Validity of self estimated interests

Camilla Fox McCormick

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THE VALIDITY OF SELF ESTIMATED INTERESTS

An Experimental Critique of

Previous Investigations

by

Camilla Pop McLennan

Presented in partial fulfillment of the
requirement for the degree of
Master of Arts.

State University of Montana

1943

Approved:

Ernest G. Atkinson
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Chairman of Graduate Committee
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I wish to express my gratitude to the Psychology Department of Montana State University whose cooperation made this study possible.

In particular I wish to thank Dr. Bert Sappenfield, my advisor for his invaluable aid in compiling this study. Dr. Atkinson has been a source of encouragement always.

Mrs. George Wamsley and Miss Prudence Clapp have given freely of their time and skill in typing the manuscript, and to the many others who have contributed in one way or another to this study, I wish to express my sincere appreciation.
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CHAPTER I

INTRODUCTION
CHAPTER I

INTRODUCTION

In the general field of psychology interest tests have comparatively recently received serious attention and application. Believing it impossible to gauge a person's interest with any degree of accuracy, no one ventured to investigate this problem. It was in 1919 at the Carnegie Institute that Clarence Yoakum's Seminar decided to make a series of tests of this nature. 1 Four names from the Seminar stand out as of major importance, Ream, Freyd, Moore, and Miner. A year before (1918), Miner had used an interest inventory with high school pupils. In this he used the comparison-of-opposites type of inquiry—"Do you like the city? Do you like the country?" 2 Its resemblance to the Interest Tests of later years is about in name only and the results as to reliability are questionable. However, it was the first step. The next year (1919) the Seminar of which Miner was a member prepared a list of a thousand questions covering interest situations from early childhood to thirty years. This list was then divided into genetic groups marking off various growth periods.

Also during this period of development of the tests by the students, there emerged two tests of importance. Moore attempted to distinguish the likes and dislikes of


2. Ibid, p. 62
engineers from all other groups with his Interest Inventory for Engineers. He took a sampling of all occupations and presented this list to 14 judges who by unanimous consent were to choose 10 items which in their opinion represented the primary interests of people mechanically inclined. Another list of 10 occupations was chosen to represent the primary interests of those Miner termed socialites. Craig also at this time developed a Record of Preferences which he tried out on Department Store employees. He incorporated in it a number of occupations, activities, and preferences. This attempt to segregate department store employees from others, he reports, was only partially successful.

Combining the mistakes and progress made by these first trials, the Seminar produced the first Standardized Inventory in 1921. This included a section of 72 samplings of occupational interests—choices of occupations including inside, outside work, solitary and social, scientific, literary, executive, sales, and mechanical pursuits. Another section dealt with 126 general interests in physical and mental fields. A revision was made in 1923 which excluded some occupations and included a list of school subjects, and further revisions had made no more drastic changes than this until Strong's work in 1928. Practically all of the

3. Loc. cit. p. 100
4. Loc. cit. footnote number 2. p. 100
5. Ibid p. 65-69
6. Loc. cit p. 69-70
general Interest Inventories today are constructed in this fashion and include items found in this first inventory.

Ream and Freyd were the first to discard the use of judges in selecting items typifying certain occupations; instead, they developed scoring keys for distinguishing groups by their interests to replace this subjective scoring method. This was the first attempt at the objective approach in scoring the tests.

Ream tried out his revised Inventory upon a group of salesmen in an attempt to distinguish the successful salesmen from the unsuccessful ones. He segregated the two groups by obtaining a record of their yearly sales and then compared the likes and dislikes of one with another. The results of the testing itself proved unsatisfactory; but, in using the objective scoring method, Ream proved the value of this new technique. In doing this, he brought the objective scoring method out of the experimental stage into practical usage.

Freyd revised the occupational section in 1923 to include items for both men and women. Through previous experiments, he also found the use of three symbols: Like (L), Indifferent (I), and Dislike (D) more satisfactory than the wider range of five symbols "Like Much", "Like", "Indifferent", "Dislike", and "Dislike Much", which had been in use prior to this time.

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7. *Ibid,* pp. 74-76
Curiosity sprang up over the country about the work being done at the Carnegie Institute and soon many Universities were employed in experimenting with similar tests of their own. Kornhauser at the University of Chicago composed a long list of items for use with college students. These items included sports, hobbies, amusements, books and magazines, college studies, and social and racial problems, but omitted all reference to vocational activities.

Patterson at the University of Minnesota added to the terms of "Like", "Indifferent", "Dislike", the symbol "U", meaning "unknown", which the student was to encircle if he had little or no knowledge of a particular item.

Hubbard's name is mentioned for a revision of the Minnesota revision of the Carnegie Institute Inventory. She used this test for experimentation with young boys. The validity of her test proved to be a coefficient of 0.73.

In 1924, Cowdry of Stanford added and omitted several items from the Carnegie Institute Interest Blank and emerged with his own Interest Test. His work on this test interested Strong, who was later to complete the most extensive and thorough research yet on the measurement of interests.

10. Ibid p. 77
11. Loc. cit
12. Ibid p. 78
13. Ibid p. 79-80
At this same time, work was being done by Remmers of Purdue, who contributed a revision for Cowdry's blank. Remmers included a number of paired comparisons in the same way that Elnner had used them in his Blank of 1918. Remmers was concerned chiefly with the selection by their interests of freshmen engineering and agriculture students.

In 1928, S. K. Strong, Jr. of Stanford produced an Inventory based upon Cowdry's which raised the former number of 267 items to 420. He divided this list into eight parts: I. Occupations. II. Amusements. III. School Subjects. IV. Activities. V. Fidelities of People. VI. Order of Preference of Activities. VII. Comparison of Interest between Two Items. VIII. Rating of Present Abilities and Characteristics. By giving this test to men averaging about forty years of age, who had been in their field for at least three years, and whom he designated on the basis of annual income as successful in their particular field, he found he could distinguish one occupational group from another by comparison of interests. This was done for thirty different occupations. From these results, Strong devised a scoring key, giving each item its weight according to its popularity with each occupational group. The individual could then be classified according to his interests in a certain

field by his score on the test. In addition to this, Strong
found that four or five occupations could be scored with a
common key i.e. that artists, psychologists, architects,
physicians and dentists all had comparatively the same interest
patterns. He also made a list of scoring keys for occupations
for women in the same fashion. Improving the validity of his
test, Strong found that only 15 per cent of non-engineers rated
a high score in engineering interest as opposed to 75 per cent
of engineers who made a high score with the same key. Strong
also found that when he gave his test to 275 seniors at
Stanford, 71 per cent of them had selected the occupation in
which they had ranked the highest or second on his Blank.
Thus concludes the first phase in the history of Interest
tests. These first tests paved the way for wider and more
extensive surveys in the field of interest measurement. The
list of items has remained approximately the same and in many
instances the form, but the trustworthiness of certain items
has been proved or disproved, broad classifications of interests
have been made, and the whole idea of interest measurement and
material used has become more concrete. According to Fryer,16
the two basic principles had been established--(1) The sampling
of all interests and, (2) The selection of interests common to
particular occupations and the discarding of those common to
all occupations. There remained to be accomplished a shifting

16. Ibid p. 99
around of the material to produce the best possible valid and reliable test.

There are in existence at the present time over thirty Interest Inventories covering many fields. Of these, only the more outstanding ones will be mentioned here. In 1930, Garretson and Symonds prepared an Interest Inventory to be used with the eighth and ninth grades. There were eight parts to the Inventory, these included occupations, school and job activities, school subjects, a list of prominent men, and things to own. The scoring keys were constructed on the basis of similarity of interests of students in academic, commercial, and mechanical fields. Their reliability proved to be above 0.86. Numerous experiments have been made to test the stability of interests over a period of time. These experiments have shown that change of interest is rapid until a relatively mature age is reached. However, the idea behind the test was successfully completed, namely that of dividing by their interest at the time, a group of eighth and ninth graders into the three classifications mentioned above.

The Specific Interest Inventory, designed for ages ten and over, developed by Paul Brainerd and Francis Steward

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appeared in 1933.\(^\text{18}\) The purpose of this test is to "analyze tendencies which are significant in vocations by measuring the interest in a particular mode of expressing activity such as physical work, mechanical work, vocal expression, etc." A five point scale is used to indicate the degree of a person's feeling toward a certain item. The test is composed of four forms with fifty groups of five items each. "The results emerge--according to the author--to form a vocational pattern consisting of certain combinations of likes, dislikes and underscorings. Select the occupation suggested most consistently and apply other criteria such as intelligence, finance, personality, etc." There is a separate blank for men and for women. Apparently not enough material has been compiled to prove the validity of this test.

Thurstone published a vocational Interest Schedule in 1935\(^\text{19}\) which is important chiefly for its factor analysis which had been heretofore neglected. He was able to classify the items into seven basic groups, composed of interest in biological science, physical science, commercial, legal, athletic, academic and descriptive. Other factor analyses have altered this scheme little as applied to tests of today. As for Thurstone's blank itself, it consisted of eighty-nine occupations to be marked


"Like", "Dislike", "Indifferent", and the results were to classify people occupationally according to their interests.

This blank has been more or less discarded since the more comprehensive tests have come into being.

The year 1937 found two tests of major importance on the market, those of Kefauver and Hand and of Cleeton. Cleeton's Interest Inventory is most valuable when applied to High School and College students. It is a vocational test attempting to predict a student's interests in terms of different occupations classified rather broadly into fields of (1) biological science, (2) physical science, (3) social science, (4) literary and legal pursuits, (5) finance, (6) creative or public performance occupations, (7) mechanical, (8) selling, (9) business administration. There are 670 items to be marked "X" (yes, like) or "0" (no, dislike) and a section dealing with extro-intervention items. The student is then classified according to his interests. Cleeton based his Inventory on the Carnegie Institute Inventory and borrowed some construction techniques from Strong. His scoring keys were developed in the same way that Strong developed his, namely, by testing people successful in an occupation and gathering the results to form norms for each group. Cleeton tested 7,424 people successful in their fields for validation purposes.

and found that 76 per cent of the group were engaged in the occupation they had ranked the highest or second on his Blank.

Kefauver and Hand developed a test for use in grades seven through fourteen.\(^2^1\),\(^2^2\) The purpose of this test was to discover the extent of the student's knowledge concerning his preferences including opportunities for self-improvement. There are six tests and two inventories. The six tests deal with topics such as educational guidance, to test a student's knowledge of education, its purpose, difficulty, etc., health guidance concerning factors of health, social-civic guidance dealing with general economic conditions, citizenship conditions, etc.

There are two Inventories, one requiring the listing and reasons for choice of the student's school subjects, his plans for the future concerning a job and the establishment of a home, etc., and the other requiring the student's estimation of his abilities in various fields and related questions. No group norms are furnished for fear of misinterpretation of the results. Emphasis is expressly laid upon the individual and his problems.


\(^{2^2}\) Edward B. Greene, op. cit., pp. 458-460
Waller and Pressey devised an Occupational Orientation Inquiry which required the student to classify a list of 222 occupations according to his experience, enjoyment, ability, and opportunity for them, in that order. A written vocational history was required with a self-evaluation of one's present situation for purposes of comparison with the checked items on the blank. The chief value of this test, like that of Kefauver and Had, is for guidance purposes and dealing with individual cases. Such norms as have been set up are reported to have little value due to the dissimilarity in checking the occupations from the standpoint of the four approaches which are purely individualistic.

Frederick Kuder has created one of the most complete and carefully planned inventories available today. His Preference Record was developed and tested over a period of years before appearing. His aim was to measure the motivation in various lines of study and work. He estimated various preferences for different activities ranging through scientific, computational, musical, artistic, literary, social service and persuasive. He chose 330 paired comparison items to be checked. His test is as yet only a method for finding preferences and not a vocational classification although

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23. Ibid, p. 460
in his manual he states that he hopes to collect test scores from people engaged in different occupations and set up a standard whereby the individual scores may be compared with them. The reliability of his Record ranges from 0.85 to 0.20, which includes all the activities. Unlike Strong, Kuder started with the students themselves instead of working down to them through standards gathered from the professional world. These two tests, however, when analyzed, show a striking resemblance.

Last to be mentioned but almost first in importance is E. K. Strong's Revised Vocational Interest Blank. Since the test's appearance in 1928, Strong has gathered the results into a composite group, weeded out the inconsistencies and uncertainties as completely as possible, and the result is one of the most complete and up-to-date classifications of an individual's interests to show his probable success in a certain field or fields where his interests lie. The items have been reduced from 420 to 400. A new Men-in-general occupational group has been added. The weights for the items have been lowered to facilitate scoring, and almost one thousand new cases have been added to strengthen the validity of each occupational scoring key.

25. Greene, op. cit. pp. 460-464
Counselors and Personnel Directors have in recent years used these Interest tests in conjunction with self estimates of the interviewee to solve vocational problems. This has raised the question, "To what extent do self-estimates and measured interests compare? Are self-estimates a valuable enough basis to be relied upon in helping someone choose an occupation?" These estimates have been relied upon in the past, but no one has checked carefully their true worth until the last few years. Three experiments with this particular phase of the field of interests have been presented in the last three years. Ralph Bedell in 1941 tested 141 freshmen women at the Teachers College at the University of Nebraska who had already made a definite vocational choice. They were given a Vocational Interest Rating Scale listing seventeen different occupations and were asked to "indicate after each occupation the extent to which you would like that kind of work in comparison with those people who are highly interested and successful in it."

The students were then given the Strong Revised Vocation Interest Blank for Women in order to measure their interests.

Coefficients of correlations were obtained between the (millimeter measured) self-estimate and the raw scores on the Strong. The results are shown in Table I. It can be

---

TABLE I

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>+.29</td>
</tr>
<tr>
<td>Librarian</td>
<td>-.04</td>
</tr>
<tr>
<td>Artist</td>
<td>+.36</td>
</tr>
<tr>
<td>Physician</td>
<td>+.34</td>
</tr>
<tr>
<td>Dentist</td>
<td>+.19</td>
</tr>
<tr>
<td>Life Insurance Saleswoman</td>
<td>+.08</td>
</tr>
<tr>
<td>Social Worker</td>
<td>+.28</td>
</tr>
<tr>
<td>YWCA Secretary</td>
<td>+.26</td>
</tr>
<tr>
<td>Teacher of English</td>
<td>+.39</td>
</tr>
<tr>
<td>Teacher of Social Sciences</td>
<td>+.51</td>
</tr>
<tr>
<td>Teacher in General</td>
<td>+.36</td>
</tr>
<tr>
<td>Lawyer</td>
<td>+.29</td>
</tr>
<tr>
<td>Teacher of Math., Phys. Sci.</td>
<td>+.44</td>
</tr>
<tr>
<td>Nurse</td>
<td>+.03</td>
</tr>
<tr>
<td>Stenographer-Secretary</td>
<td>+.54</td>
</tr>
<tr>
<td>Office Worker</td>
<td>+.48</td>
</tr>
<tr>
<td>Housewife</td>
<td>+.23</td>
</tr>
</tbody>
</table>

Coefficients of Correlation between Self-estimated Interests and Scores on the Strong Vocational Interest Blank for Women for 141 Teachers College Freshmen Women.

seen that there are no significantly high correlations. Only the coefficients for secretary-stenographer and teacher of social sciences were above 0.50 and only thirteen coefficients exceeded 0.22 and those are not much more than that number. Bedell points out that "self-estimates for all occupations except four were found to offer no better basis for the prediction of scores in the given occupation than for the prediction of scores in some other occupations. Scores for all occupations except two were found to offer no better basis for the prediction of self-estimates for the given occupation than for some other occupation." The conclusion drawn from this study by Bedell is that there is no significant relation between self-estimated and measured interests, and that conclusions based upon this assumption are apt to be invalid. Bedell places his faith in measured interests.

R. C. Crosby and A. L. Winsor that same year reported on a similar study. In 1921, Thorndike had shown that in the case of 120 college students there was a fairly high correlation (0.47) between the students' grades and their estimated abilities in the subjects. Fryer had concluded from this study that when a student is familiar with a particular field, his estimation of his ability in that field should correlate highly with measured ability. With Fryer's statement in mind, Crosby and Winsor used the Kuder

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Preference Record to measure the estimated interests of 222 students from the College of Agriculture and Home Economics at Cornell University. The Record measures preferences for seven types of activities—musical, artistic, scientific, computational, social service, persuasive, and literary. The students were made familiar with these seven categories. They were then asked to estimate the degree of their preference for each of these activities in relation to the rest of the student body. Then the students were given the preference Record in order to measure their preferences, and compare them with the estimated preferences they had shown. The results are given in Table II.

In addition to this, the students were asked to estimate their heights. These estimations were then correlated with the actual heights and resulted in a coefficient of 0.74.

Crosby and Winsor's conclusions regarding self-estimated and measured interests are that "the students had a pronounced tendency to overestimate their position in relation to the general college population. There seems to be less discrepancy between the estimates and actual scores on interests closely connected with the students' vocational choices." For estimating height, the students had a tendency to underestimate the relative position, however, "when the variable in question is within experience, the high correlation of 0.74 indicates that a fair degree of ability to estimate accurately may be expected."
### Table II

<table>
<thead>
<tr>
<th></th>
<th>Group I (General Psychology)</th>
<th>Group II (Educational Psychology)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=111</td>
<td>N=111</td>
</tr>
<tr>
<td>1. Scientific........</td>
<td>.48±.051</td>
<td>.53±.059</td>
</tr>
<tr>
<td>2. Computational.....</td>
<td>.56±.050</td>
<td>.66±.039</td>
</tr>
<tr>
<td>3. Musical...........</td>
<td>.58±.045</td>
<td>.49±.051</td>
</tr>
<tr>
<td>4. Artistic...........</td>
<td>.41±.056</td>
<td>.51±.050</td>
</tr>
<tr>
<td>5. Literary...........</td>
<td>.57±.048</td>
<td>.58±.045</td>
</tr>
<tr>
<td>6. Social service.....</td>
<td>.39±.058</td>
<td>.50±.051</td>
</tr>
<tr>
<td>7. Persuasive.........</td>
<td>.62±.040</td>
<td>.66±.039</td>
</tr>
<tr>
<td>Average................</td>
<td>.52</td>
<td>.56</td>
</tr>
</tbody>
</table>

Correlations between Estimated and Measured Interests

In 1942, D. J. Moffie reported his results in experimenting with the same problem of estimated versus measured interests. He wished to prove the validity of the direct question method of interview—Would you like to be a lawyer? A dentist? etc. This test group consisted of eighty NYA students taken at random from the NYA Center at Raleigh, North Carolina. The mean age was 18.7 and the range was eight years. The students chosen were enrolled in one of three subjects, radio communication, wood shop, or machine shop.

A rating scale listing the eight occupational groups found by Strong was presented to each student in which he was to estimate his interests for each of the occupations listed in these groups, and secondly he was given the Strong Interest Blank for Men. The scores were then computed from the millimeter-measured scores of the Estimated Interest Blank and the raw scores of the Strong Blank. When correlated, they yielded the coefficients shown in Table III.

In Part A of Table III, are shown the coefficients between the self-estimated scores and the main group scores. They range from -.07, group 16 to +.47 for group VIII. As Moffie points out that a +.47 is only twelve per cent better

---

TABLE III

<table>
<thead>
<tr>
<th>Groups</th>
<th>Coefficients with probable errors</th>
<th>Occupations</th>
<th>Coefficients with probable errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Doctor, Dentist, Psychologist, Architect, Artist</td>
<td>.20±.07</td>
<td>Forest Service</td>
<td>.28±.07</td>
</tr>
<tr>
<td>II. Chemist, Engineer, Mathematician</td>
<td>.26±.06</td>
<td>Architect</td>
<td>.06±.07</td>
</tr>
<tr>
<td>V. Personnel manager, YMCA secretary, Physical director, Minister, Social science teacher, City school superintendent</td>
<td>.23±.07</td>
<td>Mathematician</td>
<td>.22±.07</td>
</tr>
<tr>
<td>VIII. Accountant, Purchasing agent, Banker, Office man</td>
<td>.47±.06</td>
<td>Production Mgr.</td>
<td>.24±.07</td>
</tr>
<tr>
<td>IX. Sales Manager, Real Estate Salesman, Life Ins. Salesman</td>
<td>.21±.07</td>
<td>Engineer</td>
<td>.35±.06</td>
</tr>
<tr>
<td>X. Advertising man, Author-journalist, Law</td>
<td>-.07±.07</td>
<td>Farmer</td>
<td>.13±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carpenter</td>
<td>.28±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personnel Mgr.</td>
<td>.53±.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Musician</td>
<td>.54±.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Certified Public</td>
<td>.06±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accountant</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Banker</td>
<td>.10±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sales Manager</td>
<td>.25±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Real Est. Salesman</td>
<td>-.01±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Life Ins. Salesman</td>
<td>.26±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lawyer</td>
<td>.09±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Author-Journalist</td>
<td>-.05±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pres. Mfg. Concern</td>
<td>.02±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physician</td>
<td>.06±.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Math.-Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teacher</td>
<td>.43±.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>YMCA Secretary</td>
<td>.38±.06</td>
</tr>
</tbody>
</table>

Coefficients of Correlation with Probable Errors Between Self-Estimated Interests and Interests as Measured by the Strong Vocational Interest Blank for Eighty N. Y. A. Boys

(D. J. Hoffie, "The Validity of Self-Estimated Interests," The Journal of Applied Psychology, 26:606-613, October, 1942.)
than chance. In Part B of Table III, the coefficients between the self-estimated scores made on the individual occupations in each Strong group are shown. These range from -.05 (author-journalist) to +.54 (musician). Moffie's conclusion based upon the discrepancy between the self-estimated and measured interests, is that it is "most likely due to a lack of maturity and experience on the part of the student. Interests develop because of maturation and experience in certain kinds of work. Without these experiences, the significance of general items will not be fully recognized."
CHAPTER II

STATEMENT OF THE PROBLEM
CHAPTER II
STATEMENT OF PROBLEM

The problem of the present study arose as a result of the apparent inconsistencies between the reports of Koffie and Bedell on the one hand and of Crosby and Winsor on the other hand.

Bedell reports in his study with 141 college women enrolled in the Teachers College at the University of Nebraska that no reliable evidence was found for the validity of self-estimated interests.\(^{31}\) Koffie in a similar study with eighty NYA students of Raleigh, North Carolina, reported only two significant correlations, one of 0.47 for Group VII and 0.56 for the occupation of banker.\(^{32}\) Crosby and Winsor, on the other hand, in a study of the validity in self-estimated interests obtained as an average for the tested group, a coefficient of 0.56.\(^{33}\)

The encouraging results obtained in Crosby and Winsor's study in contrast to the poor results obtained from the studies of Koffie and of Bedell, leads to the assumption that there may, after all, exist a high relation between measured and self-estimated interests, and that it is the method employed in attempting to solve this problem that has been at fault.

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31. Bedell *op. cit.* p. 67
32. Koffie *op. cit.* pp. 610-611
33. Crosby and Winsor *op. cit.* pp. 410-411
One large factor which might account for the
differences in results is that Crosby and Winsor used the
Kuder Preference Record in their experiment, whereas the Strong
Interest Blank was employed by Moffie and Bedell in the two studies. Kuder, in constructing his Preference
Record, subjectively grouped items as belonging in certain
categories of interests. Therefore, if a student's self-
estimated interests are validated against the Kuder Preference
Record which itself was built upon a subjective basis, a
high correlation between the two might naturally be expected.

The Strong Blank differs from the Kuder Record in that it measures the similarity between the interests
of the individual and the interests which have been proved
to belong to people successfully employed in different
occupations.

The questionnaires which were used by Moffie and
Bedell for estimating the interests of their subjects
showed that what was being asked for was not what the Strong
Interest Blank purports to measure.

34. Ibid. P. 409
35. Moffie, op. cit., p. 607
36. Bedell, op. cit., p. 60
The Strong Blank Manual states:

"Men engaged in a particular occupation have been found to have a characteristic set of likes and dislikes which differentiate them from men following other professions. The Vocational Interest Test is a device by which such patterns of interests may be determined."

The instructions on Moffie's questionnaire, however, read as follows:

"The purpose of this Inquiry is to see how well you like certain occupations. You are asked to indicate after each occupation listed below the extent to which you would be interested in that kind of work. Do not consider salary, social recognition, advancement, skill, ability or training. Merely indicate how you would enjoy that kind of work." 39

A copy of this Inventory is found in the Appendix.

The instructions of Bedell were, in effect, the same as Moffie's. Bedell's instructions were:

"Indicate after each occupation listed below the extent to which you would like that kind of work. Disregard all considerations of salary, social standing, future advancement, etc. Consider only how well 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 the extent to which you would enjoy that kind of work, regardless of any necessary skills, ability, or training which you may or may not possess.

Indicate how well you would like that kind of work in comparison with those people who are highly interested and successful in it. It may help if you think of the people you have known who are highly interested and successful in the occupation." 40


39. Moffie, op. cit., p. 609

40. Bedell, op. cit., p. 61 - also found in Appendix.
A comparison of that which Strong measures in his Interest Blank and that which the student is asked to estimate on the questionnaires to gather these estimations shows the student is not being asked to estimate his interests in comparison with the interests which people successfully engaged in a particular occupation have shown. Instead, a comparison was being made between a student's estimation of how well he would like a certain occupation with no thought of the various interests connected with that occupation which the Strong Blank has shown to exist and is supposed to measure. Hence, a low correlation might be expected to exist since the factors being correlated were obviously of a different character.

If it were true that the reason for the low correlations obtained by Moffie and by Bedell were that each one had not asked for an estimation of interest patterns similar to those measured by the Strong Blank to compare with measured interests, then in order to solve this experimental problem a questionnaire would have to constructed which would ask for an estimation of such interest patterns. Results from this questionnaire could be correlated with scores on the Strong Interest Blank and should be expected to yield higher correlations than those previously found. It is with the construction and use of such a questionnaire that the present study deals.
Specifically, the problem has been to compare the correlations obtained between results for such a questionnaire and Strong Blank scores with correlations between scores on the Strong Blank and results for a questionnaire similar to that used by Koffie.
CHAPTER III

THE METHOD
CHAPTER III

METHODS

Three Blanks were used in this study; Vocational Interest Inquiry I, and Vocational Interest Inquiry II used for estimation of interests relating to certain vocations; and the Strong Vocational Interest Blank for Women used to measure the interest patterns for those same vocations.

Vocational Interest Inquiry I was an exact replica of Koffie's questionnaire for estimating interests except for the list of occupations to be rated. The directions asked the student to estimate how well he would like to be employed in each one of eleven occupations - Life Insurance, Saleswoman, Housewife, Librarian, Y.W.C.A., Secretary, Secretary Stenographer, Nurse, Social Worker, Teacher in General, Artist, Lawyer, Physician. The instructions were as follows:

"The purpose of this inquiry is to see how well you like certain occupations. You are asked to indicate after each occupation listed below the extent to which you would be interested in that kind of work. Do not consider salary, social recognition, advancement, skill, ability, or training. Merely indicate how you would enjoy that kind of work."

This rating blank was scored by using a scale of 0 to 100 and measuring estimates made on this scale in millimeters. A copy of this inquiry appears in the Appendix.

The Vocational Interest Inquiry II gave the same list of occupations and the estimates were measured in the
same way. The directions, however, were completely different. Instead of asking the student to estimate how well he would like the occupations listed, he was asked to estimate the degree of similarity between his general interests and the general interests of people successfully engaged in the occupations. The directions read as follows:

"The purpose of this inquiry is to see how well you can estimate the degree of similarity between your own general interests and the general interests of the average person successfully engaged in each one of the occupations listed.

For instance, the average woman author likes to participate in dramatics, to write personal letters, to tell jokes, to indulge in arguments; she likes intellectual people, witty people, and religious people; she would dislike being an office manager or a civil service employee; she dislikes attending conventions, bridge parties, or formal affairs; she has a distaste for "Good Housekeeping" and the "American Magazine"; and she heartily dislikes arithmetic, bookkeeping, statistics, etc. If you should have these same likes and dislikes, you would rate your general interests to be "extremely similar" to those of a woman author.

Consider carefully what might be the general likes and dislikes of most successful people working in each of the occupations listed below. Then estimate to what degree your own general interests coincide with them."

Then the Strong Interest Blank for Women was administered and scored with the keys for the occupations appearing in the two vocational inquiry tests. The method for obtaining the scores for the Strong Blank was the one recommended by Strong in his manual for hand scoring. Two
counters were used, one totaling the minus numbers, and the other totaling the plus numbers. This method proved to be the quickest and most accurate way of scoring.

The subjects for this study consisted of ninety-six women students enrolled at present in the Montana State University. These were divided into two groups and classified as Group I and Group II.

Group I was composed of twenty-one sorority members and twenty-seven women participating in the General Psychology Course given Winter Quarter, 1943. Their ages ranged from eighteen to twenty-one, including members of all classes from Freshmen to Seniors. This group included majors in many different fields of the University. It was, therefore, a somewhat representative group.

Group II was composed of twenty-three women enrolled in the General Psychology Course of Spring Quarter, 1943, and twenty-two sorority women. Their ages ranged also from eighteen to twenty-one years and like Group I included a scattering of majors in various departments of the University.

The students in Group I were given the Vocational Inquiry I, Vocational Inquiry II and the Strong Interest Blank for Women in that order. A week was allowed to elapse between the application of the tests.

41. Strong Manual p. 8
Group II was given only the Vocational Inquiry II and the Strong Interest Blank for women with a week elapsing between the tests.

CHART

<table>
<thead>
<tr>
<th></th>
<th>Group I N=48 (Max.)</th>
<th>Group II N=45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocation</td>
<td>Vocation II</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Strong Interest</td>
<td></td>
</tr>
<tr>
<td>Vocation</td>
<td>Strong Interest</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Strong Interest</td>
<td></td>
</tr>
</tbody>
</table>

For Group I, correlations were computed between the millimeter scores of Vocational Inquiry I and the raw scores of the Strong, between the millimeter scores of Vocational Blank Inquiry II and the raw scores of the Strong, and between the millimeter scores of Vocational Inquiry I and Vocational Inquiry Blank II.

For Group I, correlations were computed from the millimeter scores of Vocational Inquiry II and the raw scores of the Strong Interest Blank.

The formula used in computing the correlation was an adaptation of the Pearson product moment correlation coefficient, as follows:

\[
r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}
\]

CHAPTER IV

THE RESULTS
CHAPTER IV
RESULTS

The results of this study will be dealt with in the following manner. First the correlation of each Inquiry Blank with the Strong Blank for Group I will be discussed and then the correlation between the two Inquiry blanks will be presented.

The correlations between the Inquiry Blank II and the Strong Blank given to Group II will follow. Lastly discussion of the correlations of the Inquiry Blanks with the Strong from both Groups is given for purposes of comparison.

The coefficients for Group I between the Vocational Inquiry Blank I and the Strong Blank are shown in Table IV. The number of cases was from forty-five to forty-eight because some of the students either overlooked one of the occupations or made estimates for only three or four of the eleven occupations listed. An examination of these coefficients shows that in five of these cases the $r$ is over 0.50. It is to be remembered, however, that for a correlation to have any significance when only fifty cases are used, the coefficient must be above 0.42.

TABLE IV

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Correlation</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Insurance Saleswoman</td>
<td>0.399</td>
<td>46</td>
</tr>
<tr>
<td>Housewife</td>
<td>0.481</td>
<td>47</td>
</tr>
<tr>
<td>Librarian</td>
<td>0.163</td>
<td>46</td>
</tr>
<tr>
<td>Y.W.C.A. Secretary</td>
<td>0.204</td>
<td>45</td>
</tr>
<tr>
<td>Secretary-Stenographer</td>
<td>0.417</td>
<td>46</td>
</tr>
<tr>
<td>Nurse</td>
<td>0.541</td>
<td>48</td>
</tr>
<tr>
<td>Social Worker</td>
<td>0.290</td>
<td>48</td>
</tr>
<tr>
<td>Teacher (in general)</td>
<td>0.536</td>
<td>48</td>
</tr>
<tr>
<td>Artist</td>
<td>0.601</td>
<td>46</td>
</tr>
<tr>
<td>Lawyer</td>
<td>0.514</td>
<td>45</td>
</tr>
<tr>
<td>Physician</td>
<td>0.679</td>
<td>46</td>
</tr>
</tbody>
</table>

Coefficients of correlations for Group I between the millimeter scores derived from Vocation Inquiry I and the Strong Interest Blank for Women.
These five correlations over 0.50 are in the occupations of nurse (+0.541), teacher in general (+0.536), artist (+0.601), lawyer (+0.514) and physician (+0.679). The six occupations left are scattered below 0.50 with the lowest descending to +0.163 for librarian. Upon examining the occupations which are in the high group, a reason which suggests itself for this is that all of these occupations are well known to the average person, and he would perhaps be more nearly able to estimate his preference for an occupation he is familiar with than for one which is not so well known to him. Upon examining the occupations in the low group one finds such occupations as Life Insurance saleswoman, and Y.W.C.A. secretary, two fields which would not generally be classified for the better known fields of women. This would serve to cement the hypothesis mentioned earlier. Yet a glance at the remaining occupations in the low group show that it includes the occupations of housewife and secretary-stenographer. These two fields would be the ones probably chosen as being among the best known to the majority of people if any were. Therefore no apparent reason seems to present itself for the way these occupations fall according to their correlations.

Table V shows the correlations between Vocation Interest Inquiry Blank II and the Strong Blank. An examination of
### TABLE V

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Correlation</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Insurance Saleswoman</td>
<td>0.419</td>
<td>46</td>
</tr>
<tr>
<td>Housewife</td>
<td>0.611</td>
<td>48</td>
</tr>
<tr>
<td>Librarian</td>
<td>0.157</td>
<td>47</td>
</tr>
<tr>
<td>Y.W.C.A. Secretary</td>
<td>0.309</td>
<td>48</td>
</tr>
<tr>
<td>Secretary-Stenographer</td>
<td>0.434</td>
<td>47</td>
</tr>
<tr>
<td>Nurse</td>
<td>0.492</td>
<td>48</td>
</tr>
<tr>
<td>Social Worker</td>
<td>0.300</td>
<td>46</td>
</tr>
<tr>
<td>Teacher (in general)</td>
<td>0.431</td>
<td>48</td>
</tr>
<tr>
<td>Artist</td>
<td>0.467</td>
<td>48</td>
</tr>
<tr>
<td>Lawyer</td>
<td>0.537</td>
<td>48</td>
</tr>
<tr>
<td>Physician</td>
<td>0.395</td>
<td>48</td>
</tr>
</tbody>
</table>

Coefficients of correlation for Group I between the millimeter scores from Vocational Inquiry Blank II and the raw scores from the Strong Interest Blank for Women.
this table shows that only two occupations have correlations higher than 0.50. These occupations are those of housewife with a correlation of 0.611, and lawyer with a correlation of 0.537. Five occupations, however, those of a Life Insurance saleswoman, secretary-stenographer, nurse, teacher in general, and artist range from 0.400 to 0.500. The lowest correlation is for the occupation of librarian (0.157). A comparison of these correlations with the ones in Table IV shows that in both cases the occupation of nurse, teacher in general, artist, and lawyer are in the higher correlation group, and the correlation of librarian is in each case the lowest on the list.

The occupations of social worker and Y.W.C.A. secretary ranked low in each case, and the correlations for Life Insurance saleswoman and lawyer vary only three points between both cases. The similarity between the correlations with the Strong Blank led to the correlation of the scores of both Inquiry Blanks with each other. The results are shown in Table VI. High correlations appeared in almost every case where a similarity had been found before in the correlations of each rating scale with the Strong Blank. The correlations between the two Inquiries for the occupations
TABLE VI

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Correlation</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Insurance Saleswoman</td>
<td>0.400</td>
<td>46</td>
</tr>
<tr>
<td>Housewife</td>
<td>0.404</td>
<td>47</td>
</tr>
<tr>
<td>Librarian</td>
<td>0.568</td>
<td>45</td>
</tr>
<tr>
<td>Y.W.C.A. Secretary</td>
<td>0.240</td>
<td>45</td>
</tr>
<tr>
<td>Secretary-Stenographer</td>
<td>0.815</td>
<td>45</td>
</tr>
<tr>
<td>Nurse</td>
<td>0.658</td>
<td>48</td>
</tr>
<tr>
<td>Social Worker</td>
<td>0.689</td>
<td>46</td>
</tr>
<tr>
<td>Teacher (in general)</td>
<td>0.674</td>
<td>48</td>
</tr>
<tr>
<td>Artist</td>
<td>0.653</td>
<td>46</td>
</tr>
<tr>
<td>Lawyer</td>
<td>0.492</td>
<td>45</td>
</tr>
<tr>
<td>Physician</td>
<td>0.516</td>
<td>46</td>
</tr>
</tbody>
</table>

Coefficients of correlations between the millimeter scores of Vocational Inquiry I and Vocational Inquiry II for Group I.
of nurse, teacher, artist and physician were all above 0.50. These occupations fell into the high correlation group for each Inquiry Blank with the Strong Blank. The fields of librarian and social worker which rated a low correlation with the Strong Blank in both cases had a coefficient of 0.568 and 0.689 respectively when correlated with each other.

The field of Y.W.C.A. secretary, whose correlation with the Strong Blank was low in both cases, resulted in the lowest correlations derived between the Inquiry Blanks. This leads to the supposition that a student can neither successfully estimate his preference for occupation in this field nor can he estimate accurately the general interests of Y.W.C.A. secretaries and compare his interests with them.

The rather high correlations found between the two Inquiry Blanks showed the necessity of using a second group of people to be given only Vocational Inquiry Blank II if the full benefit of the change of instructions for estimates was to be gained. The testing of a second group with the Vocational Inquiry Blank II would prevent any influence that Vocational Inquiry Blank II might be supposed to have upon responses to Inquiry Blank II.
The correlations for Group II between Vocational Inquiry Blank II and the Strong Blank are presented in Table VII. An analysis of these correlations shows that there is only one correlation above 0.50, that for the occupation of secretary-stenographer (+0.515). There are four occupations whose correlations are in the low forties and these are physician (+0.457), lawyer (+0.434), social worker (+0.411), and housewife (+0.417). All of these occupations can be said to be well known to an average college student. The rest of the occupations from the list which would probably be classified in this group as to general familiarity -- namely nurse and artist -- have correlations which are not far below the highest ones. The correlation for nurse is +0.376 and for artist is +0.382.

The very low correlations for the occupations of Life Insurance saleswoman and Y.W.C.A. secretary would be expected if judged on this basis. However, there still remain the occupations of librarian and teacher in general which should be as well known as the high correlations group but whose correlations are +0.196 and +0.207, respectively. Therefore a grouping of the correlations
TABLE VII

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Correlation</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Insurance Saleswoman</td>
<td>+0.181</td>
<td>45</td>
</tr>
<tr>
<td>Housewife</td>
<td>+0.417</td>
<td>45</td>
</tr>
<tr>
<td>Librarian</td>
<td>+0.196</td>
<td>45</td>
</tr>
<tr>
<td>Y.W.C.A. Secretary</td>
<td>+0.105</td>
<td>45</td>
</tr>
<tr>
<td>Secretary-Stenographer</td>
<td>+0.515</td>
<td>45</td>
</tr>
<tr>
<td>Nurse</td>
<td>+0.376</td>
<td>45</td>
</tr>
<tr>
<td>Social Worker</td>
<td>+0.411</td>
<td>45</td>
</tr>
<tr>
<td>Teacher (in general)</td>
<td>+0.207</td>
<td>45</td>
</tr>
<tr>
<td>Artist</td>
<td>+0.382</td>
<td>45</td>
</tr>
<tr>
<td>Lawyer</td>
<td>+0.434</td>
<td>45</td>
</tr>
<tr>
<td>Physician</td>
<td>+0.457</td>
<td>45</td>
</tr>
</tbody>
</table>

Coefficients of correlations for Group II between the millimeter scores of Vocational Inquiry II and the raw scores of the Strong Interest Blank for women.
according to the degree to which the occupational fields are known would be invalid and an hypothesis which would satisfactorily explain the relative magnitude of the correlations does not suggest itself.

Table VIII shows the correlation for Group I between each Vocational Inquiry Blank and the Strong Blank and for Group II the correlation between Vocational Inquiry Blank II and the Strong Blank, for purposes of comparison.

There are four occupations which have correlations that are fairly consistent throughout. The occupations of lawyer and secretary-stenographer in all three cases are above 0.40 and the occupations of librarian and Y.W.C.A. secretary are low throughout, falling in each case below 0.30.

A comparison between the Vocational Inquiry Blank I of Group I and Vocational Inquiry Blank II of Group II shows that each has about the same correlation for the occupations of housewife, librarian and Y.W.C.A. secretary, and lawyer. The rest of the correlations are from ten to twenty points apart. The greatest differences lie in the occupations of Life Insurance saleswomen - Group I, +0.599; Group II, +0.181; and teacher in general - Group I, +0.536; Group II, +0.207. Generally speaking, contrary to the original hypothesis, the correlations with the Strong Blank scores were higher in the case of Vocational Inquiry Blank I given to Group I than in the case of Vocational Inquiry Blank II given to Group II.
TABLE VIII

<table>
<thead>
<tr>
<th>Strong</th>
<th>Group I</th>
<th>Group II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voc. I</td>
<td>Voc. II</td>
</tr>
<tr>
<td>Life Insurance Saleswoman</td>
<td>0.399</td>
<td>0.419</td>
</tr>
<tr>
<td>Housewife</td>
<td>0.481</td>
<td>0.611</td>
</tr>
<tr>
<td>Librarian</td>
<td>0.163</td>
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</tr>
<tr>
<td>Y.W.C.A. Secretary</td>
<td>0.204</td>
<td>0.309</td>
</tr>
<tr>
<td>Secretary-Stenographer</td>
<td>0.417</td>
<td>0.434</td>
</tr>
<tr>
<td>Nurse</td>
<td>0.541</td>
<td>0.495</td>
</tr>
<tr>
<td>Social Worker</td>
<td>0.230</td>
<td>0.300</td>
</tr>
<tr>
<td>Teacher (in general)</td>
<td>0.536</td>
<td>0.431</td>
</tr>
<tr>
<td>Artist</td>
<td>0.557</td>
<td>0.467</td>
</tr>
<tr>
<td>Lawyer</td>
<td>0.514</td>
<td>0.537</td>
</tr>
<tr>
<td>Physician</td>
<td>0.679</td>
<td>0.395</td>
</tr>
</tbody>
</table>

Table of correlations of Vocational Inquiry Blanks I and II with the Strong Interest Blank for women in Group I, and correlations between Vocational Inquiry Blank II and the Strong Interest Blank for women.
CHAPTER V

CONCLUSION
CHAPTER V
CONCLUSIONS

The problem in this study has been to find out if asking a person to estimate his general interests compared to the general interests of people successfully engaged in a given field would result in a higher correlation with the Strong Interest Blank which purports to measure these interests than asking a person to estimate only his preference for a given occupation and correlating this with the Strong Blank.

One of the results of this study has been at first glance ambiguous with reference to the central problem. A comparison of the two methods for estimation resulting from the testing of Group I shows that both methods seem to have about the same value. In some cases the correlations of one with the Strong are higher than the other, and in some cases the second one is higher. But a comparison of the correlations between Vocational Inquiry Blank I and the Strong Blank for the first group and the correlations between Vocational Inquiry Blank II and the Strong Blank for the second group shows that Vocational Inquiry Blank I yielded higher coefficients when correlated with the Strong Blank than did Vocational Inquiry Blank II. Vocational
Inquiry Blank I asked the student to "indicate how well you would like each of the occupations listed below." Vocational Inquiry Blank II asked the student to "compare your general interests with the general interests of people successfully engaged in the following fields."

Two Groups were used because it was feared that in using only one group one Vocational Inquiry Blank might influence the estimates made on the other Vocational Blank. This fact seems to be borne out by the similarity in the correlations between each Blank with the Strong Interest Blank and between the two blanks when these two Inquiry Blanks were given to the same group. Therefore a comparison of the results of Vocational Blank I with the Strong Blank given to Group II would seem to reveal the true facts of the case. These facts show that Vocational Inquiry Blank I would be more valuable in considering student vocational problems than a discussion of the comparison of the student's general interests with those of people successfully engaged in an occupation. It is probably too big a problem to present to the student in asking him to decide what the general interests of a successful lawyer, for example, might be. The student might also be asked to think of a lawyer he knows and in making a snap judgement of that one lawyer's general interests decide that upon a brief survey of these interests, they do not coincide with his-the student's-
general interests. Thus, an isolated case such as this might influence a student's judgement of the general interests which might logically be those of people successful in a given field to the extent that he would not be able to draw an unbiased picture of this particular phase of an occupation.

There are still to be considered the relatively high correlations obtained by Crosby and Winsor in their study compared to the low results obtained by Bedell, Moffie, and the experimenter in this study.

A brief glance will show that the correlations resulting from this study are not much lower than those given by Crosby and Winsor. However, the difference in the number of cases used in each instance - maximum in this experiment 48, compared to 222 tested by Crosby and Winsor - would serve to place the correlations of this study in the same low category as those of Bedell and Moffie, because there were comparatively few correlations over 0.42 in this study.

An analysis of the methods used by Crosby and Winsor in their attempt to validate estimated interests shows that there are two important items to perhaps explain for their satisfactory correlations. In the first place two sets of estimations were correlated with one another, Kuder's estimation of the items which signified preference for each of seven fields, and the student's estimation of preferences
in these seven fields—artistic, computational, musical,
scientific, social service, persuasive, and literary.

Secondly, the students were given a detailed account
of the general "make-up" of each field so that they more or
less knew what it was they were being asked to state their
preference for. It might well be that because a student
had no clear idea of the duties entailed in the field of
Y.W.C.A. secretary that he was unable to accurately estimate
either his preference for this type of work or to compare
his general interests with the general interests proved to
exist for Y.W.C.A. secretaries which this study shows to
be the case.

There no doubt exists yet a flaw in the method used
to solve the problem of the validity of estimated interests.
However, until a method is discovered which is able to
prove that a high relation exists between measured and
self-estimated interests it is quite possible that for
purposes of counseling it is the best to rely upon tests
which measure a person's capacity for occupations instead
of trusting his estimation of abilities and interests for
various occupations. This is essentially the conclusion
drawn by Moffie and Bedell.
This study, however, has done what it set out to do, namely, to correlate self estimated interests compared to the general interests by people successfully engaged in an occupation with a Blank which is proved to measure these interests.

This had not been done before. Both Bedell and Moffie had correlated estimates of preference for an occupation with a measurement of interests in occupations and these are two entirely different factors.

This study, therefore, shows that no apparent relation exists between estimated and measured interests.
BIBLIOGRAPHY


APPENDIX
The purpose of this inquiry is to see how well you like certain occupations. You are asked to indicate after each occupation or group of occupations listed below and on the next sheet the extent to which you would be interested in that kind of work. Do not consider salary, social recognition, advancement, skill, ability, or training. Merely indicate how you would enjoy that kind of work.

Make a straight, vertical mark on the line opposite each occupation or group of occupations at the position which best describes your interests. It need not necessarily be under a descriptive phrase.

| No Interest | Little Interest | Average Interest | Above Average Interest | Extreme Interest |
|-------------|----------------|------------------|------------------------|-----------------

Example:

Dentist:

- Make a rough classification of different occupations involving like interests. These have been listed below. Rate yourself on each group. Work rapidly. Your first impression is desired.

Group:

I. Applied Sciences
Doctor, dentist, psychologist, architect, artist

Rate yourself on each occupation given below. Work rapidly. Your first impression is desired.

| No Interest | Little Interest | Average Interest | Above Average Interest | Extreme Interest |
|-------------|----------------|------------------|------------------------|-----------------

Artist:

Psychologist:
BEDELL'S
VOCATIONAL INTEREST RATING SCALE

Women
Name........................................ Degree for which you are working..............
Major department........................... Number of years you have taught...........
Approximate total number of semester hours earned in college or univer-
sity........ Date...........

Indicate after each occupation listed below the extent to which you
would like that kind of work. Disregard considerations of salary, social
standing, future advancement, etc. Consider only how well 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 the extent to which
you would enjoy that kind of work, regardless of any necessary skills,
ability, or training which you may or may not possess.

Make a straight vertical mark through the line opposite each occupation
at the point which indicates how well you would like that kind of work in
comparison with those people who are highly interested and successful
in it. It may help if you think of the people you have known who are
highly interested and successful in the occupation and compare yourself
with how well they like the work.

Work rapidly. Your first impressions are desired here. Rate yourself
on each occupation. You may place your mark at any place on the line;
it need not be directly under a descriptive phrase.

How well would you like this occupation in
comparison with those now in this work?
Would Less As well Better As well
not than the than the than the than the
like average average average best

Author.................................................................
Librarian............................................................... 
Artist.................................................................
Physician............................................................
Dentist............................................................... 
Life Insurance Saleswoman.................................
Social worker......................................................
Y.W.C.A. Secretary..............................................
Teacher of English................................................
Teacher of Social Sci.............................................
Teacher in general............................................... 
Lawyer..............................................................
Teacher Math-Phys. Sci.........................................
Nurse............................................................... 
Stenographer-Secretary........................................
General Office Worker.........................................
Housewife..........................................................
Department of Psychology
Montana State University

Vocational Interest Inquiry I

Name ______________________________ Age ____________________________
Major ______________________________ Date ____________________________

The purpose of this inquiry is to see how well you like certain occupations. You are asked to indicate after each occupation listed below the extent to which you would be interested in that kind of work. Do not consider salary, social recognition, advancement, skill, ability, or training. Merely indicate how you would enjoy that kind of work.

Make a straight vertical mark on the line opposite each occupation at the position which best describes your interests. It need not necessarily be under a descriptive phrase.

<table>
<thead>
<tr>
<th>Example</th>
<th>No Interest</th>
<th>Little Interest</th>
<th>Average Interest</th>
<th>Above Average Interest</th>
<th>Extreme Interest</th>
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</tbody>
</table>

Dentist

|                      | No Interest | Little Interest | Average Interest | Above Average Interest | Extreme Interest |
|                      |             |                 |                 |                        |                  |

Life Insurance Saleswoman
Housewife
Librarian
Y.W.C.A. Secretary
Secretary-Stenographer
Nurse
Social Worker
Teacher (in general)
Artist
Lawyer
Physician
The purpose of this inquiry is to see how well you can estimate the degree of similarity between your own general interests and the general interests of the average person successfully engaged in each of the occupations listed below.

For instance, the average woman author likes to participate in dramas, to write personal letters, to tell jokes, to indulge in arguments; she likes intellectual people, witty people, and religious people; she would dislike being an office manager or a civil service employee; she dislikes attending conventions, bridge parties, or formal affairs; she has a distaste for "Good Housekeeping" and the "American Magazine"; and she heartily dislikes arithmetic, bookkeeping, statistics, etc. If you should have these same likes and dislikes, you would rate your general interests to be "extremely similar" to those of a woman author.

Consider carefully what might be the general likes and dislikes of most successful people working in each of the occupations listed below. Then estimate to what degree your own general interests coincide with them.

Make a straight vertical mark on the line opposite each occupation at the position which best described your estimate. The mark need not necessarily be under a descriptive phrase.

Before you begin be sure you understand the above instructions thoroughly.

<table>
<thead>
<tr>
<th>Extremely Dissimilar</th>
<th>Very Dissimilar</th>
<th>Very Similar</th>
<th>Extremely Similar</th>
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</thead>
<tbody>
<tr>
<td>Life Insurance Saleswoman</td>
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<tr>
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