

# STATEMENT OF PERMISSION TO COPY

In presenting this paper in partial fulfillment of the requirements for an advanced degree at Montana State University, I agree that the Library shall make it freely available for inspection. I further agree that permission for extensive copying of this paper for scholarly purposes may be granted by my major professor, or in his absence, by the Director of Libraries. It is understood that any copying or publication of this paper for financial gain shall not be allowed without my written permission.

Signature Susan L. McConnaughey

Date May 27, 1976

205

CAREER CHOICES, ASPIRATIONS AND INTERESTS OF  
COLLEGE WOMEN AT MONTANA STATE UNIVERSITY

by

SUSAN LEE MEISSNER

A professional paper submitted in partial fulfillment  
of the requirements for the degree

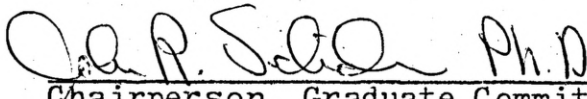
of

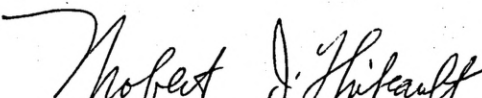
MASTER OF EDUCATION

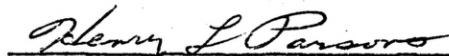
with concentration in

Counseling

Approved:

  
Chairperson, Graduate Committee

  
Head, Major Department

  
Graduate Dean

MONTANA STATE UNIVERSITY  
Bozeman, Montana

June, 1976

## ACKNOWLEDGEMENTS

The author gratefully acknowledges Dr. John Schneider for his professional knowledge and time. Special mention should be made of Dr. Carol Parker who recommended the topic for this paper. She also wishes to express gratitude to the Montana State University Endowment and Research Foundation whose financial backing allowed the study to be completed.

## TABLE OF CONTENTS

|                                                   | Page |
|---------------------------------------------------|------|
| VITA . . . . .                                    | ii   |
| ACKNOWLEDGEMENTS . . . . .                        | iii  |
| ABSTRACT . . . . .                                | vii  |
| <br>Chapter                                       |      |
| 1. INTRODUCTION . . . . .                         | 1    |
| Statement of the Problem . . . . .                | 1    |
| Application and Contribution . . . . .            | 1    |
| General Questions to be Answered . . . . .        | 2    |
| General Procedure . . . . .                       | 3    |
| Limitations . . . . .                             | 3    |
| Definition of Terms . . . . .                     | 4    |
| Summary . . . . .                                 | 4    |
| 2. REVIEW OF LITERATURE . . . . .                 | 5    |
| Vocational Preference Inventory . . . . .         | 5    |
| Women and Careers . . . . .                       | 8    |
| Summary . . . . .                                 | 10   |
| 3. PROCEDURES . . . . .                           | 12   |
| Population and Sampling . . . . .                 | 12   |
| Categories . . . . .                              | 12   |
| Method of Collecting Data . . . . .               | 16   |
| Method of Organizing and Analyzing Data . . . . . | 17   |
| Hypotheses for Testing . . . . .                  | 18   |



|                                                                     |      |
|---------------------------------------------------------------------|------|
| Chapter 3 (Cont.)                                                   | Page |
| Precautions Taken for Accuracy . . . . .                            | 19   |
| Summary . . . . .                                                   | 19   |
| 4. RESULTS . . . . .                                                | 20   |
| Section One . . . . .                                               | 20   |
| Section Two . . . . .                                               | 22   |
| Section Three . . . . .                                             | 26   |
| Figure I . . . . .                                                  | 27   |
| 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS . .                     | 30   |
| Conclusions . . . . .                                               | 30   |
| Recommendations . . . . .                                           | 32   |
| REFERENCES CITED . . . . .                                          | 34   |
| APPENDIX . . . . .                                                  | 36   |
| Sample of Cover Letter . . . . .                                    | 37   |
| Sample of Questionnaire . . . . .                                   | 38   |
| Sample of Vocational Preference Inventory . . .                     | 39   |
| Sample of Vocational Preference Inventory<br>Answer Sheet . . . . . | 41   |

## LIST OF TABLES

## TABLE

|      |                                                                                                        |    |
|------|--------------------------------------------------------------------------------------------------------|----|
| 1.   | PERCENTAGES OF MATCH, NON-MATCH FOR<br>EXPRESSED CAREER CHOICES AND CAREER<br>ASPIRATIONS . . . . .    | 21 |
| II.  | PERCENTAGES OF MATCH, NON-MATCH FOR<br>EXPRESSED CAREER CHOICES AND VPI<br>HIGH POINT SCALES . . . . . | 21 |
| III. | PERCENTAGES OF MATCH, NON-MATCH FOR<br>CAREER ASPIRATIONS AND VPI HIGH<br>POINT SCALES . . . . .       | 22 |
| IV.  | CROSS TABULATION OF EXPRESSED CAREER<br>CHOICES AND CAREER ASPIRATIONS . . . .                         | 23 |
| V.   | CROSS TABULATION OF EXPRESSED CAREER<br>CHOICES AND VPI HIGH POINT SCALES . . .                        | 24 |
| VI.  | CROSS TABULATION OF CAREER ASPIRATIONS<br>AND VPI HIGH POINT SCALES . . . . .                          | 25 |

## ABSTRACT

The problem of this study was to survey career choices and career aspirations of sophomore and senior women at Montana State University, and to compare those career choices and aspirations to John L. Holland's Vocational Preference Inventory high point scales.

A survey was designed to discover expressed career choices and career aspirations. Subjects also completed the Vocational Preference Inventory and high point scales were determined. The career choices, career aspirations and Vocational Preference high point scales were scored on a match, non-match basis. Chi-square tests were used to test for significance.

The data indicated that there was a significant difference between career choice, career aspiration and interests for the sampled sophomore and senior women. Women are not choosing careers that correspond to their interest, nor do their career aspirations correspond to their interests.

The investigator recommends that more research be done with women in the area of career choices, and that a systematic approach to vocational counseling for women be presented in the public school system.

## Chapter 1

### INTRODUCTION

The fact that women have traditionally chosen stereotyped occupations has become a controversial topic. Today women are questioning their careers and their role in the occupational world. This study attempts to determine if women at Montana State University (MSU) are choosing careers that relate to their interests. A comparison between actual career choice and career aspirations is made, and these choices are then compared to the high scale of the Vocational Preference Inventory (VPI). The VPI was developed by John L. Holland, who felt that people choose occupations according to personality types. The VPI scales determine personality types which are used to predict occupational satisfaction. In this study the VPI is used to determine which career choice is closer to career interests.

### STATEMENT OF THE PROBLEM

The problem of this study is to compare career aspirations and expressed career choices of sophomore and senior women at Montana State University in 1976, and to determine if the VPI results match the expressed career

choice or the career aspiration.

#### APPLICATION AND CONTRIBUTION

The fact that more women are working today than ever before, and that they are working for longer periods of time, points out the need for studies dealing with occupational choices of women. Because a large part of women's lives are spent in the labor force, and because there is a need for greater economic benefits, women should be employed in occupations that are challenging and rewarding. The review of literature points out that this is the exception. Women are centered in occupational clusters typical of acceptable careers for women. If this is true at MSU today, a need for more intensive vocational counseling for women is apparent.

#### GENERAL QUESTIONS TO BE ANSWERED

This study is an investigation of career choices and career aspirations of women at MSU. The following questions are answered by the study:

1. Is there a difference between expressed career choice and career aspiration?
2. Does the VPI predicted choice correspond

more closely to the expressed choice or the aspiration?

3. Does the year in college effect the degree of closeness between career choice, career aspiration and the VPI high scale?

#### GENERAL PROCEDURE

Subjects were selected from a computerized random sample of sophomore and senior women enrolled at MSU during winter quarter, 1976. The subjects were mailed a questionnaire and the VPI. The questionnaire determined expressed career choice and career aspirations. These were then categorized according to Holland's theory, and analyzed on a match, no match basis. The VPI high point scales were compared to both career choices to determine which choice was closer to measured interests.

#### LIMITATIONS

Because the population used for this study is an ideal group, inferences beyond women at MSU cannot be made. Women in general are not comparable to college women. Because only women at MSU were used, inferences to other college women are not possible.

Because a mail survey was done, the results are biased according to who returned the forms, and how many subjects responded.

#### DEFINITION OF TERMS

The following terms used throughout the study need defining:

Expressed Career Choices - the career the subject has chosen to pursue

Career Aspiration - the career that the subject would choose if there were no restrictions

High Point Scale - the area of highest interest determined from the VPI

#### SUMMARY

This study deals with career choices of women. The idea that women do not choose careers that are of actual interest forms the basis for this investigation. With the use of a questionnaire and Holland's VPI, data was gathered about career choice and aspiration of sophomore and senior women at MSU. The data answers questions dealing with the degree of closeness between career choices and career interests.

## Chapter 2

### REVIEW OF LITERATURE

The review of literature is divided into two parts. The first section deals with the Vocational Preference Inventory and its use in predicting vocational choices. The second section discusses career choices of women and women's place in the vocational field.

#### Vocational Preference Inventory

In 1958 John Holland developed the VPI, a personality inventory using occupational titles for content. To determine the relationship between age and VPI scales, the third revision of the test was given to heterogeneous samples of high school and college students and employed adults. The relationship was insignificant. (8) The relationship between intelligence and VPI scales was also found to be insignificant. The conclusion drawn was that the VPI is relatively independent of age and intelligence variables. (8) In the same study Holland tested the reliability of the VPI using the split-half method and administering it to 100 college freshmen. The correlation, corrected for length, ranged from .72 to .95 with a median of .85 for the males and from .68 to .90 with a median of .79 for the women. (8)



Using career choice as a dependent variable, Holland studied the relationship between personality type and the expressed career choice. The subject's high point code from the VPI was compared to the career choice. The results showed that various personality types choose careers from respective categories. One exception was found. Artistic types choose careers in social fields more often than artistic fields and enterprising fields as often as artistic fields. (11) Osipow suggests this may be due to cultural biases about artistic fields especially for men.(11) This study also compared second and third choice of career to the high point of the VPI and found that these choices also coincided with personality types.

A cross sectional study, concerned primarily with student's perceptions affecting vocational choice, assigned students to personality types according to their vocational choices. The degree of resemblance to each type was determined by the scores on the VPI. 658 high school students were asked to characterize themselves using an adjective checklist. The results showed that students' conceptions of themselves corresponded with the results of the VPI. (12) The study also pointed out that students' history of vocational choice coincided with personality types. This

supported Holland's theory that personality types seek occupations that fit personality types.

At Pennsylvania State University, 228 freshmen were grouped according to the status of their career choice. Three groups were established Group I; decided - those with a fairly strong commitment to a particular major, Group II; tentative - those who had a leaning in one direction but not directly enrolled in a program; and Group III; undecided - those with no rank order personality descriptions for themselves based on Holland's six types. They listed vocational choices. The study showed that students did choose occupations which were consistent with their personality types in most cases. The researcher concluded that vocational choices for enough students could be predicted to make the VPI a valid instrument.

Osipow and Ashby carried the coding of personalities a step further. Instead of relying on the high point code, they combined two or more of the highest scales on the VPI, hoping to increase predictive validity. 831 male and 129 female college freshmen were given the VPI and asked to indicate their educational preference. The results showed that common combinations of personality scales go along with Holland's theory of consistency in most cases. (18)

The results for women showed some evidence of stereo-types. A large majority of their high point scales fell into the social-artistic categories. (18)

### Women and Careers

Studies on vocational interests and choices of women reveal some interesting facts. In 1964, 35% of the labor force were women. (3) Of these 25 million women, only 20% attended college and only 10% graduated. (3) The typical employed woman was in her 40's with twenty years of work ahead of her. (3) In 1974, women again made up about a third of the labor force, but the number of women working was larger - 42 million. (5) Although many women are working, studies show that they are filling stereo-typed roles, and that little attention has been given to career guidance for women. Because of sex roles, women are not career oriented. In a study by Marcia Kimmel, it was found that girls begin to show dependency in achievement situations as early as age two. (15) She also stated that there is a general decline in girls' intelligence test scores throughout school. Thus at an early age girls are conditioned to succeed in traditional careers only. This carries through to college. 88% of college women avoid

stimulating and challenging careers because of social pressure. (15) Matthews and Tiedemann found that junior high girls with strong vocational goals had lost them by the time they reached senior high school. The main goal became marriage. (15) Reasons given for losing career plans include social pressures against career orientation, limited vocational self concepts and cultural sexual roles. Women then become forced to accept any job rather than planning and looking for a challenging rewarding occupation. (5)

Working women are generally in low paying jobs. Seven areas that are heavily concentrated with women are as follows: retail sales, secretary, household worker, elementary school teachers, bookkeepers, waitresses and nurses. (3) Only 15% of all women are in professional or technical occupations. (3) Less-skilled areas are heavily populated by women. Several reasons for the concentration of women in low paying jobs have been stated. These include social pressures, lack of vocational guidance, low motivation because little is demanded of women in the vocational area, and women's attitude toward actual training and planning a career.

Studies have also presented ideas for changing views

about vocational training for women. It is important to realize that a variety of lifestyles are open to women today. (5) For example, women may work part-time, full time or not at all. They may work for a short time, drop out of the labor force only to return at a later date. Vocational programs could prevent women taking the first job that comes along. In vocational training, aspirations need to be lifted out of traditional roles. (3) Motivation for vocational training needs to be provided. (3) Early training needs to be revised and an opportunity given for women to choose careers according to actual desires.

#### SUMMARY

The review of literature points out various items. First, Holland's theory of career choice is valid. People do choose careers that correspond to personality types. High point scales on the VPI are generally related to occupational choices. Thus the VPI is helpful in determining career satisfaction and interests.

Because of lack of vocational planning and guidance women are concentrated in traditional roles and in low skilled areas. The fact that one third of the labor force

is women points out the need to develop intensive vocational programs for women. Since most women will work, they could be working at something that is rewarding and challenging.

## Chapter 3

### PROCEDURES

The problem of this study is to compare career aspirations and expressed career choice to VPI high scales. This chapter describes the procedures used to collect and evaluate the data. Included is a description of the population and the sampling technique. The method used for organizing and analyzing the data is presented. The hypotheses for testing are presented in null form.

### POPULATION AND SAMPLING

The population for this study was 839 sophomore and 710 senior women enrolled at MSU winter quarter, 1976. From this population a computerized sample was drawn. The sample included 200 sophomore women and 200 senior women.

### CATEGORIES

The data of this investigation is broken down in several ways. First, all data is classified according to Holland's scheme of six groups. These are explained in detail later in this section. The data is also categorized according to year in college. Holland's VPI measures six personality types which are described below. Also included in this description are the occupations that correspond to

the specific personality type.

Realistic. The model type is masculine, physically strong, unsociable, aggressive; has good motor coordination and skill; lacks verbal and interpersonal skills; prefers concrete to abstract problems; conceives of himself as being aggressive and masculine and as having conventional political and economic values. Persons who choose or prefer the following occupations resemble this type: airplane mechanic, construction inspector, electrician, filling station attendant, fish and wildlife specialist, locomotive engineer, master plumber, photoengraver, power shovel operator, power station operator, radio operator, surveyor, tree surgeon, tool designer.

Intellectual. The model type is task-oriented, intrceptive, asocial; prefers to think through rather than act out problems; needs to understand; enjoys ambiguous work tasks; has unconventional values and attitudes; is anal as opposed to oral. Vocational preferences include aeronautical design engineer, anthropologist, astronomer, biologist, botanist, chemist, editor of a scientific journal, geologist, independent research scientist, meteorologist, physicist, scientific research worker, writer of scientific or technical articles, zoologist.



Social. The model type is sociable, responsible, feminine, humanistic, religious; needs attention; has verbal and interpersonal skills; avoids intellectual problem solving, physical activity, and highly ordered activities; prefers to solve problems through feelings and interpersonal manipulations of others; is orally dependent. Vocational preferences include assistant city school superintendent, clinical psychologist, director of welfare agency, foreign missionary, high school teacher, juvenile delinquency expert, marriage counselor, personal counselor, physical education teacher, playground director, psychiatric case worker, social science teacher, speech therapist, vocational counselor.

Conventional. The model type prefers structured verbal and numerical activities and subordinate roles; is conforming (extracognitive); avoids ambiguous situations and problems involving interpersonal relationships and physical skills; is effective at well-structured tasks; identifies with power; values material possessions and status. Vocational preferences include: bank examiner, bank teller, bookkeeper, budget reviewer, cost estimator, court stenographer, financial analyst, IBM equipment operator, inventory controller, payroll clerk, quality control expert, statis-

tician, tax expert, traffic manager.

Enterprising. The model type has verbal skills for selling, dominating, leading; conceives of himself as a strong, masculine leader; avoids well-defined language or work situations requiring long periods of intellectual effort; is extrceptive; differs from the conventional type in that he prefers ambiguous social tasks and has a greater concern for power, status, and leadership; is orally aggressive. Vocational preferences include business executive, buyer, hotel manager, industrial relations, consultant, manufacturer's representative, master of ceremonies, political campaign manager, real-estate salesman, restaurant worker, speculator, sports promotor, stock and bond salesman, television producer, traveling salesman.

Artistic. The model type is asocial: avoids problems that are highly structured or require gross physical skills; resembles the intellectual type in being intrceptive and asocial; but differs from that type in that he has a need for individualistic expression, has less ego strength, is more feminine, and suffers more frequently from emotional problems through self-expression in artistic media. Vocational preferences include art dealer, author, cartoonist, commercial artist, composer, concert singer, dramatic

coach, free-lance writer, musical arranger, musician, playwright, poet, stage director, symphony conductor. (10)

#### METHOD OF COLLECTING DATA

From the computerized sample, 400 subjects - 200 seniors and 200 sophomores - were sent a letter requesting assistance (see appendix), a copy of the questionnaire, the VPI and an answer sheet. The questionnaire asked three questions - year in college, career presently pursuing and career that would be pursued if there were no restrictions. (See appendix). The VPI lists 160 occupations which the subjects express like or dislike by marking the answer sheet yes or no. If undecided about an occupation, the answer sheet is left blank. (See appendix). The questionnaire and answer sheet were coded for reasons of identifying subjects who desired results of the study and for follow-up purposes. They were returned by mail. The career choices given were categorized according to Holland's scheme. The VPI was scored to determine high point scales for each subject.

The questionnaire asked only factual information so no test for reliability or validity was needed. The VPI consists of 160 occupations which the subject expresses

like or dislike. If they are undecided about an occupation the answer sheet is left blank. The VPI was tested for internal consistency by administering the test to employed adult males and college freshmen, both males and females. The employed adults coefficients ranged from .86 to .28. (13) The freshmen males coefficients ranged from .89 to .60, and freshmen females from .89 to .50. (13) The re-test coefficients for students and adults ranged from .98 to .27. (13) The standard error of measurement ranges from 1 to 5 raw score points. (13) Construct validity was established by administering the test to psychotic and non-psychotic people, and normal and psychopaths. Statistically significant differences were obtained. The VPI scales have also been intercorrelated with other personality inventories. The observed relationships lead support to construct validity. (13) The VPI has been found to be predictive of vocational choices for one and two year periods, and predictive of academic and extra-curricular achievements for one to three year periods. (13)

#### METHOD OF ORGANIZING AND ANALYZING DATA

The data gathered was first categorized according to year in college. After the career choices were categorized

into Holland's classification scheme, they were given a number of 1 - 6 according to the following system: 1 - Realistic, 2 - Intellectual, 3 - Social, 4 - Conventional, 5 - Enterprising, 6 - Artistic. Expressed career choice and career aspiration were compared for match. The VPI high point scale was also compared to both career choices for match. The data from the comparisons is reported in table form to show percentages of cross match, and cross tabulations were done to show the tendencies toward match. A nonparametric correlation was found to show the degree of likeness for the sample.

#### HYPOTHESES FOR TESTING

The hypotheses are presented in null form and were tested at the .05 level.

1. There is no difference between career aspiration and career choice.

There is a difference between career aspiration and expressed career choice.

2. There is no difference between VPI high point scale and the expressed career choice.

There is a difference between the VPI high point scale and the expressed career choice.

3. There is no difference between the VPI high point scale and career aspiration.

There is a difference between the VPI high point scale and career aspiration.

#### PRECAUTIONS TAKEN FOR ACCURACY

The sample was drawn by computer to eliminate bias on the part of the investigator. The VPI was scored with the use of a scoring key to help eliminate error. Cross tabulations and the correlation were also computerized to eliminate error on the part of the investigator.

#### SUMMARY

The data was collected by first choosing a random sample and then asking them to do a questionnaire, the VPI. The survey was conducted by mail. The information from the survey was categorized according to Holland's classification scheme. Career choices, aspirations and VPI high point scales were compared for match. The data was reported in table form showing percentages of correct match. Cross tabulations were done to show tendencies of match and a nonparametric correlation was found. The hypotheses were presented in null form.

## Chapter 4

### RESULTS

The results of this study are presented in three sections. The first section includes percentages of return and match, non-match. The second section shows the results of cross tabulation in table form. The third section deals with the chi-square test of significance.

#### SECTION ONE

Four hundred subjects were mailed the questionnaire and the VPI. Fifty-six were returned due to address changes, therefore the results are based on a sample size of 344. Out of the fifty-six returned, forty-three were seniors, leaving a sample size of 157, and fourteen were sophomores, leaving a sample size of 186. The total return was 260 or 75%. 78% of the seniors responded compared to 72% of the sophomores.

Tables I, II, and III present the percentages of match, non-match for expressed career choice and career aspiration, expressed career choice and VPI high point scale, and career aspiration and VPI high point scale respectively.

Table I

PERCENTAGES OF MATCH, NON-MATCH FOR EXPRESSED  
CAREER CHOICES AND CAREER ASPIRATIONS

| Sample       | Match | Non-match |
|--------------|-------|-----------|
| Sophomores   | 69%   | 31%       |
| Seniors      | 62%   | 38%       |
| Total Sample | 65%   | 35%       |

Table II

PERCENTAGES OF MATCH, NON-MATCH FOR EXPRESSED  
CAREER CHOICES AND VPI HIGH POINT SCALES

| Sample       | Match | Non-match |
|--------------|-------|-----------|
| Sophomores   | 55%   | 45%       |
| Seniors      | 45%   | 55%       |
| Total Sample | 49%   | 51%       |



Table III

PERCENTAGES OF MATCH, NON-MATCH FOR CAREER  
ASPIRATIONS AND VPI HIGH POINT SCALES

| Sample       | Match | Non-match |
|--------------|-------|-----------|
| Sophomores   | 54%   | 46%       |
| Seniors      | 42%   | 58%       |
| Total Sample | 47%   | 53%       |

These percentages show that expressed career choices fall into the same categories as career aspirations for both sophomores and seniors. However expressed career choices and VPI high point scales for 55% of the seniors, and career aspirations and VPI high point scales for 58% of the seniors do not match. This indicates that a majority of senior women are not following careers that are of interest to them, nor do their career aspirations correspond to their vocational interests.

## SECTION TWO

This section presents the results of cross tabulation in table form. The numbers 1 - 6 in each table

indicate the six categories of Holland's classification scheme, and each table shows the number of matches for the categories stated.

Table IV.  
CROSS TABULATION OF EXPRESSED CAREER  
CHOICES AND CAREER ASPIRATIONS

|    | 1**                   | 2                     | 3                      | 4                  | 5                     | 6                      |
|----|-----------------------|-----------------------|------------------------|--------------------|-----------------------|------------------------|
| 1* | $\frac{19}{(7)}_{12}$ | $\frac{2}{(1)}_1$     | $\frac{0}{(0)}_0$      | $\frac{0}{(0)}_1$  | $\frac{0}{(0)}_0$     | $\frac{1}{(0)}_1$      |
| 2  | $\frac{1}{(1)}_0$     | $\frac{28}{(9)}_{19}$ | $\frac{7}{(3)}_4$      | $\frac{0}{(0)}_0$  | $\frac{2}{(0)}_2$     | $\frac{2}{(1)}_1$      |
| 3  | $\frac{6}{(2)}_4$     | $\frac{8}{(6)}_2$     | $\frac{83}{(43)}_{40}$ | $\frac{0}{(0)}_0$  | $\frac{8}{(3)}_5$     | $\frac{24}{(11)}_{13}$ |
| 4  | $\frac{0}{(0)}_0$     | $\frac{2}{(0)}_2$     | $\frac{3}{(0)}_3$      | $\frac{13}{(8)}_5$ | $\frac{4}{(2)}_2$     | $\frac{1}{(0)}_1$      |
| 5  | $\frac{2}{(1)}_1$     | $\frac{1}{(0)}_1$     | $\frac{4}{(2)}_2$      | $\frac{0}{(0)}_0$  | $\frac{22}{(4)}_{18}$ | $\frac{2}{(1)}_1$      |
| 6  | $\frac{1}{(0)}_1$     | $\frac{2}{(1)}_1$     | $\frac{1}{(1)}_0$      | $\frac{0}{(0)}_0$  | $\frac{0}{(0)}_0$     | $\frac{11}{(7)}_4$     |

\*Expressed career choice

\*\*Career Aspiration

Underlined numbers = Total sample responses

Numbers in parentheses = Sophomores responses

Plain numbers = Senior responses

Table V.

CROSS TABULATION OF EXPRESSED CAREER  
CHOICES AND VPI HIGH POINT SCALES

|    | 1**                     | 2                         | 3                          | 4                       | 5                        | 6                          |
|----|-------------------------|---------------------------|----------------------------|-------------------------|--------------------------|----------------------------|
| 1* | $\frac{1}{\frac{1}{0}}$ | $\frac{11}{\frac{4}{7}}$  | $\frac{2}{\frac{1}{1}}$    | $\frac{0}{\frac{0}{0}}$ | $\frac{0}{\frac{0}{0}}$  | $\frac{6}{\frac{1}{5}}$    |
| 2  | $\frac{1}{\frac{0}{1}}$ | $\frac{26}{\frac{9}{17}}$ | $\frac{2}{\frac{0}{2}}$    | $\frac{0}{\frac{0}{0}}$ | $\frac{0}{\frac{0}{0}}$  | $\frac{8}{\frac{3}{5}}$    |
| 3  | $\frac{6}{\frac{3}{3}}$ | $\frac{16}{\frac{9}{7}}$  | $\frac{63}{\frac{32}{31}}$ | $\frac{1}{\frac{1}{0}}$ | $\frac{1}{\frac{0}{1}}$  | $\frac{29}{\frac{12}{17}}$ |
| 4  | $\frac{0}{\frac{0}{0}}$ | $\frac{1}{\frac{0}{1}}$   | $\frac{4}{\frac{2}{2}}$    | $\frac{9}{\frac{4}{5}}$ | $\frac{2}{\frac{1}{1}}$  | $\frac{1}{\frac{0}{1}}$    |
| 5  | $\frac{1}{\frac{0}{1}}$ | $\frac{2}{\frac{1}{1}}$   | $\frac{4}{\frac{2}{2}}$    | $\frac{3}{\frac{0}{3}}$ | $\frac{10}{\frac{2}{8}}$ | $\frac{8}{\frac{3}{5}}$    |
| 6  | $\frac{0}{\frac{0}{0}}$ | $\frac{0}{\frac{0}{0}}$   | $\frac{1}{\frac{0}{1}}$    | $\frac{0}{\frac{0}{0}}$ | $\frac{0}{\frac{0}{0}}$  | $\frac{13}{\frac{8}{5}}$   |

\*Expressed career choice

\*\*VPI high point scale

Underlined numbers = Total sample responses

Numbers in parentheses = Sophomore responses

Plain numbers = Senior responses

Table VI.

CROSS TABULATION OF CAREER ASPIRATIONS  
AND VPI HIGH POINT SCALES

|    | 1**                       | 2                            | 3                            | 4                         | 5                          | 6                            |
|----|---------------------------|------------------------------|------------------------------|---------------------------|----------------------------|------------------------------|
| 1* | $\frac{2}{\frac{(1)}{1}}$ | $\frac{12}{\frac{(5)}{7}}$   | $\frac{6}{\frac{(2)}{4}}$    | $\frac{0}{\frac{(0)}{0}}$ | $\frac{0}{\frac{(0)}{0}}$  | $\frac{7}{\frac{(2)}{5}}$    |
| 2  | $\frac{1}{\frac{(0)}{1}}$ | $\frac{24}{\frac{(11)}{13}}$ | $\frac{5}{\frac{(2)}{3}}$    | $\frac{3}{\frac{(0)}{3}}$ | $\frac{0}{\frac{(0)}{0}}$  | $\frac{7}{\frac{(2)}{5}}$    |
| 3  | $\frac{4}{\frac{(3)}{1}}$ | $\frac{14}{\frac{(6)}{8}}$   | $\frac{47}{\frac{(23)}{24}}$ | $\frac{0}{\frac{(0)}{0}}$ | $\frac{2}{\frac{(1)}{1}}$  | $\frac{20}{\frac{(19)}{11}}$ |
| 4  | $\frac{0}{\frac{(0)}{1}}$ | $\frac{0}{\frac{(0)}{3}}$    | $\frac{2}{\frac{(1)}{4}}$    | $\frac{6}{\frac{(4)}{3}}$ | $\frac{1}{\frac{(0)}{8}}$  | $\frac{0}{\frac{(0)}{3}}$    |
| 5  | $\frac{1}{\frac{(0)}{1}}$ | $\frac{4}{\frac{(1)}{3}}$    | $\frac{9}{\frac{(5)}{4}}$    | $\frac{3}{\frac{(0)}{3}}$ | $\frac{10}{\frac{(2)}{8}}$ | $\frac{4}{\frac{(1)}{3}}$    |
| 6  | $\frac{1}{\frac{(0)}{1}}$ | $\frac{2}{\frac{(0)}{2}}$    | $\frac{7}{\frac{(4)}{3}}$    | $\frac{1}{\frac{(1)}{0}}$ | $\frac{0}{\frac{(1)}{0}}$  | $\frac{27}{\frac{(13)}{14}}$ |

\*Career Aspiration

\*\*VPI high point scale

Underlined number = Total sample responses

Numbers in parentheses = Sophomore responses

Plain Numbers = Senior responses

Table IV shows the general tendency for expressed career choices to match career aspirations.

Table V shows the general tendency for expressed career choices to match the VPI high point scales. One exception is subjects whose expressed career choices fall into category one show a high interest in category two. This is true for the total sample as well as sophomores and seniors.

Table VI shows the general tendency for career aspiration to match the VPI high point scale. The one exception again is subjects whose career aspiration fell in category one show a high interest in category two.

In summary, cross tabulation showed the general tendency for expressed career choice, career aspirations and high point scale to match with the above noted exceptions.

### SECTION THREE

A chi-square test of significance was used to test for significance. Frequency distributions for each category of Holland's scheme were statistically compared. Figure I shows the number of expressed career choices, career aspirations and high point scales classified according to Holland's

six vocational categories.

Figure I.

FREQUENCY DISTRIBUTION FOR RESPONSES CLASSIFIED  
ACCORDING TO HOLLAND'S SCHEME

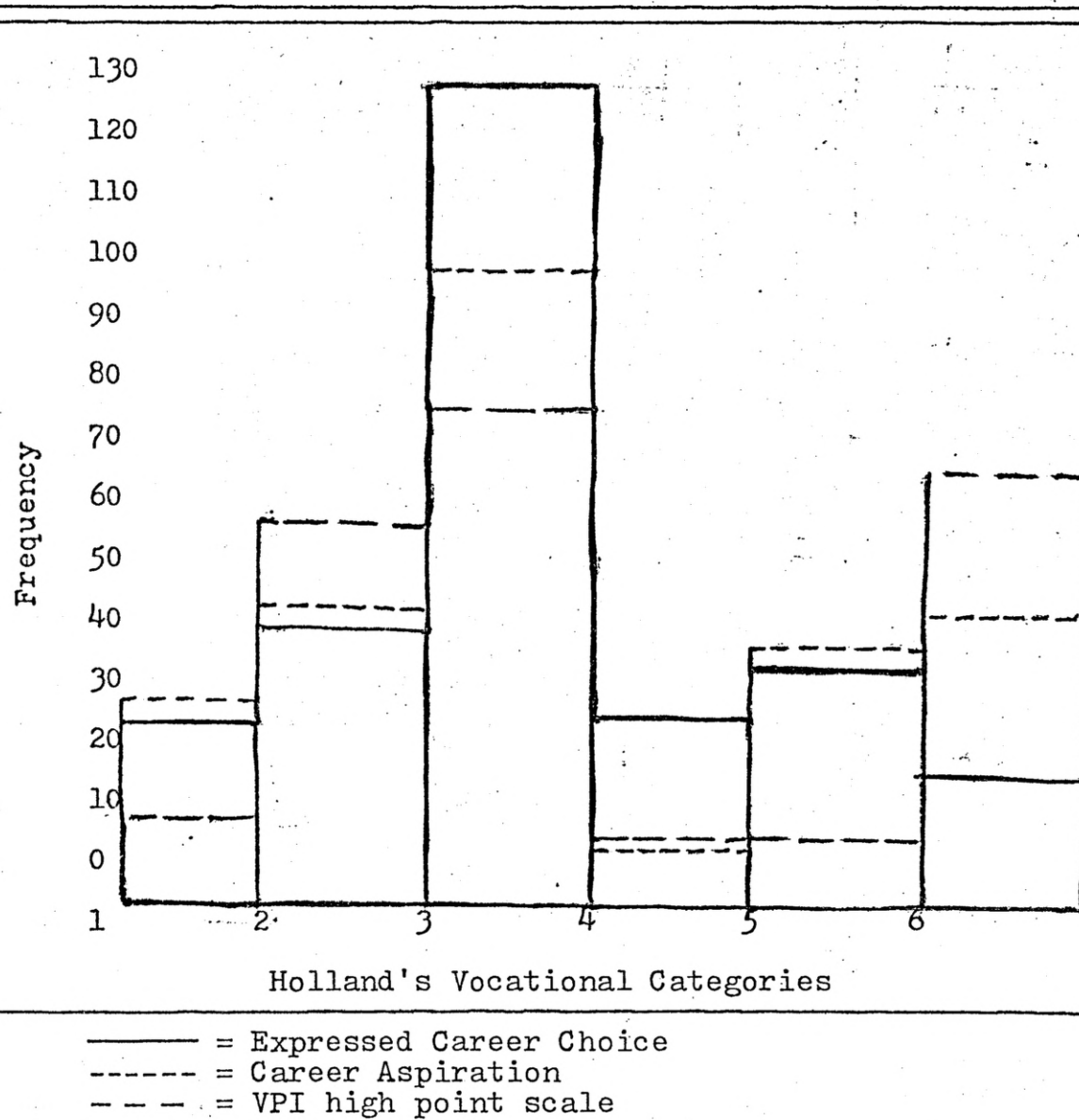


Figure I shows that category three contains the largest number of responses. This category is the social area in which occupations such as teachers, nurses, social workers and other typical feminine occupations are included. Category six, artistic, demonstrates that more subjects are interested in the area than are actually in the area. The fact that expressed career choices, career aspirations and VPI high point scales differ is evident in reading the figure.

Frequency distributions for the total sample were statistically compared to test for significance. Chi-squared value statistically demonstrate the significant differences do exist. When comparing expressed career choice and career aspiration, chi-squared = 20.5250 with a P Value of .0013. The critical value was 11.1, thus null hypothesis one was rejected. The comparison between expressed career choice and VPI high point scale was also significant. Chi-squared for the frequency distribution was 61.8188, with a P Value of .000. The critical value was again 11.1, thus null hypothesis two was rejected. Career aspiration and VPI high point scale comparisons yielded a chi-squared value of 29.7477 with a P value of .0001. The critical value was again 11.1, thus null

hypothesis three was rejected.

The highest level of significance was found in comparing expressed career choice with VPI high point scale.

This would indicate that women are not choosing careers that coincide with their interests. Rejection of all null hypotheses indicates that neither expressed career choices nor career aspirations match career interests.



## Chapter 5

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this paper was to investigate career choices, career aspirations and career interests of women at Montana State University. Subjects were asked to complete a questionnaire and the VPI. The responses were categorized according to John Holland's theory of vocational choice. The data was reported in percentages, cross tabulation tables and figures. On the basis of the chi-squared values found, all null hypotheses were rejected.

### CONCLUSIONS

Conclusions from the data reported in Chapter IV can be drawn in several areas. From the percentages, the greatest area of match was expressed career choice and career aspiration. One reason for this may be that women will not admit that the career they are pursuing is different from their career aspiration. The percentages for expressed career choices and VPI high point scales showed that 51% of the women are not choosing careers that are of interest to them. Career aspirations and VPI high point scales do not match for 53% of the sample. Women are not choosing careers that are of interest to them nor are their aspirations similar to their interests. Sophomores showed a greater degree of match than did the seniors.

The cross tabulation tables showed general tendencies for expressed career choice, career aspiration and career interests to correspond. However when statistically compared, the differences became very significant in all categories. College women at Montana State University are not choosing careers that follow their interests or their aspirations. The investigator concluded that expressed career choices may be more reliable than measured interests.

Figure I showed a concentration of career interests, choices, and aspirations in category three, social. This indicates that women are choosing careers that have been designated "female careers". The category includes teachers, nurses and social workers. The fact that aspirations in that category are also high may indicate that women are conditioned to choose careers in these areas. The other interesting fact shown by Figure I is the high amount of interest in category 6 compared to the low amount of expressed career choice in the same category. It was stated earlier in this paper that people with an interest and aspiration in the artistic category do not often choose careers in that area probably due to society's lack of esteem for artistic people. The data seems to indicate that women at Montana State University follow this trend.

RECOMMENDATIONS

The investigator recommends that more time be spent with women in vocational counseling in order to get a closer relationship between career choice, career aspiration and career interest. In reality there should be no difference between these three items. It is recommended that a systematic approach to vocational counseling for women to show women's role in the vocational field be undertaken in elementary school and carried on through high school.

The investigator recommends that research in the area of career choices of women be conducted with a broader population to investigate differences between career choices and interests. This would allow for more generalized inferences to be made.

#### REFERENCES CITED

#### REFERENCES CITED

1. American Women - Report of the President's Commission on Status of Women, 1963.
2. Andrews, Hans A. Personality Patterns and Vocational Choice: A Test of Holland's Theory with Adult Part-Time Community College Students. Journal of Counseling Psychology, 1973, 20, 482-483.
3. Campbell, David P. and Lenore W. Harmon. Vocational Interests of Non-Professional Women. U. S. Department of Health, Education and Welfare, Office of Education, Bureau of Research, December, 1968.
4. Erickson, Linda G. and Margaret L. Nordin. Sex Role Ideologies and Career Salience of College Women. Kansas State University, March, 1974.
5. Hohenshil, Thomas H. New Dimensions in the Career Development of Women. Virginia State Advisory Council on Vocational Education, March, 1974.
6. Holland, John L. Explorations of a Theory of Vocational Choice: VI. A Longitudinal Study Using a Sample of Typical College Students. Journal of Applied Psychology, Monograph Supplement, 1968, 52, Part 2, 1-37.
7. Holland, John L. Making Vocational Choices: A Theory of Careers. (Englewood, New Jersey, 1973).
8. Holland, John L. A Personality Inventory Employing Occupational Titles. Journal of Applied Psychology, 1958, 42, 336-342.
9. Holland, John L., and Lutz, Sandra W. The Predictive Value of a Student's Choice of Vocation. Personnel and Guidance Journal, 1968, 46, 428-436.
10. Holland, John L. The Psychology of Vocational Choice, (Toronto, 1966).
11. Holland, John L. Some Explorations of a Theory of Vocational Choice: I. One and Two-Year Logitudinal Studies. Psychological Monographs. 1962, 76, cited by Samuel H. Osipow, Holland's Career Typology Theory of Vocational Behavior, Theories of Career Development,

Second Edition, (New York, Appleton-Century-Crofts, 1973) 41-81.

12. Holland, John L. A Theory of Vocational Choice: Vocational Images. The Vocational Guidance Quarterly, 1963, 11, 232-239.
13. Holland, John L. Vocational Preference Inventory Manual, (Palo Alto, 1965).
14. Jeffs, George A. Occupational Aspiration Scale for Females. Clark High School, Las Vegas, Nevada, 1973.
15. Kimmel, Marcia S. Educational Influences on Career Opportunities for Women. Teacher Education Forum Series, Vol 2, No. 13, March, 1974.
16. Osipow, Samuel H., Ashby, Jefferson D., and Wall, Harvey W., Personality Types and Vocational Choice: A Test of Holland's Theory. Personnel and Guidance Journal, 1966, 45, 37-42.
17. Osipow, Samuel H. Theories of Career Development. Holland's Career Typology Theory of Vocational Behavior, Second Edition, (New York, Appleton-Century-Crofts, 1973), 41-81.
18. Osipow, Samuel H. and Ashby, Jefferson D., Vocational Preference Inventory High Point Codes and Educational Preferences: Personnel and Guidance Journal, 1968, 47, 126-136.
19. Study of the Aspirations of Married Women College Graduates, U. S. Department of Health, Education and Welfare, January, 1967.

## APPENDIX

April 6, 1976

Dear Fellow Students:

Your help is greatly needed!

This study, funded by the MSU Research and Endowment Department, is being conducted as part of my research project in counselor education. The purpose of the study is to examine career choices and interests of women enrolled at Montana State University.

Won't you please take the fifteen minutes required to provide the information needed? Your name was selected through a random sampling process and all information given will remain confidential. The results of the study will be available to you upon request. The code number on the questionnaire will be used for purposes of follow-up to those who fail to respond and to identify those who wish results of the study.

Please fill out the short questionnaire and read the directions for the test and mark the answer sheet accordingly. Please return the questionnaire, test and answer sheet in the enclosed envelope as soon as possible.

Sincerely,

Sue Meissner  
Graduate Student



PLEASE ANSWER THE FOLLOWING QUESTIONS CAREFULLY.

1. What is your year in college?

\_\_\_\_\_ Sophomore \_\_\_\_\_ Senior

2. What career do you plan on pursuing?

3. What career would you pursue if there were no barriers,  
restrictions or pressures of any kind?

\_\_\_\_\_ Check here if you wish to receive the results of this  
study.

## THE VOCATIONAL PREFERENCE INVENTORY

*Developed by John L. Holland, Ph.D.*

This is an inventory of your feelings and attitudes about many kinds of work. Fill out your answer sheet by following the directions given below:

1. Show on your answer sheet the occupations which *interest or appeal to* you by blackening Y for "Yes."
2. Show the occupations which you *dislike or find uninteresting* by blackening N for "No."
3. Make *no marks* when you are undecided about an occupation.

- |                                  |                                      |
|----------------------------------|--------------------------------------|
| 1. Aviator                       | 31. Power Station Operator           |
| 2. Private Investigator          | 32. Astronomer                       |
| 3. YMCA Secretary                | 33. Juvenile Delinquency Expert      |
| 4. Detective                     | 34. Budget Reviewer                  |
| 5. Post Office Clerk             | 35. Stock & Bond Salesperson         |
| 6. Route Salesperson             | 36. Musician                         |
| 7. Electronic Technician         | 37. Prize Fighter                    |
| 8. Humorist                      | 38. Diplomat                         |
| 9. Photographer                  | 39. Experimental Laboratory Engineer |
| 10. Interplanetary Scientist     | 40. Crane Operator                   |
| 11. Airplane Mechanic            | 41. Master Plumber                   |
| 12. Meteorologist                | 42. Aeronautical Design Engineer     |
| 13. Foreign Missionary           | 43. Speech Therapist                 |
| 14. Bookkeeper                   | 44. Traffic Manager                  |
| 15. Speculator                   | 45. Manufacturer's Representative    |
| 16. Poet                         | 46. Author                           |
| 17. Deep Sea Diver               | 47. Fire Fighter                     |
| 18. Newspaper Editor             | 48. Army General                     |
| 19. Nursery School Teacher       | 49. Interior Decorator               |
| 20. Lawyer                       | 50. Novelist                         |
| 21. Fish and Wildlife Specialist | 51. Power Shovel Operator            |
| 22. Biologist                    | 52. Anthropologist                   |
| 23. High School Teacher          | 53. Marriage Counselor               |
| 24. Quality Control Expert       | 54. Statistician                     |
| 25. Buyer                        | 55. Television Producer              |
| 26. Symphony Conductor           | 56. Commercial Artist                |
| 27. Wrecker (Building)           | 57. Wild Animal Trainer              |
| 28. Narcotics Inspector          | 58. U.N. Official                    |
| 29. Elementary School Teacher    | 59. Sculptor                         |
| 30. School Principal             | 60. Automobile Mechanic              |

Sixth Revision. Copyright 1953, 1965, by John L. Holland. Any reproduction of this form, singly or in quantity, without written authorization of the Publisher, is a prima facie violation of the copyright law of the United States.



**CONSULTING PSYCHOLOGISTS PRESS**  
577 College Avenue, Palo Alto, California 94306

Permission has been granted to copy this test.

61. Surveyor
62. Zoologist
63. Physical Education Teacher
64. Court Stenographer
65. Hotel Manager
66. Free-Lance Writer
67. Stuntperson (Motion Picture)
68. Criminal Lawyer
69. Professional Athlete
70. Carpenter
71. Construction Inspector
72. Chemist
73. Playground Director
74. Bank Teller
75. Business Executive
76. Musical Arranger
77. Jockey
78. Ventriloquist
79. Army Officer
80. Banker
81. Radio Operator
82. Independent Research Scientist
83. Clinical Psychologist
84. Tax Expert
85. Restaurant Manager
86. Art Dealer
87. Motorcycle Driver
88. Police Judge
89. Referee (Sporting Events)
90. Truck Gardener
91. Filling Station Attendant
92. Writer of Scientific or Technical Articles
93. Social Science Teacher
94. Inventory Controller
95. Master of Ceremonies
96. Dramatic Coach
97. Blaster (Dynamiter)
98. Mind Reader
99. English Teacher
100. Sales Manager
101. Tree Surgeon
102. Editor of a Scientific Journal
103. Director of Welfare Agency
104. IBM Equipment Operator
105. Traveling Salesperson
106. Concert Singer
107. F.B.I. Agent
108. Prosecuting Attorney
109. Factory Foreman
110. College Professor
111. Tool Designer
112. Geologist
113. Asst. City School Superintendent
114. Financial Analyst
115. Real Estate Salesperson
116. Composer
117. Mountain Climber
118. Congressional Investigator
119. Portrait Artist
120. Machinist
121. Locomotive Engineer
122. Botanist
123. Personal Counselor
124. Cost Estimator
125. Industrial Relations Consultant
126. Stage Director
127. Explorer
128. Supreme Court Judge
129. Draftsman
130. Judge
131. Photoengraver
132. Scientific Research Worker
133. Psychiatric Case Worker
134. Pay Roll Clerk
135. Sports Promoter
136. Playwright
137. Test Pilot
138. Criminologist
139. Children's Clothing Designer
140. Truck Driver
141. Electrician
142. Physicist
143. Vocational Counselor
144. Bank Examiner
145. Political Campaign Manager
146. Cartoonist
147. Racing Car Driver
148. Book Censor
149. Social Worker
150. Locksmith
151. Funeral Director
152. Counter-Intelligence Agent
153. Architect
154. Shipping & Receiving Clerk
155. Criminal Psychologist
156. Insurance Clerk
157. Barber/Hairdresser
158. Bill Collector
159. Ward Attendant
160. Masseur/Masseuse

# VOCATIONAL PREFERENCE INVENTORY by John L. Holland

ID No. \_\_\_\_\_

Name \_\_\_\_\_ Sex \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_  
 Occupation \_\_\_\_\_ Major Field \_\_\_\_\_

1 2 3 4 5 6 7 8 9 10 Inf. 11 Ac  
 Blacken "y" for Yes, "N" for No. For example: ☒ or ☒

|      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |       |
|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 Y  | 11 Y | 21 Y | 31 Y | 41 Y | 51 Y | 61 Y | 71 Y | 81 Y | 91 Y  | 101 Y | 111 Y | 121 Y | 131 Y | 141 Y | 151 Y |
| 2 Y  | 12 Y | 22 Y | 32 Y | 42 Y | 52 Y | 62 Y | 72 Y | 82 Y | 92 Y  | 102 Y | 112 Y | 122 Y | 132 Y | 142 Y | 152 Y |
| 3 Y  | 13 Y | 23 Y | 33 Y | 43 Y | 53 Y | 63 Y | 73 Y | 83 Y | 93 Y  | 103 Y | 113 Y | 123 Y | 133 Y | 143 Y | 153 Y |
| 4 Y  | 14 Y | 24 Y | 34 Y | 44 Y | 54 Y | 64 Y | 74 Y | 84 Y | 94 Y  | 104 Y | 114 Y | 124 Y | 134 Y | 144 Y | 154 Y |
| 5 Y  | 15 Y | 25 Y | 35 Y | 45 Y | 55 Y | 65 Y | 75 Y | 85 Y | 95 Y  | 105 Y | 115 Y | 125 Y | 135 Y | 145 Y | 155 Y |
| 6 Y  | 16 Y | 26 Y | 36 Y | 46 Y | 56 Y | 66 Y | 76 Y | 86 Y | 96 Y  | 106 Y | 116 Y | 126 Y | 136 Y | 146 Y | 156 Y |
| 7 Y  | 17 Y | 27 Y | 37 Y | 47 Y | 57 Y | 67 Y | 77 Y | 87 Y | 97 Y  | 107 Y | 117 Y | 127 Y | 137 Y | 147 Y | 157 Y |
| 8 Y  | 18 Y | 28 Y | 38 Y | 48 Y | 58 Y | 68 Y | 78 Y | 88 Y | 98 Y  | 108 Y | 118 Y | 128 Y | 138 Y | 148 Y | 158 Y |
| 9 Y  | 19 Y | 29 Y | 39 Y | 49 Y | 59 Y | 69 Y | 79 Y | 89 Y | 99 Y  | 109 Y | 119 Y | 129 Y | 139 Y | 149 Y | 159 Y |
| 10 Y | 20 Y | 30 Y | 40 Y | 50 Y | 60 Y | 70 Y | 80 Y | 90 Y | 100 Y | 110 Y | 120 Y | 130 Y | 140 Y | 150 Y | 160 Y |