Satisfaction by Hoppock; and in reviews of investigations by Hoppock, Shaeffer, Super, and others as summarized in the periodic issues of Occupations Magazines. 5

Surveys by Fortune Magazine and Daniel Starch also furnished data for comparison. 6 Description of these studies will be found under Procedures, the topic which follows.


Procedures

Collecting Data

The interview method was used for the collection of data relating to the sample group.

5 See Chapter I, page 11.

Applicants were selected for the study from the regular traffic of the three state employment service offices. While the study originated in the Omaha office, to broaden the area from which subjects were drawn and to add the thinking of other counselors, arrangements were made to secure data from other than the Omaha office of the State Employment Service. A personal visit to the Lincoln and Norfolk offices was made to obtain the information not already tallied by the counselor, in the same manner as described below. Obviously it was necessary that the personal interviewing be done by the counselors in those offices and the information be relayed by discussion of the individual cases.

Each applicant came voluntarily to the employment office seeking either assistance in locating a job, in selecting a vocational goal, or both. Tests were also either requested by the applicant or mutually agreed upon after testing was suggested by the counselor. All tests were administered by the staff member holding the position of test technician. Results were interpreted by the counselor.

Each subject was personally interviewed by a counselor in the Omaha, Lincoln, and Norfolk offices respectively. The personal interview, an integral part of the counseling process, was particularly essential for determining the

7 Omaha, Lincoln, and Norfolk.
subjects' reaction to the criteria pertaining to job satisfaction or frustration, not only for the study but also for doing an effective counseling job, since, "a study of adjustments, drives, and preferences should supplement any tests administered." 8

Test record scores and other data not tallied immediately after the interview were later obtained from the application card in the following manner:

First from the Kuder Preference Record file, names of those persons whose scores in art, literature, or music were higher than those in all other categories were selected.

If an individual had a score in column 5, 6, or 7 9 at or above the 75 percentile, considered significant by the author, he would still not be selected if he had another score which was higher. This attempt to study only the individual whose aesthetic interests seemed to exclude other interests measured by the test materially reduced the number of cases available for study. In fact, selections of cases from the Grand Island and Kearney offices of the Nebraska State Employment Service had to be eliminated entirely to meet this criteria.

The second step was to check the master index file for the occupational classification of each case.

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9 Art, literature, and music, respectively.

Third, the application card for each individual was pulled from the applicant record file.

From these cards a tally of personal data including age, education, special training in the field of major interest, and the "G" factor obtained from the General Aptitude test were listed.

Finally, the subjects' employment history was studied, especially noting frequency of job changes. Then, comparison of the type of work done with the field of major interest was made by checking test scores with the occupational classification. Whether or not the applicant had been happy in his work was checked during the personal interviews.

Except in a very few instances, all sampling was done during the calendar year of 1948. Selections in all cases were made entirely at random. No attempt at any systematic procedure was made on the basis that "systematic selection may not yield a random sample, and unless the sampling is random, the inferences may not be true." 11

Verification that the sample was random and other analysis of the data is recorded in Chapter IV.

Selection of Material for Comparative Study

Reviewing pertinent literature and investigations for the purpose of selecting studies yielding results

with which to compare the findings of this study was really a phase of collecting data. Those selections were based as nearly as possible on similarities of subject, objective, procedure, and timing. As previously pointed out, the most common approach to studies of vocational maladjustment were through studies of satisfaction or dissatisfaction.

The job satisfaction study of the entire working population of New Hope, Pennsylvania, conducted by Wallace P. Thornton for Robert Hoppock in 1933, is probably the most thorough study of job satisfaction of the general population available. However, because it was made during a period of economic depression in a town of much smaller population than those from which subjects for this study were drawn, and that it included both male and female workers, it was not considered the most appropriate for statistical comparison with this study.

Hoppock's conclusion that the proportion of dissatisfied workers in this group was about or slightly less than one third, being general rather than specific, also made comparison of questionable value.

An investigation preceding this study by one year which more nearly meets the criteria for comparative study was reported in Job Horizons by Reynolds and Shister. The following is a brief description of the study:
In 1947, this study of the labor market of a medium-sized New England manufacturing center was undertaken by the authors. 12

This preliminary report is intended to summarize part of the information obtained through interviews with workers in the area. We have tried in particular to select those subjects which will be of greatest immediate interest to the general public: the factors which make the worker satisfied or dissatisfied with his job and which therefore influence morale and labor turnover. 13

Interviews were carried out with two separate groups of workers, which are identified in the following chapters as Sample 1 and Sample 2. The workers in Sample 1, some 450 in number, are a cross-section of the manual working population of the city as of October, 1945 (the date of the most recent city directory available when we began work). This group, which included few war veterans, turned out to be relatively old, skilled, and immobile. In order to learn more about labor mobility, we decided to draw a second sample made up entirely of people whose job listing in the 1947 directory differed from their listing in the 1946 directory. Sample 2 was limited further to men currently employed in manufacturing industries. This group turned out to be relatively young, with a large proportion of war veterans and a considerably higher mobility rate than Sample 1. 14

12 Lloyd G. Reynolds, Professor of Economics and Associate Director, Labor and Management Center, Yale University. Joseph Shister, Assistant Professor of Economics and Director of Research, Labor and Management Center, Yale University.


14 Reynolds and Shister, On. cit., pp. 4-5.
In spite of these differences in the characteristics of the two groups, their answers checked out closely on most points. The consistency of the responses appears to indicate both reliability of the method used and an underlying consistency in the pattern of worker behavior. 15

The study was carried out in a medium-sized New England manufacturing city. The city and its surrounding metropolitan area had a population of about 350,000 in April, 1947. The great importance of manufacturing in the area is shown by the fact that forty-three per cent of the labor force was employed in manufacturing industries in April, 1947. 16

Manufacturing in this city is diversified and relatively small-scale. While there are some five hundred manufacturing establishments in the area, only thirty-five of these had more than two hundred workers in 1947, and only seven had more than one thousand workers. 17

Sample 2 was limited to male workers currently employed in manufacturing industries. Selection was made on a random basis. 350 workers were interviewed in their own homes. Interviewers followed a list of key questions which they were allowed to vary. A minimum of writing was done during the interview.

While the objective of the Yale Study was to investigate labor mobility, the approach was very similar to

15 Ibid.
17 Ibid.
that of the job satisfaction studies, as indicated by the authors: "It is important to know as much as possible about the factors making for satisfaction or dissatisfaction on the job." 18

Results regarding frequency of job change, selection of jobs in line with goals, and expressed dissatisfaction are all comparable to criteria for vocational maladjustment as defined by this study.

Two other surveys yield results with which findings of this study are compared.

Daniel Starch made a national survey of a cross-section of average Americans by asking the question, "If you had your life to live over again, what three things would you do differently?" 32.7% answered that they would have chosen a different occupation. 19

The editors of Fortune Magazine, conducting a national survey of occupational contentment, asked the question more directly: "If you could go back to age eighteen and start life over again, would you choose a different career or occupation?" 20 Five thousand people were interviewed for this study. They were "so selected as to age and sex, geographical distribution, and density


of population, and as to their economic level and relation to their communities, that they represent the U. S. faithfully in microcosm." 21

The findings of this study are compared with six previous investigations in Chapter IV.

Summary

It has been the purpose of this chapter to point out:

1. Sources of
   (a) Data relating to applicants.
   (b) Material for comparative study.

2. Procedures for
   (a) Collecting data.
   (b) Selecting material for comparative study.

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</table>
CHAPTER IV
ANALYSIS AND COMPARISON OF DATA

Sample Data

Sample tally sheet #1 preceding this page shows the type of data collected. It includes a number representing the subject, his veteran status, age, educational level, occupational classification, and two test scores: interest as indicated by the Kuder Preference Record, and general learning ability represented by the G-factor of the United States Employment Service General Aptitude Test Battery. (See Appendix) Indicated also is the type of special training, if any has been received, in the field of his major interest.

Check marks in the designated columns indicate whether or not the subject

1. Frequently changed jobs.
2. Usually worked in a field widely divergent from his highest interest.
3. Expressed unhappiness and dissatisfaction with his work.
4. Selected an occupational goal in line with his strongest interest pattern, or in any other field.

The number of cases, selected entirely at random from the three offices of the Nebraska State Employment Service, were as follows:
Probably the high proportion of veterans selected from the two smaller offices is due to the fact that counseling was introduced in those offices after World War II and gave emphasis to service to veterans, whereas counseling in the Omaha office had initially been given to non-veterans and was extended to veterans as they became a part of the job-seeking traffic.

Fifty-three percent of this sample have veteran status, whereas fifty percent of the traffic routed for counseling service in the Omaha office in 1948 were veterans. ¹

The normal curve of distribution is evident in the educational range, Chart II, with the Lincoln group skewed toward the higher grades, probably not unusual in a city with a proportionately higher college population than the other two cities from which samplings were drawn. The fact that the Norfolk office serves a rural population and Omaha emphasizes vocational guidance to

school drop-outs may have skewed the curve toward the lower educational levels.

The educational chart, Chart II, shows that slightly more than fifty percent of the sample are high school graduates. This chart also shows a high incidence of drop-outs at the tenth grade level.

The percentages of both high school graduates and veterans fall within the 95% confidence interval for a sampling of this size; that is, between 67% and 47%. The upper educational level extends to eighteen years as a result of one subject being in training for the priesthood before taking a five year university course.

The curve of age distribution as shown in Chart III follows the pattern of the normal curve for each of the groups. Irregularities common to all small samples are evident.

The highest percentage seeking vocational guidance as shown by this chart were in the twenty-one year old category.

Since the Employment Services encourage graduating seniors to register, the eighteen year and twenty-four year old upswings probably represent terminal educational pursuits, high school and college respectively. Veterans returning to college may account for the college graduation age of twenty-four.

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Fewer older persons seek job changes, probably because of resignation, satisfactions resulting from security, pension and retirement systems, and family responsibility.  

An array of the G factors, Chart IV, as well as a distribution curve, is shown. The mean scores for each group was computed with the following results:

- Lincoln  \( x = 115.5 \)
- Norfolk  \( x = 127.2 \)
- Omaha  \( x = 109.1 \)

The mean score for the combined group is 109.7. This falls between the fiftieth and seventy-fifth percentiles on the General Aptitude Test Battery which are 100 and 115 respectively.

These calculations with reference to the G factor verify the fact that "as the sample size increases, its average tends toward the population value." Norfolk, with the smallest sample, deviates 18.5 points from the mean of the combined total; Lincoln, with a sampling twice as large as Norfolk's but much smaller than the Omaha sample, is 6.2 above the group mean; while Omaha, with the largest sampling, is but 3.6 points above the

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general average. Interestingly, the mean and median scores are 109.7 and 109 respectively.

Another comparison of the distribution of the G factor scores with the general population was made by computing the Standard Deviation (using 109 instead of 109.7 to facilitate the computation). Thus, one SD comprises 35% of the sample as compared with the 34.13% of the established standard for the general population, or sigma.

Tally sheet Number 2 records the factors defined in this study as indications of vocational maladjustment. (See Chapter XI, pages 31-32). Also shown on this tally are the number of those who had special training in their field of highest interest. Seventeen had training in art, four had taken courses in creative writing, and ten had some musical training.

This item is not directly concerned with the problem of this study, but seems related.

Wide discrepancy between the major interest of the worker and the activities required by the job was determined by accepting the classification of the Dictionary of Occupational Titles which lists art, literature, and music in the professional category. 5 Manual labor, routine

5 Dictionary of Occupational Titles. (United States Printing Office, 1949)
machine jobs, and other similar jobs classified as semi-skilled or unskilled are assumed to be widely divergent from art, literature, and music. Allowance was made for the student pursuing studies toward his goal who is content to do part-time or even full-time labor in any field so long as it contributes financially to attainment of his ultimate goal.

A review of the collected data gives the following results:

The total number of individuals stating that they had selected occupational goals in line with their major interests as indicated by the Kuder Preference Record was eleven. Sixteen others stated they had selected an occupational goal, but these goals were not in the field of their major interest as indicated by the Kuder Preference Record.

Seventy-three of the group studied had no vocational goal.

Work histories, as recorded on the Nebraska State Employment Service application cards, showed that forty-six individuals had changed jobs from one to five times during 1948.

Thirty-three of these workers stated that they had not as yet had a job with which they were satisfied.

Seventy-six were working in jobs requiring widely different activities from those of their expressed interests.
Although this was a small sampling of only one hundred cases, age range, educational level, the G factor, and veteran status all follow closely the normal distribution of the general population, as shown by the charts and by statistical calculation.

The randomness of the sampling seems to point out that the selection was objective, impersonal, and unbiased. It also seems to support confidence in sampling founded upon "the tendency of sample ratios to deviate little from the population value." 6

Comparisons

The next step is to make comparisons with previous studies representing a population sampling uncontrolled so far as aesthetic interests are concerned, but yielding results pointing to factors which contribute to vocational maladjustment.

The purpose of these comparisons is to test whether or not this group of persons having a high degree of aesthetic interest shows a higher percentage of vocational maladjustment than do those selected as criterion groups.

This determination will be made by a series of calculations of Chi-square, "which is a measure of the deviation of the observed sample group from those expected

under the hypothesis set up. . . . It enables one to judge whether the sample ratio itself departs much or little from the hypothetical population value. 7

The three comparative calculations which will be made are in relation to:

1. Frequency of job change.
2. Numbers expressing dissatisfaction.
3. Number showing a wide discrepancy in their usual work and their major interest.

Definite goals of the sample group are listed on the data sheet in two categories:

1. Those goals in line with the subjects' aesthetic interests.
2. Those representing occupational goals in a field other than that of the major interest.

Calculations relating to choice of a goal have been omitted because no study of goal selection seems to be suitable for comparison with the sample. Reynolds and Shister state casually that about 50 percent of those interviewed in their studies had no vocational plan upon graduation from high school. 8 The question of this study was as to whether or not the worker presently had a vocational goal.

Ten percent of Sample 2 of the Yale Study said their first job "coincided with the plans they had made while still in school. These people took the first job they found because it was the kind of work they were looking for." 9

9 Ibid.
### Data Sheet #2

**CRITERIA FOR VOCATIONAL MALADJUSTMENT**

<table>
<thead>
<tr>
<th>Goal</th>
<th>In Line With Interest</th>
<th>Other</th>
<th>No Goal</th>
<th>Frequency of Job Change</th>
<th>Job Dissatisfaction</th>
<th>Wide Discrepancy In Job and Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln</td>
<td>1</td>
<td>4</td>
<td>13</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Norfolk</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Omaha</td>
<td>9</td>
<td>10</td>
<td>54</td>
<td>34</td>
<td>26</td>
<td>64</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>16</td>
<td>73</td>
<td>46</td>
<td>33</td>
<td>76</td>
</tr>
</tbody>
</table>

### Data Sheet #2A

**TRAINING IN FIELD OF INTEREST**

<table>
<thead>
<tr>
<th></th>
<th>Art</th>
<th>Literature</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln</td>
<td>4</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Norfolk</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Omaha</td>
<td>13</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>17</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>
However, it is not known how many "shopping around" did so because they were seeking a job in line with their goal.

No other study pertaining to goals of workers was found, although further research may have uncovered such a study.

**Calculation #1 - Job Changes**

Forty-four percent of the Yale Group changed jobs between October 1945 and October 1946. 10 Forty-six percent of the sample group made one or more job changes in 1948.

**Calculation #1:**

\[
x = 46 \\
\mu = 44
\]

\[
x^2 = \frac{(46-44)^2}{44} + \frac{(54-56)^2}{56}
\]

\[
= \frac{4}{44} + \frac{4}{56}
\]

\[
= .0909 + .0714
\]

\[
= .1623
\]

Any Chi-square larger than 3.841 is referred to as significant. The larger the value of Chi-square, the stronger the evidence against the hypothesis. 11

This is an insignificant value of Chi-square and supports the null hypothesis of no real difference in sample and supply.

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Calculation #2 - Discrepancy Between Occupation and Interest

Studies of discrepancies between occupation and field of major interest seem to be limited in number.

In the Yale study of occupational aspirations of factory workers, forty-seven percent listed a desire for jobs in clerical, sales, professional, and administrative fields which probably can be classed as widely divergent from the occupation in which they were engaged, which was factory labor. 12

This is compared with the seventy-six of the sample who are listed as working at occupations not in line with their interests.

Calculation #2:

\[ x = 76 \]
\[ m = 47 \]

\[ x^2 = \frac{(76-47)^2 + (24-53)^2}{47} \]

\[ = \frac{841}{47} + \frac{841}{53} \]

\[ = 33.6 \]

This is highly significant and does not support the null hypothesis.

Studies approached from the standpoint of determining the vocational maladjustment of a group through job satisfaction or dissatisfaction offer considerably more opportunity for comparison. In addition to the Yale

Studies, Robert Hoppock and his assistants have surveyed a number of groups for the purpose of determining job dissatisfaction. The results range all the way from zero to ninety percent.

Daniel Starch surveyed a cross-section of average Americans and found 32.7% so dissatisfied with their careers that a different job was their major concern. This figure is almost identical with the thirty-three percent dissatisfied in the sample.

A Fortune Magazine survey of five thousand persons in a controlled sample with selection as to age, sex, geographic location, and economic level making the sample a “USA in microcosm,” found 44.8% of the men dissatisfied with their career choice.

The following calculations relate to these various studies of job dissatisfaction.

**Calculation #2 - Expressed Job Dissatisfaction**

Twenty-two percent of the Yale Group stated they were definitely dissatisfied and were planning to leave their present jobs. This seems to be a sound basis

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for comparison with the sample group of thirty-three dissatisfied workers - thirty-three percent of the total of one hundred.

Calculation #3

\[
x = \frac{33}{22}
\]

\[
x^2 = \frac{(33-22)^2}{22} + \frac{(67-78)^2}{78}
\]

\[
= \frac{121}{22} + \frac{121}{78}
\]

\[
= 5.5 + 1.55
\]

\[
= 7.05
\]

This Chi-square value is highly significant and does not support the null hypothesis. It does, however, support the impression of the counselors that there is a greater proportion of those with high aesthetic interests dissatisfied than are dissatisfied in the criterion group of the Yale Sample.

Calculation #4 - Expressed Job Dissatisfaction

Comparing the sample with the Fortune Magazine survey yields the following Chi-square value:

Calculation #4

\[
x = \frac{33}{44.8}
\]

\[
x^2 = \frac{(33-44.8)^2}{44.8} + \frac{(67-55.2)^2}{55.2}
\]
This significant value of Chi-square does not support the null hypothesis.

**Calculation 85 - Expressed Job Dissatisfaction and Valuation**

The final comparative study is based on a summation of thirty-two of the studies reported in the Hommock reviews in *Job Satisfaction*, Chapter IX, pp. 215-233, and in the Occupations Magazines previously designated. 16

The number of subjects in these investigations was 18,579 of which 4,028 expressed dissatisfaction. Single group frequencies of expressed dissatisfaction ranged from 5 to 985.

Since this final calculation involves more than one study, determination of significance will be made by calculating a t-value based on a pooled percentage of the thirty-two studies of the criterion populations.

A t-value is the "critical ratio" between the difference and its error. 17

Pooled percentage = \[ \frac{s(F)}{s(N)} \]

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16 See Chapter I, p. 11.
\[
\begin{align*}
\phi_p &= \sqrt{\frac{\text{pooled rate} \times (1 - \text{pooled rate})}{\text{number in sample}}} \\
&= \sqrt{\frac{(.216) \times (1 - .216)}{100}} \\
&= \sqrt{(.00169344)} \\
&= .041 \\
t &= \frac{.32 - .216}{.041} \\
&= 2.78
\end{align*}
\]

This is a highly significant value and does not support the null hypothesis.

**Summary**

The analysis of data was reviewed earlier in the chapter.

Recapitulating the results of the comparisons of data, it is found that one Chi-square value is insignificant and supports the null hypothesis of no real difference between sample and supply. One study yielded results so nearly identical to the sample that it obviously supported the null hypothesis.

Three Chi-square values and one t value are highly significant. They indicate that the sample and criterion populations differ with regard to the proportionate number of vocationally maladjusted persons in the groups as defined and measured in this study.
Conclusions

The relationship of aesthetic interest to vocational maladjustment is shown by two findings of this study to be insignificant, while four findings suggest a significant relationship.

The comparisons suggesting no significance are with respect to:

1. Number changing jobs in sample and criterion groups.

2. The study of job dissatisfaction by Daniel Starch.

To be more specific, according to the findings of this study, those persons whose highest interest scores on the Kuder Preference Record are in art, literature or music, appear to be no more maladjusted vocationally than persons in the criterion population when the frequency of changing jobs is the basis for determining vocational adjustment.

In the study by Daniel Starch, 32.7 percent of the group expressed job dissatisfaction - which is obviously not significantly different from the 33 percent of the sample group dissatisfied with their jobs.

The four studies revealing a significant relationship between vocational maladjustment and aesthetic interest are:
1. A study of divergence between interests and activities required by the job.

2. Three studies based on job dissatisfaction.

That is, a significantly greater number of persons with aesthetic interests were shown by a comparison of the sample with the criterion Yale Group to be working in jobs widely divergent from their field of major interest, than was true in the criterion group of the Yale study - 76 percent and 47 percent respectively.

In another comparison with the Yale Group with respect to job dissatisfaction, it was found that a significantly greater number in the sample were dissatisfied, as revealed by their own statement of job dissatisfaction. 33 percent of the sample and 22 percent of the Yale Group were dissatisfied.

In the Fortune survey of job dissatisfaction, the difference was significantly high but showed a negative relationship. That is, those in the sample showed less tendency toward job dissatisfaction than did the criterion group. It should be pointed out that the Fortune survey dealt entirely with young people, and Hopcock found that job dissatisfaction apparently decreases with age. 1

When compared with a pooled percentage of thirty-two studies of job dissatisfaction, the number dissatisfied is again significantly greater in the sample and shows a positive relationship.

In view of the results, therefore, it would seem that further study of this problem is warranted.

**Suggestions for Further Study**

Further investigations pertinent to this problem might be pursued in the following areas:

1. A study of the proportion of dissatisfied workers scoring high in aesthetic interests on the Kuder Preference Record, or perhaps on several interest tests.

2. A study of the proportion of those with aesthetic interests who have no training in the arts, with reasons for this lack of training, and scores on aptitude tests in the field of their special interest.

3. A study of the personality characteristics of persons with high aesthetic interest might reveal clues to vocational maladjustment.

4. Further study into the discrepancies between the interest of workers and the requirements of the job might also provide valuable data.

**Related problems**

The related problems mentioned earlier also suggest fertile fields for research.

An analysis of opportunities in conventional occupations for satisfaction of aesthetic interests seems much needed by counselors as well as by the individuals possessing these interests.

Harry Hepner suggests the need for more professional vocational guidance when he says:
The vocational guidance given by many teachers and employment managers... is in the same class as the home remedy of the friend who never studied medicine or the human body. 2

If one of the objectives of vocational guidance is to assist workers in adjustment, the knowledge to be gained from further scientific investigation would seem fundamental to sound procedures in this field.

While vocational activities are apparently sufficiently satisfying to some individuals with high aesthetic interest, others seem to need to devote their entire working day to creative activity. Continued research in the area of this particular study seems desirable in the light of this comment by LeComte Du Noey, who says:

After all man seeks happiness and the joys he derives from his sentimental affections and aesthetic qualities are deeper than those based on strictly speculative and intellectual activity. 3

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APPENDIX
APPROACH TO TESTING APTITUDES

APTITUDES MEASURED BY THE GATB TEST BATTERY

- General Aptitude (G)
- Spatial (S)
- Verbal (V)
- Numerical (N)
- Perceptual (P)
- Manual Dexterity (D)
- Finger Dexterity (F)
- Mechanical (M)
- Clerical (C)
- Manual Speed (L)
- Form Perception (P)

Scores range from 50 to 100.
COMPONENTS OF THE
GENERAL APTITUDE TEST BATTERY G-FACTOR

Part H: Spatial Relations Test

Similar to Minnesota Paper Form Board Test.
Forty rows of four drawings each representing objects.
Forty rows of single drawings representing a flat piece of metal.
Counselor checks letter indicating which object could be made from the flat metal drawing.
Time limit six minutes.

Part I: Numerical Test

Twenty-five simple arithmetical calculations to be done with pencil and paper.
Time limit six minutes.

Part J: Vocabulary Test

From sixty groups of four words each, the counselor selects two words from each group having either the same or opposite meanings.
Time limit five minutes.
PROFILE SHEET
• FOR MEN AND BOYS •

For Form BB of the
Kuder Preference Record
(profile for Women and Girls on reverse side)

DIRECTIONS

1. Read the directions below carefully. As soon as you have finished a step place a check in the box on the right to show you have completed it, then move to the next one.

2. Look over the answer pad to make sure you have answered every question.

3. Take hold of the answer pad at the top toward the left side and lift upward, detaching the booklet from the binding.

4. Turn the answer pad over to the last page which is marked with the Figure 1. Count the number of circles in which holes are punched. Start at the arrow and follow the chain of circles over the page. Do not count the circles in which there are three punches in a circle, since these punches represent errors. In the space for score 1 on the cover of the answer pad record the number of holes you have counted.

5. Follow the same procedure for each of the other scores. Note that scores 2 and 3 are obtained from the same page, and that scores 6 and 7 also come from one page.

6. Obtain the count again for each score, recording your answers in the spaces provided on each page.

7. Compare the scores on the cover with those entered on the inside pages. In cases of differences, make the counts over again until you are sure your scores are right. Then cross out the old score and write the correct score beside it.

8. Enter the nine scores you have obtained in the space provided at the top of the chart on this page. If you are a man or boy, use the chart at the right. If you are a woman or girl, use the chart on the reverse side of this sheet.

9. Find the number in column 1 which is the same as the score you have entered at the top of the column. Draw a line through this number from one side of the column to the other. Do the same thing for each of the other columns. If your score is larger than any number in a column, draw your line across the top of the column; if your score is smaller than any number in a column, draw the line across the bottom of the column.

10. With your pencil, blacken the entire space between the lines you have drawn in each column and the bottom of the chart.

11. The result is your "profile" on this test. Your adviser can tell you how to interpret it.

Published by

Kuder Research Associates

300 West Washington Street, Chicago 4, Illinois
**PROFILE SHEET**  
*FOR WOMEN AND GIRLS*  

For Form BB of the  
Kuder Preference Record

(Profile for Men and Boys on reverse side)

**DIRECTIONS**

Follow the directions below carefully. As soon as you have finished step one, check in the box at the right to show you have completed it, then go on to the next one.

1. Look over the answer pad to make sure you have answered every question.

2. Take hold of the answer pad at the top toward the left side and lift upward, detaching the booklet from the binding.

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8. Find the number in column 1 which is the same as the score you have entered at the top of the column. Draw a line through this number from one side of the column to the other. Do the same thing for each of the other columns. If your score is larger than any number in a column, draw your line across the top of the column; if your score is smaller than any number in a column, draw the line across the bottom of the column.

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Published by

**SCIENCE RESEARCH ASSOCIATES**

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