PATTERNS OF PERCEPTIONS AND ATTITUDES TOWARD TRADITIONALLY MASCULINE AND FEMININE OCCUPATIONS THROUGH CHILDHOOD AND ADOLESCENCE

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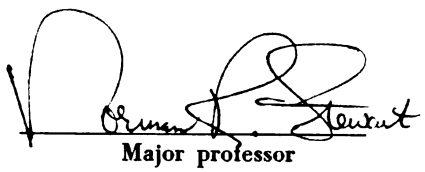

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ABSTRACT

PATTERNS OF PERCEPTIONS AND ATTITUDES
TOWARD TRADITIONALLY MASCULINE AND FEMININE OCCUPATIONS
THROUGH CHILDHOOD AND ADOLESCENCE

by Marilyn M. Meyer

The purpose of this investigation was to examine the process of vocational development by studying how boys and girls view sex-linked occupations at grades three, seven and eleven. A total of 132 boys and girls from the Oshkosh, Wisconsin public schools, divided into high and low socio-economic status groups, were subjects. An instrument was developed using a paired picture technique. Each pair of pictures represented one occupation; the pictures were of identical vocational activities but one had a female worker and one a male worker. The instrument contained three parts: vocational identification, vocational interest and vocational appropriateness. Each part had three scales, each scale representing four traditionally feminine, four traditionally masculine or four traditionally neutral occupations. The sex-linkage of the occupations was determined on the basis of the work force figures in the 1960 census. Subjects responded by answering the following questions about each pair of pictures:

Which picture do you like the best?

Which of the people do you think likes this job best?

Which of the people do you think made the best choice of this job?

An analysis of variance was performed to examine the interaction of sex, grade, socio-economic status, parts (vocational identification,

vocational interest and vocational appropriateness) and scales (masculine, feminine and neutral occupations). The degree of masculinity and femininity attached to the various occupations was presented in descriptive data.

The major finding of the study was that overall boys and girls have strong stereotypic ways of behaving toward traditionally sex-linked occupations, but the sexes, and grades three, seven and eleven differ in these responses. Boys and girls in grade three identified with male and female workers on the basis of their sex rather than on the basis of their work role. Third grade boys had an especially strong identification pattern--they viewed the men as best liked in all occupations, the men as liking all occupations best, and the men as having made the best occupational choices regardless of the sex-linkage of those occupations.

Seventh grade subjects did not tie interest in an occupation to the sex of the individual in that occupation although all their other views of sex-linked occupations adhered to the cultural stereotype. The eleventh grade moderated its choices in its entire vocational response pattern by the appropriate worker for the particular sex-linked occupation.

Socio-economic status had an effect upon views of sex-linked occupations only at the third grade level and only toward masculine occupations. Occupations were categorized by degrees of masculinity and femininity. The feminine occupations were elementary teacher, secretary, nurse and laundry-dry cleaning presser; the masculine occupations were policeman, machinist, engineer and truck driver. All four of the masculine occupations had stronger masculinity ratings

than all but the secretary had femininity ratings. Girls saw nursing as more feminine than did the boys while the boys saw engineering as more masculine than did the girls.

Various vocational experiences were suggested which counselors could provide to give positive social recognition to all occupations; to modify social attitudes toward occupations; and to increase the appropriateness and acceptability of a greater variety of occupations for both sexes.

PATTERNS OF PERCEPTIONS AND ATTITUDES TOWARD TRADITIONALLY MASCULINE AND FEMININE OCCUPATIONS THROUGH CHILDHOOD AND ADOLESCENCE

By

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CHAPTER I

INTRODUCTION

Statement of Purpose

The purpose of this investigation is to trace the pattern of change of boys' and girls' perceptions and attitudes toward traditionally sex-linked occupations from childhood through adolescence. A boy, for instance, may recognize and accept certain occupations as being traditionally sex-linked in childhood while a girl may not acquire that view until adolescence.

Background and Importance of Research

To put this study into proper perspective it is necessary to examine the trends and research related to technological changes, to sex-linked occupations and to role conflict. The rapid changes in the world of work have a direct effect upon occupations and upon the occupational roles of men and women. An understanding of these changes is necessary to understand the importance of this study.

Technological changes. Today's world dictates that with changing technology individuals be flexible, adaptable and maneuverable. Technology changes jobs, does away with some, and creates others. The societal structure needs to accommodate all the interests of men and women so there can be maximizing of all available talent by accommodating both sexes in all occupational areas in which they are capable of performing. Wolfbein (1967) states more and more jobs

will require technical and educational training and the tremendous increase in the number of workers in the fourteen to thirty-four year old age group will necessitate one and one-half million more jobs annually just to absorb the rise in the labor supply. Both the life expectancy and work life expectancy of males and females has risen (m-66.6, and 41.4 years, f-73.1, and 20.1 years) and career patterns have been extended. With job opportunities predominant in white collar rather than in blue collar levels, in services rather than in goods, men and women need to feel comfortable entering any occupational area of need. Wolfbein (1967) points out there are great shortages of workers in the professional, technical, and clerical areas.

Traditionally sex-linked occupations. Many jobs, however, have come to be classified as masculine or feminine, and men or women who cross traditionally classified job lines are often considered less than favorably by society. Heilbrun (1964) found that failure to conform to masculinity-femininity stereotypes may result in anticipated social punishment for inappropriate behavior.

The stereotype of sex related work roles has a historic perspective which persists even though valid reasons are no longer applicable (Blood and Wolfe, 1960). Not what men or women are able or unable to do, but what societal stereotypes will allow them to is a current problem. Specific personal characteristics are often attributed to an individual as a result of the stereotype attached to the work role he performs; this may subject the individual to undue pressures. The expectations of society, however, toward adoption of traditional roles are strong (Simpson and Simpson, 1961). For example, Crawford (1962) found that ninety percent of the women

surveyed in his study indicated a preference for employment in traditionally feminine jobs rather than in high salaried, more traditionally masculine jobs. Freedman (1963) found that most women are reluctant to assume leadership in male fields. Slocum and Bowles (1968) in surveying high school students' likes and dislikes of sixty-one occupations discovered the most liked occupations were those with traditional sex identification while those most rejected were those occupations traditionally followed by the opposite sex. The cultural pattern becomes increasingly clear when examining the nearly 500 jobs listed in the 1960 census. For each occupational grouping the number of vocations in which there is less than .01 percent of the total male or female work force is as follows: professional, m=2, f=17; managers, officials and proprietors, m=0, f=10; clerical, m=1, f=1; sales, m=1, f=1; craftsmen, m=0, f=38; and operatives, m=3, f=33.

Role conflict. Traditionally sex-linked occupations within a work structure often create role conflicts for individuals who choose to reject an occupational stereotype. Understanding the necessity for a change in the sex-typing of occupations and examining ways in which this might be accomplished provide another basis for the need of this study.

Simpson and Simpson (1961) pointed out that we educate boys and girls through the twelfth grade in relatively the same manner when their adult roles are significantly different. Sixteen years are spent in awakening the same interests in both sexes, but some of these interests are then defined as undesirable in the adult member of one sex, and provide role conflict. Female physicians, for example (Kosa and Coker, 1965), face three types of role conflict: 1) the professional

role restricts the full realization of the sex role, 2) the sex role restricts the full continuous performance of the professional role and 3) there are aspects of the professional role which are noncompatible with the female role. These female physicians typify the kind of dissonance that may result from an individual entering an occupation that is typically not identified with his sex. The authors conclude that the institutionalized way of reducing role conflict is to enter those fields where sex and professional roles can be expected to be most compatible.

Lyons (1965) believes, however, that the historical, cultural, and economic factors which influence the psychology of choice must be seen as changeable and changing. Sex-typing of occupations should be eliminated and the dissonance of role conflict removed. Miles (1935, p. 779) has stated "for social progress the psychological starting-point seems to lie in the efforts of each sex responsibility to fulfill its biological and social destiny and at the same time intelligently and sympathetically urge and encourage self-realization of the other in the achievement and integration of the potentials of the individual personality."

Rossi (1964) believes changing a sex-ratio within an occupation can only be achieved by altering the sex-typing of such occupations long before young people make a career decision, for "it is during the early years of elementary school education that young people develop their basic views of appropriate characteristics, activities and goals for their sex." (p. 639) Grambs and Waetjen (1966) argued for overhauling the elementary school to provide masculine and feminine environments as opposed to the traditionally neutral environment.

Sexual identity and vocational development. The process of sexual identity and its relationship to vocational development provides an additional framework into which to place the present research. The observations and theories of others regarding the relationship of sexual identity and vocational identity underscore the need for specific data regarding children's views of sex-linked occupations at different developmental points.

Josselyn (1966) believes the sources of sexual identity are three in nature: 1) inherent biological differences, 2) the conceptualizations and mores of the culture in which reared and 3) the attitudes of those emotionally meaningful in childhood. She believes that it is important for each individual to value himself in the framework of sexual identity and to see the role of the opposite sex as complementary, not as antagonistic.

Welch (1949) feels because social approval or disapproval acts as a powerful force which society wields over each person, individuals respond consciously or unconsciously to intangible, subtle factors in making a vocational choice. The author feels an even distribution of manpower to job opportunities will come about only as social attitudes toward occupations are modified. The individual then can feel free to choose an occupation contributing to his own fullest development and which is socially acceptable and desirable.

Super (1963) has emphasized the intimate relationship between self-concept and vocational development. He states that "reality factors--the reality of personal characteristics and the reality of society play an increasingly important part in occupational choice with increasing age from early adolescence to adulthood." (p. 530)

He also states that self-concepts begin to form prior to adolescence, become clearer in adolescence and then are translated into occupational terms. Under these circumstances certain individuals may see an occupation as a source of social approval giving them a place within the culture. (Hershenson, 1967)

Rodgers (1966) examined the socialization process which instills in a child concepts of acceptable roles and aspirations with regard to self and those with whom he interacts. He concludes that the society, the family in which the process occurs, and the individual himself provide the sources of definition of norms of any given role in a position. The societal and family inputs at the various developmental vocational stages of a child determine his view of occupations and the world of work. Westervelt (1965, p. 24) continues by stating, "... if the interaction of psychological sex differences is socially functional as we must assume it is, social health requires that this interaction be fully reflected in the values of the society; for this to occur it is necessary that men and women be equally participant in the society."

Summary. All of the current problems, concerns and trends which have been examined underscore the need for greater understanding of the role of sexual identification in the process of vocational development. They also have indicated that changes in occupational roles must take place. In order to do this it is essential to have specific data upon which to plan change. The current research addresses itself to these needs by examining children's views of traditional sex-linked occupations at important developmental points.

Implications

This study, with its focus on vocational identification, vocational interest and vocational appropriateness, has implications for improving vocational counseling. It will provide data concerning sex-role identification, the acculturation process and psycho-sexual developmental stages in relation to vocational choice. Despite the number of studies dealing with vocational development, no data of this type is currently available. This research, reflecting the relationship of age, sex and vocational development, will provide a foundation that could be used in subsequent studies to develop innovative counseling activities to broaden the vocational horizons of boys and girls, and to attempt to change the traditional cultural view of certain occupations. These activities may need to be differentiated by sex and grade as a result of the findings of this study. For instance, is there, as Mathews (1963) asks, a last fling of aggression for girls during the junior high years before adopting a "feminine role"? These new guidelines in vocational counseling in turn should help to expand socially acceptable occupations in the world of work for men and women, and to reduce the dissonance of role conflicts.

The study also is designed to provide preliminary answers to questions such as: How do boys and girls modify their ideas about masculine and feminine roles as they become men and women? What are their perceptions of the roles of each other as they grow and mature? It will extend the knowledge of vocational development patterns; it will generate hypotheses for further research; and, indirectly, it may have implications for re-evaluations of curricular offerings.

Hypotheses

Because there is not a specifically relevant theoretical basis for this study problem research is the appropriate choice. Saupe (1961) has this to say about problem research:

> The second type of research for which the methods of statistical inference are appropriate I will call problem research. If there is no theoretical scheme which applies to an area of investigation or if the topic for study represents a sizable jump from such a body of theory, the researcher may then have no specific hypothesis concerning the subject of his research. He has only a problem. He has no basis for guessing that there is or is not a difference between treatments or groups or a relationship among the variable he chooses to study. It would then be out of place for him to attempt to formulate a hypothesis about the particular piece of nature with which he is concerned. It is proper, of course, for him to state problems for investigation. Such problems may merely be declarations of what he intends to do...problems may also be stated as questions. ...In problem type research the problem is the thing that guides the research effort ... The first study in an area cannot be guided by research hypotheses, but it can result in the suggestion of fruitful hypotheses for further research efforts and thereby stimulate the development of a body of theory. Furthermore, some problem researchers may happen on to, by accident or design, relationships which suggest how some previously unconsidered theoretical scheme applies to the problem area or which provide for basis of choice among possibly competing theories.

The problems of this research revolve around the following questions:

> When comparing pictures of two vocational activities, identical except for the sex of the worker, will (males) (females) prefer the picture representing a worker of their own sex, the opposite sex, or the traditional sex-linkage?
>
> When comparing the interest of a female and male worker in identical vocational activities will (males) (females) indicate more interest for the person representing their own sex, the opposite sex, or the traditional sex-linkage?
>
> When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational

activities will (males) (females) indicate more appropriateness for the person representing their own sex, the opposite sex, or the traditional sex-linkage?

For each of the above questions will there be a pattern of choice across the selected grade levels, grade three through grade eleven, for each sex? If there is a pattern will it differ significantly for the sexes?

Out of these problems may be generated the hypotheses to be used. Because there is no theoretical foundation upon which to base a predicted direction, alternate hypotheses are stated for each area of investigation.

Hypotheses

1a. When indicating a preference for a male or female worker in identical vocational activities subjects will select the picture of the worker of their own sex.

1b. When indicating a preference for a male or female worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage.

2a. When comparing the interest of a female and male worker in identical vocational activities subjects will select the picture of the worker of their own sex.

2b. When comparing the interest of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage.

3a. When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational activities subjects will select the picture of the worker of their own sex.

3b. When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational activities

subjects will select the picture where the worker represents the traditional sex-linkage.

4a. The longitudinal vocational response pattern for each part will be characterized by an increasing trend toward the same sex as the individual responding.

4b. The longitudinal vocational response pattern for each part will be characterized by an increasing trend toward traditional sex-linkage conformity.

5a. The longitudinal vocational response pattern will be the same for boys and girls.

5b. The longitudinal response pattern will be different for boys and girls.

6a. The longitudinal vocational response pattern for each part will be the same for boys and girls.

6b. The longitudinal vocational response pattern for each part will be different for boys and girls.

7a. The longitudinal vocational response pattern will be the same for high and low socio-economic status groups.

7b. The longitudinal vocational response pattern will be different for high and low socio-economic status groups.

8a. The longitudinal vocational response pattern will be the same for high and low socio-economic status groups by boys and girls.

8b. The longitudinal vocational response pattern will be different for high and low socio-economic status groups by boys and girls.

9a. Grades three, seven, and eleven will have the same vocational response patterns toward masculine, feminine and neutral

occupations.

9b. Grades three, seven and eleven will have different response patterns toward masculine, feminine and neutral occupations.

10a. Boys and girls in grades three, seven and eleven will have the same vocational response pattern for masculine, feminine and neutral occupations.

10b. Boys and girls in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations.

11a. High and low socio-economic status groups in grades three, seven and eleven will have the same vocational response patterns for masculine, feminine and neutral occupations.

11b. High and low socio-economic status groups in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations.

12a. Boys and girls of high and low socio-economic status in grades three, seven and eleven will have the same vocational response patterns for masculine, feminine and neutral occupations.

12b. Boys and girls of high and low socio-economic status in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations.

Definition of Terms as Used in this Study

Childhood

Boys and girls in grades three and seven will represent childhood.

Adolescence

Boys and girls in grade eleven will represent adolescence.

Perceptions and Attitudes

For each set of paired pictures representing a male and female worker in the same occupation each subject will be asked three questions:

Which picture do you like best?

Which worker do you think likes this work best?

Which worker do you think made the best choice of job?

The answers to these questions are interpreted as the perceptions and attitudes of the subjects toward traditionally sex-linked occupations.

Patterns

Patterns are defined as the similarities or differences in perceptions and attitudes across grade levels by sex.

Traditionally Masculine Occupations

A traditionally masculine occupation has at least 200,000 workers, represents at least .5 percent of the total United States work force, at least 1.00 percent of the total male work force, and differs by at least .75 percent from the percent of the total female work force in that occupation (exception policeman).

Traditionally Feminine Occupations

A traditionally feminine occupation has at least 200,000 workers, represents at least .5 percent of the total United States work force, at least 1.00 percent of the total female work force and differs by at least .75 percent from the percent of the total male work force in that occupation.

Plan of the Dissertation

This introductory chapter will be followed by a review of the

literature in Chapter II. This review will examine research relevant to the focus and methodology of the present study. Chapter III will discuss the methodology of the dissertation and Chapter IV, the results of the research. A summary and discussion of the results will conclude the dissertation in Chapter V.

Summary

Current trends and research were shown to provide a rationale for the investigation of this dissertation while the implications illustrated its importance. The hypotheses, definition of terms and plan of the dissertation gave the specific details and focus of the research.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Career choice as it is now known is not an isolated single event, but is a continuous developmental process with many factors impinging upon it. One of these factors is the sex of the individual, for it often dictates the cultural or sociological norms which may impinge upon that individual. A second factor is socio-economic status which may limit the aspirations, the goals and the accomplishments of the individual. A third is the age of the individual, for it determines the reality with which the occupational world is seen. How do these factors affect the vocational development patterns of individuals. How do they affect views of specific occupations? No research is currently available to answer these questions.

The present study attempts to answer questions such as these by examining the interaction of grade, sex and socio-economic status in relation to vocational identification, vocational interest and vocational choice as reflected in views toward selected sex-linked occupations. It will give more precise information about the specific factors of grade, sex and socio-economic status which impinge upon the vocational developmental process. Unfortunately, there is little available research which directly pertains to the tenants of this study. However, there are some studies in the area of vocational development which consider sex as a variable and which deal with

developmental patterns. These studies fall into the three categories of vocational patterns, prestige and status, and future plans. By examining these studies tangential evidence will be gained in support of the present research, and questions and issues will be raised regarding both the assumptions and the techniques of previous research in relation to the present research.

The second part of the chapter will examine research evidence pertaining to the support of the methodology of the study. It will discuss the use of pictures as an instrument and the selection of third, seventh, and eleventh graders as subjects.

Research in Vocational Development Studies

This section will be organized to examine relevant research in three areas: vocational patterns, prestige and status, and future plans. The contribution of each of these areas to the present study will be discussed within each section.

Vocational Patterns. Although current vocational theory emphasizes the developmental nature of career patterning, most research has been focused primarily on the search for the influences which lead an individual to choose a particular vocation. It is longitudinal studies, however, that hold the most promise for understanding the process of vocational development. Extensive examination of boys' and girls' vocational behavior at different grade levels should provide the substance from which a normal vocational development pattern may be developed. The present study emphasizes this need for examining patterns and does so by studying how boys and girls view sex-linked occupations at grades three, seven and eleven. No previous studies have been conducted in this specific area, but some have been done

with developmental stages of vocational decision-making.

A few studies which stress the on-going nature of career development provide some clues toward an evolving theory of vocational development. Dipboye and Anderson (1959) compared ninth and twelfth graders and concluded that occupational values were quite well formed by the ninth grade and little change took place thereafter. They also discovered significant differences between the mean rankings of values of the boys and girls. Although their research focus was on values it might be expected from their findings that there would be some similarity between the seventh and eleventh grade students in the present study in their views toward sex-linked occupations, but that these views may differ between the boys and girls. Wolff's (1963) work would seem to substantiate this view as he discovered differences between men and women in the manner in which their occupational plans developed. The males seemed to have occupational plans at all ages, pre-school through college, that bore some similarity to each other while the females had a varied and unrelated vocational choice pattern.

Any particular individual in the process of maturing vocationally has various factors impinging upon him. One of these factors is sex and its relationship to societal expectations for that sex. Many occupations have come to be sex-linked and hence an individual's perception of that occupation may affect his process of career choice. Powell and Bloom (1962) and Rezler (1967) did discover that girls in grades four, five and six and in grades ten, eleven and twelve concentrated their choices in a few occupations in the traditionally feminine occupations while boys' choices were spread over a much wider

range. Powell and Bloom, however, did not indicate whether or not the boys' choices were confined to masculine occupations and hence one cannot conclude that girls identify more closely with traditional feminine occupations than boys do with masculine occupations. The results may suggest, however, that the boys and girls in the present study will have different patterns of identification with the male and female workers depicted in the traditionally sex-linked occupations.

Prestige and Status. Occupational decision-making takes place within the framework of the prestige and status afforded the various occupations in contemporary society. That such a status hierarchy exists and stays constant for adults over time has been demonstrated be Deeg and Paterson (1947) and Hakel, Hollman and Dunnerre (1968). However, the term "prestige" is vague and ambiguous. It may have different meanings to men and women, to boys and girls; it may vary by age, grade or socio-economic status; it may vary by the sex of the worker in various occupations. Prestige studies need to examine these factors for differential ratings. Such ratings are important in any attempt to analyze the vocational development process and to provide appropriate vocational counseling.

Reported prestige research contains a number of weaknesses. Examples are a lack of criteria for the selection of occupations to be rated, the use of separate lists for boys and girls (Simmons, 1962) and the lack of the mention of the sex of the worker in the occupations (Stefflre, Resnikoff, and Lezotte, 1968). These shortcomings notwithstanding, certain studies suggest that the masculinity and femininity dimensions of career development are important. These dimensions would be reflected in the current research by

differential responses of boys and girls to the sex-linked occupations. Hartley (1961), in investigating children's perceptions of male and female roles, discovered the children clearly assigned one group of activities to men, another to women and one equally to both sexes. Although these were not vocational activities it might suggest that children would have a similar view of the occupational world; if so, the third graders would reflect the same cultural stereotype that Slocum and Bowles (1968) discovered with junior and senior high school students. They found a definite pattern of dislike for occupations traditionally followed by the opposite sex. However, they discovered many students did not apply cultural stereotypes to their own evaluations and suggested that the attractiveness of occupations must be explained by variables other than prestige. Such variables may be discovered by the specificity of vocational identification, interest, and appropriateness of this study and thus add an important dimension to prestige studies by delineating their possible elements.

As the need for influencing a change in attitudes toward sex-linked occupations is a major justification of this research, knowledge of differences in perceptions between grades is essential in planning those differential experiences which contribute to attitudinal change. However, as has previously been stated, studies dealing with developmental stages of vocational decision-making are few in number. Unfortunately, the same may be said of research which examines how prestige and status vary from childhood to adulthood. Only two studies provide this important focus. Simmons (1962) had boys and girls in grades four, eight and twelve rank twenty occupations for prestige and personal interest and discovered that the males showed significant

awareness of occupational prestige as early as fourth grade, but the females did not show this awareness until eighth grade. If his assertion that a femininity dimension may control ratings for girls prior to the development of a generalized prestige dimension is correct, then in this study third grade girls should show a stronger feminine identification with female vocational workers than do the boys with male workers. Nelson's (1963) work upheld this view of differences between boys and girls as it stated that sex is the most important factor in determining reactions to individual occupations, and sex appropriateness, activity of interest, and status appear to be the three major referent points by which children evaluate occupations. A major weakness of this study, however, was its failure to distinguish differences between grades, an important oversight in using the data for initiating an on-going program of vocational guidance from the elementary grades through high school.

Future Plans. As boys and girls, men and women, plan their futures they have certain interests, values and cultural expectations which they incorporate into those plans. At varying ages different influences affect occupational decision-making. Interests have been found to be the dominant basis for boys' vocational choices in grades four, five and six while for girls the same period is a value stage (O'Hara, 1962). Cultural expectations play a dominant role for college men and women because they have picked occupations that they perceived to have a greater loyalty to traditional sex roles than to the idea of occupational equality (Empey, 1958). Although the grade levels are somewhat different in these two studies than in the current research it might be expected that the younger boys and

girls would monitor their responses to sex-linked occupations upon the basis of interests and values, while the high school students would respond upon the basis of the culturally accepted pattern. Knowing these effects and their time of impact contributes additional knowledge from which a normal vocational development pattern may be developed.

The range of occupational choices appears to be much narrower for girls than for boys. (O'Hara, 1962; Clark, 1967). Although the authors did not speculate upon the causes for these differences it might be expected that the girls in the present research will tie themselves more closely to the traditional vocational sex-linkage than will boys, and they will exhibit a much narrower range of perceived feminine occupations than the boys will masculine ones.

Summary. In summarizing the content of research studies in this area one cannot discern a specific focus of study except to note that it was distributed almost equally over the groups of developmental patterns, prestige rankings and projected future plans. Out of the research Lewis (1965) has suggested some generalized findings: (1) Vocational interests do not play the kind of role in vocation or curriculum selection of girls that it does for boys, (2) job attitudes of girls differ from boys in small but consistent ways; and (3) occupational aspiration is related to values among boys, but not among girls. Too, it seems clear as shown by Shuval (1963) that interest in sex-linked occupations is to a large extent conditioned by adherence to traditional definitions of sex-role patterns. Dipboye and Anderson (1961) agree with Shuval in that they question whether the differences they found in their study of values were true sex

differences, or whether they were not more likely culturally inspired or maturational differences--two important variables ignored or overlooked by many researchers.

Well-designed and executed differential studies--those having sex, grade and/or socio-economic status as variables--are limited. Most research centers on the male or ignores the sex variable in studying a sample made up of both boys and girls. Certainly in the areas studied and particularly in the areas of maturity level, decision-making, occupational prestige ranking and values one might hypothesize differences between men and women, boys and girls, that ought to be investigated. This study attempts to contribute additional information toward this goal.

Vocational studies examining developmental patterns hold particular relevance for the counselor in providing realistic and significant vocational guidance. What kinds of experiences should be provided boys and girls to broaden their vocational horizons? Should they be the same for both sexes? Should they be at the same age level? It would seem we have examined much behavior-of-the-moment, but have done little to inspect the shifts in behavior. Those research studies giving perspective to the changes of factors influencing vocational decision-making as a person matures currently seem to be making the greatest contribution to our knowledge of vocational development. The current research has this objective.

Methodology Research

In doing developmental research the researcher is faced with using techniques and methods which are appropriate to the ages of all the subjects being studied, and which will elicit the interest and

involvement of all the participants. He also needs an instrument which most effectively secures the kind of data in which he is interested. For this study, then, the reading level of third graders had to be a consideration as were verbal descriptions of occupations and an interest level appropriate for many ages. Faced with these difficulties Van Dalen (1966) suggests pictures as a particularly suitable technique. Other researchers, too (Stevenson, 1967; Vener and Weese, 1965) have utilized pictures in studies dealing with children and adult sex roles, a focus similar to this study.

In depicting situations not lending themselves to effective verbal descriptions Estes (1938) suggests behavior in the picture be as representative as possible of the behavior of the subject in a life situation. The pictures in the present study, therefore, were taken in settings and with workers that represent realistic job settings.

In order to eliminate the research problems discussed in Prestige and Status one list of occupations needed to be used for both boys and girls, and each occupation needed to show the sex of the worker. In addition, with the focus of the study upon vocational identification, interest and appropriateness in relation to sex-linked occupations each occupation needed to be shown with both a male and female worker. A paired picture technique, then, a paired comparisons methodology defended by Gulliksen (1946), was selected as the most useful and effective instrumentation.

Subjects. To gather information of the most significance for developing and understanding a vocational developmental pattern subjects need to represent different developmental stages. Research in vocational theory and in psychosexual stages provided the basis for

selecting third, seventh and eleventh graders in this study. Boys and girls in these grades fit three groupings in Gunn's (1964) prestige study and three stages of Havighurst's (1964) six stages of vocational development. Havighurst's stage one states that identification with a worker is predominant at ages five to ten years. If the theory is to be substantiated, third grade boys and girls in the current research should be expected to identify with workers of their own sex rather than with the worker of the traditional sex-linkage.

Fortunately, the most detailed attention of vocational theorists has been to the period from childhood to young adulthood, the range within which the subjects of this study fall (Ginzberg, et al, 1951; Super, et al, 1957; Beilin, 1955). Hershenson (1968) has incorporated these existing theories into a life stage vocational development system which overlaps with Erickson's (1963) psychosexual stages. The focus for three of the periods is first on "Who am I?", then on "What can I do?" and then on "What will I do?" The three grade levels used in this study fit into the three stages described by Hershenson and Erickson, and thus provide further support for having chosen students from different vocational and psychosexual developmental stages.

Summary. This section has examined the studies which justify and substantiate the use of a paired picture technique and the use of subjects in grades three, seven and eleven. Evidence was cited for pictures being an effective instrument to use with children. Both research studies and theoretical positions were presented to confirm that subjects from grades three, seven and eleven represent different vocational developmental stages.

Summary

This chapter has reviewed the relevant research in vocational development studies that has specifically dealt with either sex as a variable or career patterning. It was stated that few studies have combined sex and career patterning as the current study will do. Available research has generally failed to provide information on how occupations to be studied were selected, or to use similar lists of occupations for males and females. The present research will correct these problems.

The vocational studies research presented gave some indication that differences might be expected between the vocational patterns of boys and girls in this study. The evidence, however, is by inference rather than by concrete data because research designs examining developmental patterns that incorporate the sex variable are very limited.

To support the methodology of this research both research studies and theory were presented to substantiate the use of a paired picture technique and the use of subjects in grades three, seven and eleven. Pictures were reported to be suitable for use with subjects of limited reading ability. Therefore, they were appropriate for a sample containing third graders. Subjects selected from grades three, seven and eleven were shown to be from three vocational developmental stages.

CHAPTER III

METHODOLOGY

Introduction

This study was designed to investigate the perceptions and attitudes of boys and girls in grades three, seven and eleven toward traditionally masculine and feminine vocations. A combined total of 132 subjects from the Oshkosh, Wisconsin school system was selected for participation in the study. Subjects were selected to represent high and low economic groups and approximately the same number of boys and girls. After the administration of the paired picture instrument the results were compared by grade, by sex and by socio-economic level to the responses toward the masculine, feminine and neutral occupations.

Instrument

The instrument developed was a paired picture technique representing twelve occupations. Four occupations were labelled masculine, four feminine and four neutral. To measure vocational identification, vocational interest and vocational appropriateness three questions were asked about each pair of pictures:

Which picture do you like the best?

Which of the people do you think likes this job best?

Which of the people do you think made the best choice of this job?

Three additional questions were asked:

Why did you like the pictures you chose?

How did you choose which person likes each job best?

How did you decide which person made the best choice of each job?

Occupations were labelled masculine, feminine or neutral upon the basis of work force figures in the 1960 census. A traditionally masculine occupation was defined as: 1) having at least 200,000 workers, 2) representing at least .5 percent of the total United States work force, 3) representing at least 1.00 percent of the total male work force, and 4) differing by at least .75 percent from the percent of the total female work force in that occupation (except police). A traditionally feminine occupation was defined as: 1) having at least 200,000 workers, 2) representing at least .5 percent of the total United States work force, 3) representing at least 1.00 percent of the total female work force, and 4) differing by at least .75 percent from the percent of the total male work force in that occupation. Neutral occupations have at least 9,000 workers, represent at least .01 percent of the total work force and have a difference of less than .05 percent between the percent of the total male and female workers in that particular occupation. Neutral occupations were incorporated into the instrument to act as distractors from the feminine-masculine pattern and to examine the subjects' tendency, if any, to place neutral occupations into a masculine or feminine pattern.

With these basic criteria the feminine and masculine occupations in Table 1, arranged in occupational groupings as in the census,

qualified for inclusion in the instrument. Similarly, the neutral occupations in Table 2 qualified for inclusion.

Next, these occupations were examined for their distribution among the worker trait groups of the Dictionary of Occupational Titles. The percentage of the total work force in each of the major census groupings was also examined. It is as follows:

	Total	Male	Female
Professional, technical	11.19	10.31	13.00
Farmers, farm managers	3.88	5.49	.56
Managers, officials, proprietors	8.37	10.65	3.68
Clerical and kindred workers	14.40	6.94	29.72
Sales	4.03	2.78	6.60
Craftsmen, foremen	13.52	19.53	1.19
Operatives, kindred workers	18.41	19.88	15.38
Service workers	8.42	5.98	13.44
Private household workers	2.67	.14	7.86
Farm laborers	2.24	2.77	1.15
Other laborers	4.81	6.90	.52

Using these as criteria to get as broad and as representative a sample of occupations as possible the final selections were made. Faced with an alternative choice within an occupational grouping, occupations were selected which were most likely to be known to children and which could most easily be clearly depicted by a picture. Closely related occupations were not picked because of the difficulty in distinguishing them by a picture (i.e. secretary and typist, nurse and hospital attendant.)

TABLE 1.--Work force for masculine and feminine occupations

TABLE 1.--Work force for masculine and feminine occupations

Occupations	Work Force			Percentage Distribution			Percentage Difference
	Total	Total Men	Total Women	Total	Total Men	Total Women	
Professional Technical							
Engineer	860,949	853,738	7,211	1.33	1.96	.03	+1.93 M
Nurse	582,379	14,495	567,884	.90	.03	2.68	+2.65 F
Elementary teacher	1,003,576	143,163	860,413	1.55	.33	4.06	+3.73 F
Clerical							
Cashier	468,950	100,996	367,954	.73	.23	1.74	+1.51 F
Bookkeeper	913,231	149,177	764,054	1.41	.34	3.61	+3.27 F
Secretary	1,463,958	40,606	1,423,352	2.26	.09	6.72	+6.63 F
Typist	522,203	25,468	496,735	.81	.06	2.35	+2.29 F
Sales							
Retail trade	2,607,410	1,210,046	1,397,364	4.03	2.78	6.60	+3.82 F
Craftsmen							
Carpenters	818,835	816,195	2,640	1.27	1.88	.01	+1.87 M
Machinist	498,688	492,228	6,460	.77	1.13	.03	+1.10 M

Table 1.--Continued

Occupations	Work Force			Percentage Distribution			Percentage Difference
	Total	Total Men	Total Women	Total	Total Men	Total Women	
Operatives							
Truck-tractor drivers	1,556,837	549,113	7,724	2.41	3.56	.04	+3.52 M
Manufacturing-durable goods	553,747	529,658	24,089	.86	1.22	.11	+1.11 F
Laundry--dry cleaning	386,873	109,477	277,396	.60	.25	1.31	+1.06 F
Apparel and accessory manuf.	362,477	91,858	270,619	.56	.21	1.28	+1.07 F
Service Workers							
Cooks	562,062	200,290	361,772	.87	.46	1.71	+1.25 F
Waiters	825,606	110,779	714,827	1.28	.25	3.38	+3.13 F
Hospital attendants	391,800	103,532	288,268	.61	.24	1.36	+1.12 F
Deliveryman	491,651	408,832	10,816	.65	.94	.05	+.89 M
Laborers							
Construction	612,465	608,541	3,924	.95	1.40	.02	+1.38 M

Table 2.--Work force figures for neutral occupations

Occupations	Work Force			Percentage Distribution			Percentage Difference
	Total	Total Men	Total Women	Total	Total Men	Total Women	
Professional, technical							
Actor	9,200	6,007	3,193	.01	.01	.02	+.01 F
Manager							
Manager--eating, drinking estab.	71,884	50,016	21,868	.11	.12	.10	+.02 M
Manager--apparel estab.	50,018	33,462	16,556	.08	.08	.08	.00
Craftsmen							
Decorators	50,939	27,373	23,566	.08	.06	.11	+.05 F
Tailors	41,021	32,079	8,942	.06	.07	.04	+.03 M
Operatives							
Bakery product workers	41,051	26,237	14,814	.06	.06	.07	+.01 F
Confectionary workers	23,505	12,002	11,503	.04	.03	.05	+.02 F
Newspaper, printing	10,832	8,647	2,185	.02	.02	.01	+.01 M
Service							
Elevator Operator	71,882	48,882	23,000	.11	.11	.11	.00
Usher	14,265	9,865	4,400	.02	.02	.02	.00

The final distribution of occupations was as follows:

Professional, technical

Elementary teacher	-	Feminine
Engineer	-	Masculine
Actor-actress	-	Neutral
Nurse	-	Feminine

Clerical

Secretary-typist	-	Feminine

Craftsmen

Machinist	-	Masculine

Operatives

Truck driver	-	Masculine
Bakery product worker	-	Neutral
Laundry, dry cleaning worker	-	Feminine

Service Workers

Elevator operator	-	Neutral
Usher	-	Neutral
Police	-	Masculine

Police was added to represent the service category for a male occupation although it did not meet the overall requirements of the other occupations. It was also included to represent three additional categories of the worker trait groupings. Police has the following manpower statistics: Total work force, 252,194; men, 245,404; and women, 6,790. Police manpower is distributed percentagewise as follows: total work force, .39%; men, .56%; and women, .03%. A difference of .53% exists between the male and female work forces.

The twelve pairs of occupations, then, represent five of the occupational groupings which represent 65.94% of the total work force and thirteen of the twenty-two worker trait groups.

With the selection of the occupations a professional photographer was hired to take the pictures. Every picture but one (elevator operator) was taken in an actual work setting. Seven of the twelve occupations were represented by male and female workers within that profession; four (secretary, machinist, elementary teacher, and engineer) had one actor; one (elevator operator) had two actors. Each picture was composed so that the occupational activity could be easily identifiable. It was also composed so that the male and female would be in identical positions and so that their facial expressions would not be evident. These steps were taken to eliminate as much impact from extraneous details as possible.

The photographs were then screened and printed to provide the final instrument (Appendix C). Six pairs of pictures were randomly selected to have the female worker on the right and the male worker on the left. The other six pairs were reversed. The placement of the occupations on the pages was by random selection.

The answer sheet (Appendix D) was devised for ease of use, ease of scoring and ease of data tabulation. On the green answer sheet the alternative choices for the basis of decision making were acquired from the pilot study.

The pilot study was run to test the instrument for identifiability of occupations and for the ease of administration. It was also run to test the level of language for the instructions and to develop the answer sheet. As a result of the pilot an instruction sheet was eliminated and all directions were given orally by the examiner. The pilot was administered to thirty-two students ranging in age from eight to fifteen.

Subjects

Permission was received from the Superintendent of Oshkosh, Wisconsin, public schools to use students in that school system as subjects. Data for judging the extent to which Oshkosh is typical of its geographical area and of the United States as a whole is shown in Table 3.

Table 2.--Census data for Oshkosh, Wisconsin and environs[1]

	U.S. as whole	North Central	E. North Central	Wisconsin	Oshkosh
Population Change 1950-1960	18.5%	16.1	19.2	15.1	9.8
Negro Population	10.5%	6.7	8.0	1.9	Less than .05
Pop. 65 & over	9.2%	9.8	9.3	10.2	12.1
Median School Years Completed (over age 25)	10.6	10.7	10.7	10.4	10.4
Completed high school or more (over age 25)	41.1%	41.7	41.2	41.5	40.8
Employment: Manufacturing	27.1%	30.2	35.0	32.9	38.4
White Collar	41.1%	39.8	40.0	37.0	40.5
Income: Median	$5660	5892	6215	5926	5784
Under $3000	21.4%	18.7	15.9	17.4	14.5
Over $10,000	15.1%	15.5	17.2	14.3	12.2
Living in One Unit	76.3%	78.3	58.9	76.7	74.5

[1] U.S. Bureau of the Census, County and City Data Book, 1967 (A Statistical Abstract Supplement). U.S. Government Printing Office, Washington, D.C., 1967.

As can be seen Oshkosh has been relatively more stable in terms of population than the entire United States, or its geographic area; it has a very small Negro population and has a slightly larger over-65 population than average. More people are employed in manufacturing than in the national average, but white collar workers are nearly the same. The levels of education in Oshkosh and in the United States are very similar. The stability of the population, the greater number of blue collar workers, and the very small Negro population were actually assets to this study. The first provided a basis for longitudinal assumptions, the second provided adequate samples of both high and low socio-economic groups, and the third eliminated a variable from consideration in this study.

No claim is made that conclusions drawn on the basis of a study of one community can be applied indiscriminately to all types of communities. However, overall Oshkosh varies by more than five percent on only four of the census criteria and thus is remarkably similar to its surrounding geographic area and to the United States total population. Thus the findings of the study might be presumed to have generalized applicability to a number of other American communities.

At an initial meeting with the co-ordinators of elementary and secondary education the study was discussed and the four schools to be included in the research were selected. The reasons for selecting subjects in third, seventh, and eleventh grades has previously been discussed in Chapter II. From the twenty public elementary schools the schools drawing from the lowest and highest socio-economic neighborhoods were selected. The entire third grade of these two schools

was used. From the four public junior high schools the one which represented the most even balance of high and low socio-economic groups was selected so that the influence of school experiences, especially vocational guidance, would be constant across the seventh grade sample. Three classes of English-social studies were randomly selected. The community has only one public high school. Four classes of United States history were randomly selected. The classes selected at the junior and senior high schools represented courses which were required of all students, and which were not sectioned according to ability, interest or other factors. In examining the school schedule there was no reason to believe that certain periods might have a different population than other periods. Assignment to classes appeared to be on a chance basis and thus each class representative of a cross section of the entire grade.

A total of 234 students were administered the instrument. Table 4 indicates the analyses by grades, sex and age.

Table 4.--Subjects by grade, sex, and age

	Boys	Girls	Total	Age	
				Boys	Girls
3rd Grade	42	43	85	8-10	8-9
7th Grade	44	39	83	12-13	12-13
11th Grade	39	27	66	16-18	16-17

Next, a feasible method of measuring socio-economic status was considered. Making a complete community study as a basis for social class placement was a task far beyond the resources available. Therefore, father's occupation was used as a basis for socio-economic

determination. In discussing factors affecting socio-economic level Brown (1965, p. 133) says, "... the style of life of a family unit in this country depends chiefly upon the occupation of the father." Hatt (1950), Kahl (1955) and Reiss (1961) have conducted research that has led them to state that occupation is the best predictor of all factors that make up socio-economic level and that occupation is a usable and valid index for most purposes of sociological research. Warner's (1949) Revised Scale for Rating Occupations was used to determine a subject's socio-economic status by rating his father's occupation. Although data was gathered on the level of the father's education it was found to be so unreliable as to be unusable. Eells (1951, p. 93), reporting on the Warner scale says, "This (scale) is a modification of the occupational classification developed by Edwards for the Bureau of the Census. Warner's rating plan makes allowances for the fact that most of the census occupational groups include occupations with a considerable range of "social prestige" value. The Warner rating plan attempts to equate those occupations from whatever census groups which enjoy approximately equal "social prestige" in the community." The Warner Revised Scale for Rating Occupation is shown in Table 5.

All the occupational ratings were made by one person in order to secure as much uniformity in interpretation as possible. Table 6 shows the rating summaries. As the table shows, the occupational rating of six seems disproportionate. However, the census figures which indicate 38.4% of workers in Oshkosh are in manufacturing would predict that 90 workers would fall in categories 5, 6, and 7. (Category 5 overlaps with some white collar workers.) Thus the sample would appear to be representative of the total population.

TABLE 5.--Revised Scale for Rating Occupation[1]

Rating Assigned to Occupation	Professionals	Proprietors and Managers	Business Men
1	Lawyers, doctors, dentists, engineers, judges, high-school superintendents, veterinarians, ministers (graduated from divinity school), chemists, etc. with post graduate training, architects.	Businesses valued at $75,000 and over.	Regional and divisional managers of large financial and industrial enterprises.
2	High-school teachers, trained nurses, chiropodists, chiropractors, undertakers, ministers (some training), newspaper editors, librarians (graduate)	Businesses valued at $20,000 to $75,000	Assistant managers and office and department managers of large businesses, assistants to executives, etc.
3	Social workers, grade-school teachers, optometrists, librarians (not graduate), undertaker's assistants, ministers (no training)	Businesses valued at $5,000 to $20,000	All minor officials of businesses.
4		Businesses valued at $2,000 to $5,000	
5		Businesses valued at $500 to $2,000	
6		Businesses valued at less than $500	
7			

[1] Warner, W.L., Social Class in America, New York: Harper and Brothers, 1949, p. 140-141.

Table 5.--Continued

	Clerks and Kindred Workers, etc.	Manual Workers	Protective and Service Workers	Farmers
1	Certified Public Accountants			Gentleman Farmers
2	Accountants, Salesmen of real estate, of insurance, postmasters			Large farm owners, farm owners
3	Auto salesmen, bank clerks and cashiers, postal clerks, secretaries to executives, supervisors of railroad, telephone, etc., justices of the peace	Contractors		
4	Stenographers, bookkeepers, rural mail clerks, railroad ticket agents, sales people in dry goods store, etc.	Factory foremen, electricians plumbers carpenters watchmakers (own business)	Dry cleaners, butchers, sheriffs, railroad engineers and conductors	
5	Dime store clerks, hardware salesmen, beauty operators, telephone operators	Carpenters, plumbers, electricians (apprentice) timekeepers, linemen, telephone or telegraph, radio repairmen, medium-skill workers	Barbers, firemen, butcher's apprentices, practical nurses, policemen, seamstresses, cooks in restaurant, bartenders	Tenant farmers
6		Moulders, semi-skilled workers, assistants to carpenter, etc.	Baggage men, night policemen and watchmen, taxi and truck drivers, gas station attendants, waitresses in restaurant	Small tenant farmers
7		Heavy labor, migrant work, odd-job men, miners	Janitors, scrubwomen, newsboys	Migrant farm laborers

Table 6.--Occupational socio-economic status rating summary

Occupational Status	3rd Grade		7th Grade		11th Grade		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
1	2	3	3	8	2	2	20
2	5	6	10	5	7	4	37
3	5	9	5	3	1	1	24
4	8	6	6	6	3	3	32
5	3	3	3	5	7	5	26
6	16	13	11	8	12	8	68
7	2	1	2	0	1	1	7
Not Classifiable	1	2	4	4	6	3	20
Total	42	43	44	39	39	27	234

The selection of the groups to be included in the analysis was based on three factors: (1) a sufficient number of students at each level to have adequate samples, (2) each group to be as homogeneous as possible with respect to socio-economic status, and (3) the contrast between socio-economic groups to be as great as possible. With these guidelines it was decided to use the occupational ranks of one and two as indicative of a high socio-economic status and occupational ranks of six and seven as indicative of a low socio-economic status. The final sample used for analysis is shown in Table 7. In the high socio-economic status group 21.4% of the girls' mothers and 34.5% of the boys' mothers worked. For the low socio-economic status group the same percentages were 45.2% and 47.7%.

TABLE 7.--Final sample distribution by grade, sex and socio-economic status

	3rd Grade		7th Grade		11th Grade		Total
	Girls	Boys	Girls	Boys	Girls	Boys	
High Socio-economic	9	7	13	13	6	9	57
Low Socio-economic	14	18	8	13	9	13	75
Total	23	25	21	26	15	22	132

Procedure

Arrangements were made with the principals and teachers of the selected third grade schools for the author to administer the instrument to the children of these schools. This administration took place in individual classrooms with the teacher present. In the seventh and eleventh grades teachers administered the instrument during a regular class period. The author met with the teachers whose classes had been selected for participation to train them to insure standardization of administration.

The instrument and two answer sheets were distributed to the subjects. The following statement was presented to each group:

> Today you are being asked to answer some questions about twelve occupations. Some members of the College of Education at Wisconsin State University are conducting a study to learn more about people's feelings toward different jobs. This information will be used to help boys and girls plan their futures.

The following directions were then read to each group:

> First, look at the yellow answer sheet. At the bottom

put your age, check boy or girl, and put the grade you are in. Then put down the jobs your mother and father have. If your mother does not work do not put anything in the space. If you do not know the exact name of the jobs your father and mother have try to describe what they do. Next, write down the job or jobs you'd like to do when you grow up and begin to work.

Next let's look at the pictures. Each pair of pictures is the same job. So in number 1 the two workers are secretaries. What are they in number 2? Let me make sure the rest of them are clear to you. Number 3 is .. etc.. Now find Part 1 on the yellow answer sheet. Put the pictures where you can see them. Notice again that each pair of pictures is of the same job. Now look at the two pictures in number 1. The numbers go down the middle of the page. If you like picture A best, put an X over A next to number 1 in Part 1 on your answer sheet. If you like picture B best put an X over B on your answer sheet. Now look at the pictures in number 2 and do the same thing. Are there any questions? Now do the same thing until you have done all 12 pairs of pictures. When you have finished please look up so I will know when everyone has completed the first part.

Now you are ready for Part 2. Find Part 2 on your yellow answer sheet. This time choose the person who likes each job best. Look at the two pictures in number 1. If you think the person in picture A likes this job best put an X across A next to number 1 on your answer sheet. If you think the person in picture B likes this job best put an X across B. Try hard to make a choice, but if you think the people like the job the same put an X across C. Now do the same thing until you have done all twelve pairs of pictures. When you have finished please look up so I will know when everyone has completed the second part.

Now you are ready for Part 3. Find Part 3 on your yellow answer sheet. This time choose the person who made the best choice of each job. If you think the person in picture A made the best choice of this job put an X across A next to number 1 on your answer sheet. If you think the person in picture B made the best choice put an X across B. Try hard to make a choice, but if you think the two people made equally good choices put an X across C. Are there any questions? Now do the same thing until you have done all twelve pairs of pictures. When you have finished please look up so I will know when everyone has completed the third part.

Now look at the green answer sheet. Find Part 1. The question says, "Why did you like the pictures you chose?" Read the answers given and put an X across the letter that best tells why you liked the pictures you did. (Read answers to third graders.)

Find Part 2. This question says, "How did you choose which person likes each job best." Read the answers and put an X across the letter that best tells how you chose which person liked each job best.

Find Part 3. This question says, "How did you decide which person made the best choice of each job?" Read the answers and put an X across the letter that best tells how you decided which person made the best choice of each job.

You are finished! You did a good job. Thank you very much for your help and co-operation.

Statistical Analysis

Each of the answers was coded with a numerical value (masculine = 3, neutral = 2, feminine = 1). For each of the occupational groupings (traditionally masculine, feminine and neutral) a mean group score of the males and of the females for each of the three questions for each sample was determined. Using this data hypotheses five through twelve were then submitted to statistical tests using a repeated measures five-way analysis of variance to test the relationship and interaction of sex; grade; socio-economic level; feminine, masculine and neutral occupations; and vocational identification, interest, and appropriateness. Data from the analysis of variance provided a descriptive analysis for hypotheses one through four. F test were considered significant when they exceeded the .05 level of confidence.

Limitations of the Study

Descriptive studies contribute direct sources of valuable knowledge concerning human behavior and provide a base upon which to begin formulating theory, but they do not provide for cause-effect relationships. This study, therefore, was designed to assess relationships, not causation.

To truly generalize results a sample of third, seventh and eleventh graders across the United States would need to be acquired through sophisticated sampling techniques. This study, as is the case in most descriptive research, could only define its sample carefully so the reader could ascertain whether results might be similar to the group in which he is interested.

Occupations were carefully selected to represent a wide range of occupational groupings and worker trait groups. However, as each pair of pictures could represent only one work task of a given occupation a broad generic interpretation of a given area may be more appropriate, in some instances, than a narrowly defined one. (i.e. engineer - draftsman).

A longitudinal approach to the study would have provided a clearer picture of developmental change with a given population than with a sample of several given ages. However, as the time which this would take (eight years) was impractical, it was assumed for purposes of this study that the students in any lower grade would tend to look like the students in a higher grade when they reached that level. This assumption was also based on the fact that there had been only slight shifts in population within the variables of socio-economic levels, races or religions in the areas from which the sample was drawn in the last ten years. Mathews and Tiedeman (1964) in their study of girls at three developmental levels sum up the longitudinal and cross-sectional problem as follows:

> A longitudinal study of persons at various points in a time interval provide the most complete kind of record of the developmental problem. However, the present study is not longitudinal, instead it is cross-sectional and therefore only an approximation of the ideal. Nevertheless our approximation

> provisionally locates the trace of the developmental effect in the nomothetic situation if our subjects may be considered matched in relevant ways at the several periods of age considered. Since there is no guideline for matching, because there has not been previous study of the problem either longitudinally or cross-sectionally, we could not control in ways which may later prove to be desirable. These are important limitations on credibility of this approximation to what may be happening. We can only know these potential restraints exist at the moment; unfortunately we cannot evaluate them.

These observations apply equally well to the present study.

Summary

A paired picture instrument was developed to measure subjects' responses on vocational identification, vocational interest and vocational appropriateness in relation to traditionally feminine, masculine and neutral occupations. The pictures, made under specific conditions, represented traditionally feminine, masculine or neutral occupations as described.

From the Oshkosh, Wisconsin public schools 234 students were selected and administered the instrument. Evidence was presented to show the subjects were representative of the total groups in Oshkosh from which they were selected, and that in most respects Oshkosh is reasonably typical of the total population of the United States. Subjects were randomly selected from four schools to secure a sample of third, seventh and eleventh grade boys and girls. By means of Warner's Scale for Rating Occupation a high socio-economic status and a low socio-economic status group of pupils were selected from the sample for analysis. Within this group one-hundred thirty-two students were included.

The procedures of administration and the statistical analyses were discussed. Limitations of the study discussed included sampling techniques and longitudinal versus cross-sectional research.

CHAPTER IV

RESULTS

Introduction

This chapter presents the results of a five-way analysis of variance (2x3x2x3x3) based on responses to sex-linked occupations in the areas of vocational identification, vocational interest and vocational appropriateness. The subjects were boys and girls of high and low socio-economic status in grades three, seven and eleven. The analysis of variance will provide the data upon which to examine the hypotheses which have been stated in Chapter I. Also to be presented will be descriptive data regarding the degree of masculinity and femininity attached to the various occupations. Arbitrary ranges of scores will provide the means for assessing the occupations perceived as the most feminine and the most masculine. Other descriptive data will present the summary of the reasons given by subjects for making the picture choices they did.

One-hundred thirty-two subjects completed the paired pictures instrument. The instrument contained three parts: Part One- Vocational Identification, Part Two - Vocational Interest, and Part Three - Vocational Appropriateness. Each part had three scales, each scale representing four traditionally feminine, four masculine or four neutral occupations. Masculine occupations were coded with a value of three, neutral with two, feminine with one. A mean score for each scale for each part was computed for each group of subjects (by grade,

sex, socio-economic status). These scores comprise the major results of the study. Because part and scale are frequently used throughout the chapter and may be difficult to keep in mind clarifying designations will be used. Part (v-id,v-in,v-ap) will be used as a reminder that the parts are vocational identification, vocational interest and vocational appropriateness. Scale (f,m,n) will be used as a reminder that there are feminine, neutral and masculine occupational groupings.

The five-way analysis of variance design was selected and programmed for the IBM 7070 computer. Since the primary goal of this study was to examine the interactive--rather than main effects--of vocational response patterns and sex, grade and socio-economic status, a planned comparison design which would provide these specific comparisons was chosen.

Instrument

The parts of the instrument were established to examine vocational identification, vocational interest and vocational appropriateness. The analysis of variance performed (Table 8) supports the independence of these parts (v-id,v-in,v-ap) as the results show a main effect part difference at the $p<.05$ level. The scales were constructed to represent traditionally masculine, feminine and neutral occupations. Strong indication that the scales (f,m,n) also are measuring separate entities is also reported (Table 8). Differences were significant at the $p<.01$ level and provide strong confirmation of traditionally sex-linked occupations.

Hypotheses

The first three hypotheses dealt with the relationships of sex

TABLE 8.--Analyses of Variance (Sex x Grade x Socio-economic Status x Part x Scale)

SOURCE	SS	df	MS	F
Sex	.775	1	.775	55.47**
Grade	.064	2	.032	2.28
SES (Socio-economic Status)	.071	1	.071	5.09
Part	.127	2	.063	4.54*
Scale	16.943	2	8.471	607.00**
Sex x Grade	1.48	2	.740	53.03**
Sex x SES	.014	1	.013	.97
Sex x Part	.199	2	.100	7.14*
Sex x Scale	.068	2	.034	2.43
Grade x SES	.254	2	.127	9.08**
Grade x Part	.111	4	.028	1.99
Grade x Scale	1.452	4	.363	26.04**
SES x Part	.018	2	.009	.64
SES x Scale	.100	2	.050	3.60
Part x Scale	.179	4	.045	3.21
Sex x Grade x SES	.068	2	.034	2.42
Sex x Grade x Part	.220	4	.055	3.93*
Sex x Grade x Scale	.209	4	.052	3.74
Sex x SES x Part	.009	2	.004	.33
Sex x SES x Scale	.034	2	.017	1.21
Sex x Part x Scale	.087	4	.022	1.56
Grade x SES x Part	.052	4	.013	.94
Grade x SES x Scale	.411	4	.103	7.36**
Grade x Part x Scale	.168	8	.021	1.50
SES x Part x Scale	.028	4	.007	.51
Sex x Grade x SES x Part	.015	4	.004	.27
Sex x Grade x SES x Scale	.114	4	.029	2.04
Sex x Grade x Part x Scale	.037	8	.005	.33
Sex x SES x Part x Scale	.047	4	.012	.83
Grade x SES x Part x Scale	.091	8	.011	.81
Sex x Grade x SES x Part x Scale	.112	8	.014	Error Term

**p <.01
*p <.05

and part (v-id, v-in, v-ap) and scale (f,m,n). They were:

1a. When indicating a preference for a female or male worker in identical vocational activities subjects will select the picture of the worker of their own sex.

1b. When indicating a preference for a female or male worker

in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage.

2a. When comparing the interest of a female and male worker in identical vocational activities subjects will select the picture of the worker of their sex.

2b. When comparing the interest of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage.

3a. When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational activities subjects will select the picture of the worker of their sex.

3b. When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage.

The data from the analysis of variance related to all three hypotheses is presented in Figure 1 which depicts the ratings given to masculine, feminine and neutral occupations in each part (v-id, v-in, v-ap) by boys and girls. If the subjects were to adhere to a choice representing the traditional sex-linkage rather than their own sex, they would give the sex-linked occupational groupings a score closer to the traditional choice than to their own sex (except, of course, where the traditional worker's and the respondent's sex were the same). That is, masculine occupations would receive a coded value that approached three, neutral would approximate two, and feminine would approach one. Examination of Figure 1 shows that, in fact, this is the case. In all parts boys and girls selected the worker

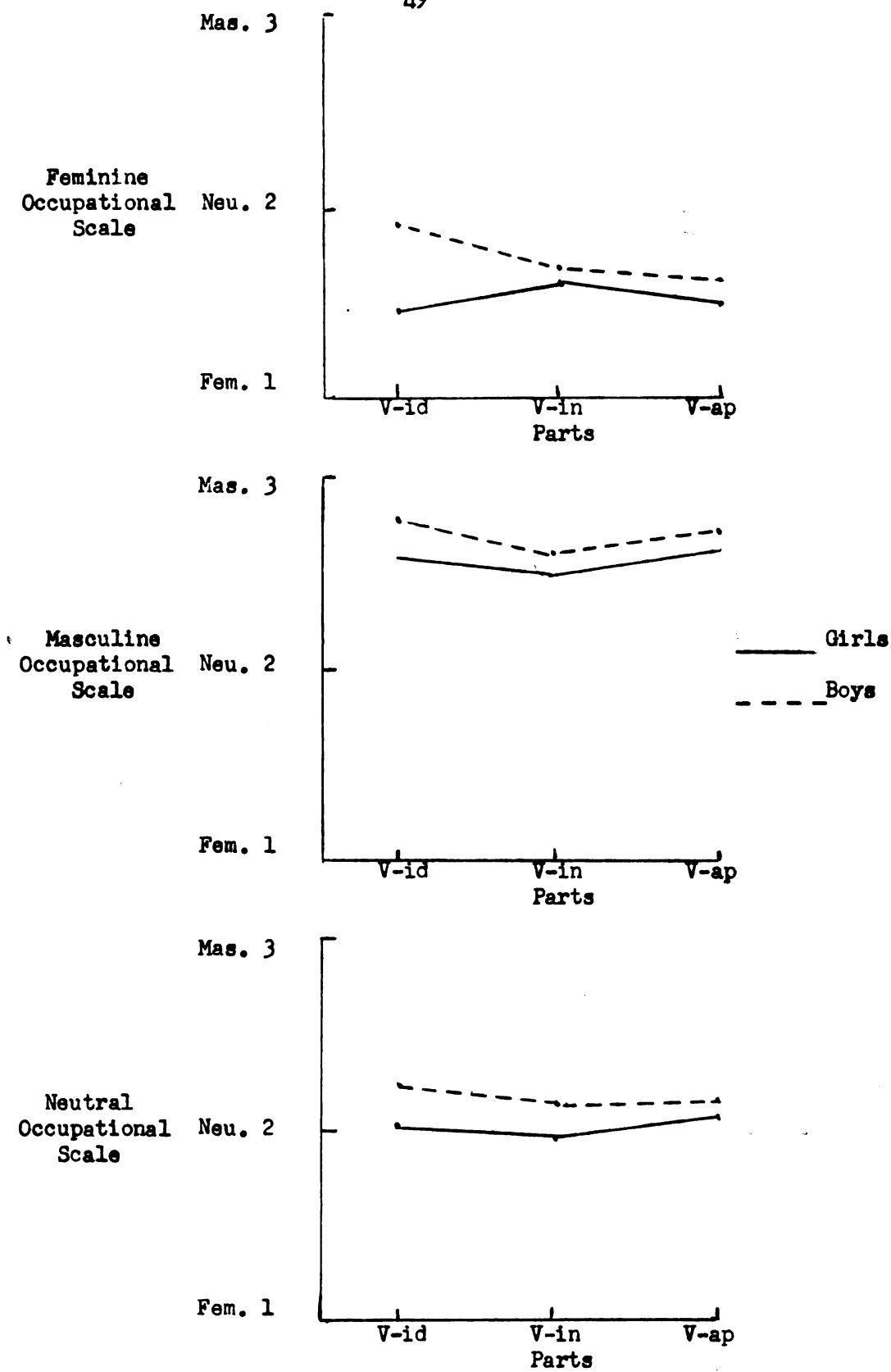

Figure 1.—Plots within scales of the scores of girls and boys by parts.

who more closely represented the traditional sex-linkage than the worker of their own sex. This is shown by the fact that code values given by both boys and girls to each of the occupational groupings were closer to the expected traditional value than to a value representing a non-traditional choice. Had the boys selected on the basis of their sex, their scores would have been high (masculine) on the feminine and neutral scales; had the girls selected on the basis of their sex, their scores would have been low (feminine) on the masculine and neutral scales. As Figure 1 shows, however, boys and girls have masculine responses to masculine occupations, feminine responses to feminine occupations and neutral responses to neutral occupations.

Although these hypotheses do not call for tests of significance the fact that part (v-id,v-in,v-ap)-by-scale (f,m,n),sex-by-scale, and sex-by-part-by-scale were all non-significant while the main effect of scale was significant substantiates the conclusion reached by means of the data in Figure 1. Therefore, hypotheses 1b, 2b and 3b are supported.

Hypothesis Four. Hypothesis four stated:

4a. The longitudinal vocational response pattern for each part (v-id, v-in, v-ap) will be characterized by an increasing trend toward the same sex as the individual responding.

4b. The longitudinal vocational response pattern for each part (v-id, v-in, v-ap) will be characterized by an increasing trend toward traditional sex-linkage conformity.

The interaction of sex, grade, part and scale in the analysis of variance provided the data for this hypothesis. Figures 2 and 3 present this data: Figure 2 for boys, Figure 3 for girls. In each figure the code values given each of the occupational groupings by

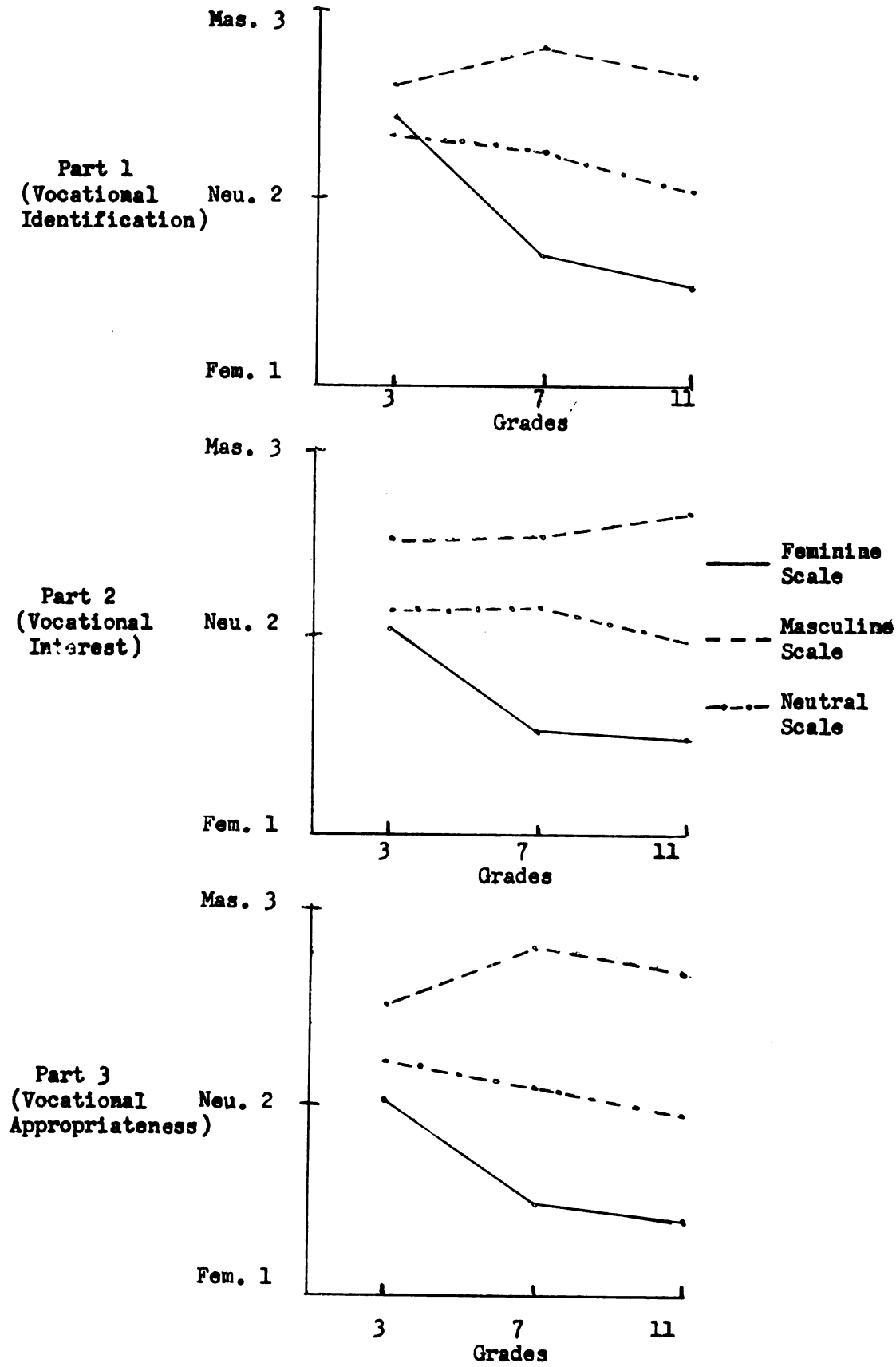

Figure 2.—Plots of scores of boys in grades 3, 7, and 11 by scale within parts.

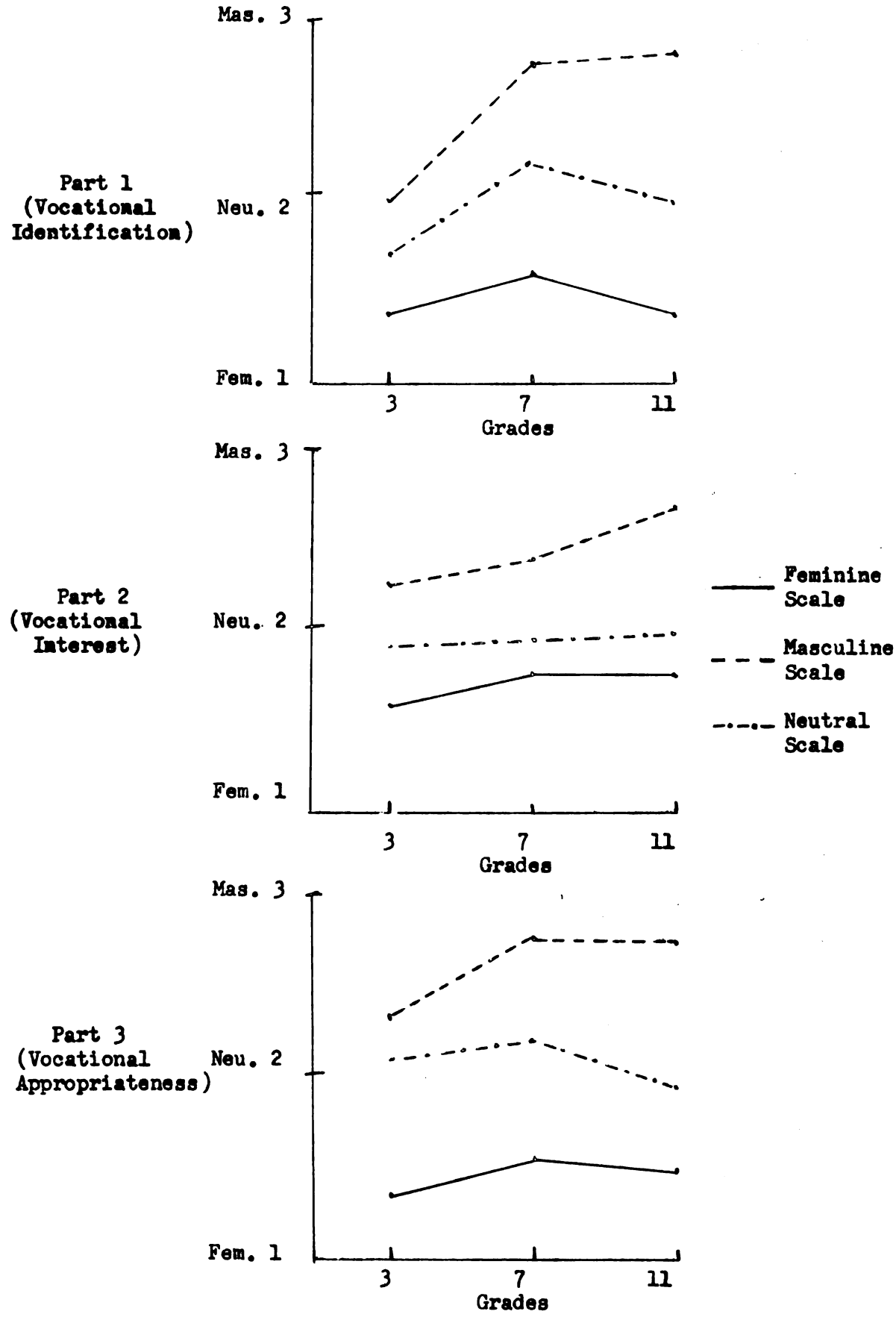

Figure 3.--Plots of scores of girls in grades 3, 7, and 11 by scale within parts

subjects in grades three, seven and eleven are shown for each part (v-id, v-in, v-ap). If the longitudinal vocational response pattern for each part is to be characterized by an increasing trend toward the same sex as the individual responding, then all the scale (f,m,n) values for all the parts (v-id, v-in, v-ap) in Figure 2 should move progressively closer to three (masculine score), and in Figure 3 move progressively close to one (feminine score). Examinations of Figures 2 and 3 show that this does not occur. If the alternate hypothesis stating that the vocational response pattern for each part will be characterized by an increasing trend toward the traditional sex-linkage conformity is to be accepted then each scale (f,m,n) within each part (v-id, v-in, v-ap) should move progressively toward its traditional code value (masculine=3, neutral=2, feminine=1). For the boys (Figure 2) all the neutral and feminine scales, and the masculine scale in Part Two (v-in) meet the criteria, but the masculine scale in Parts One (v-id) and Three (v-ap) do not. For the girls (Figure 3) all the masculine scales and the neutral scale for Part Two (v-in) show a consistent trend toward the traditional sex-linkage, but no other scales do. In fact, the feminine scale has a lower score (more feminine) in the third grade for every part than it does for the seventh and eleventh grade.

The criteria established for neither of the hypotheses were fully met and therefore neither can be fully supported. More evidence supports the hypothesis 4b than it does 4a, but not with enough consistency to accept it. Therefore neither hypothesis 4a or 4b can be accepted.

Hypothesis Five. The alternate hypotheses were:

5a. The longitudinal vocational response pattern will be the same for boys and girls.

5b. The longitudinal vocational response pattern will be different for boys and girls.

The point in question is whether (1) boys and girls respond in a similar fashion regardless of grade level or (2) those at one grade level respond differently from those at another. In Table 8 the sex-by-grade interaction is found to be significant at $p < .01$ so boys and girls in grades three, seven and eleven do differ significantly in their vocational response pattern (hypothesis 5b). To further analyze the data the mean scores were plotted in Figure 4 in order to identify the source of the interaction. From the graph it is shown to be the difference between boys and girls in grade 3. Responses of boys and girls were virtually identical at both the grade seven and grade eleven level.

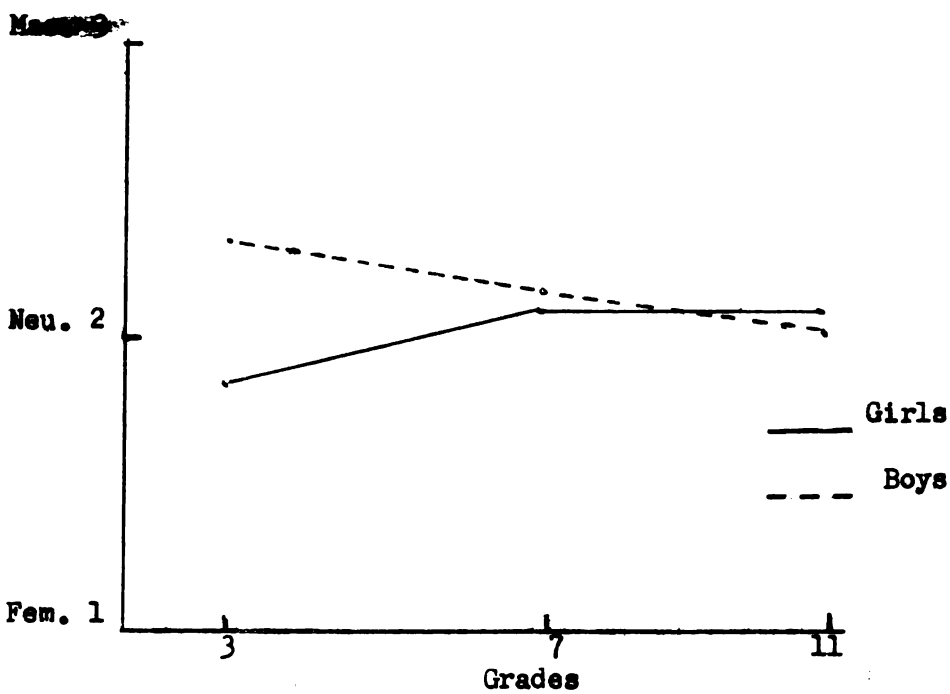

Figure 4.--Plots of mean scores of boys and girls by grades.

Hypothesis Six. The alternate hypotheses were:

6a. The longitudinal vocational response pattern for each part (v-id, v-in, v-ap) will be the same for boys and girls.

6b. The longitudinal vocational response pattern for each part (v-id, v-in, v-ap) will be different for boys and girls.

In Table 8 the interaction of sex, grade and part (v-id, v-in, v-ap) is found to be significant at $p < .05$ and therefore hypothesis 6a can be rejected and 6b accepted. In three-way interactions several combinations of interactions can be plotted, but as the study is focused on patterns of perceptions the grade-by-part interaction has been plotted for boys and girls separately (Figure 5). This enables an analysis to be made of the differences between boys and girls at various grade levels. The data in three-way interactions is plotted in either two or three graphs depending upon the interaction being studied in order to identify clearly the trends. In three-way interactions results must be examined across graphs rather than within graphs; that is, the significant interaction is found by comparing each part (v-id, v-in, v-ap) score for the girls with each part score for the boys. Parallel lines indicate no interaction. When using this procedure and comparing the two graphs in Figure 5, the patterns for girls and boys appear to be dissimilar and the nature of the interaction is seen to be due primarily to the differences between the third grade boys and girls on all three parts (v-id, v-in, v-ap).

Hypothesis Seven.

The alternate hypotheses were:

7a. The longitudinal vocational response pattern will be the

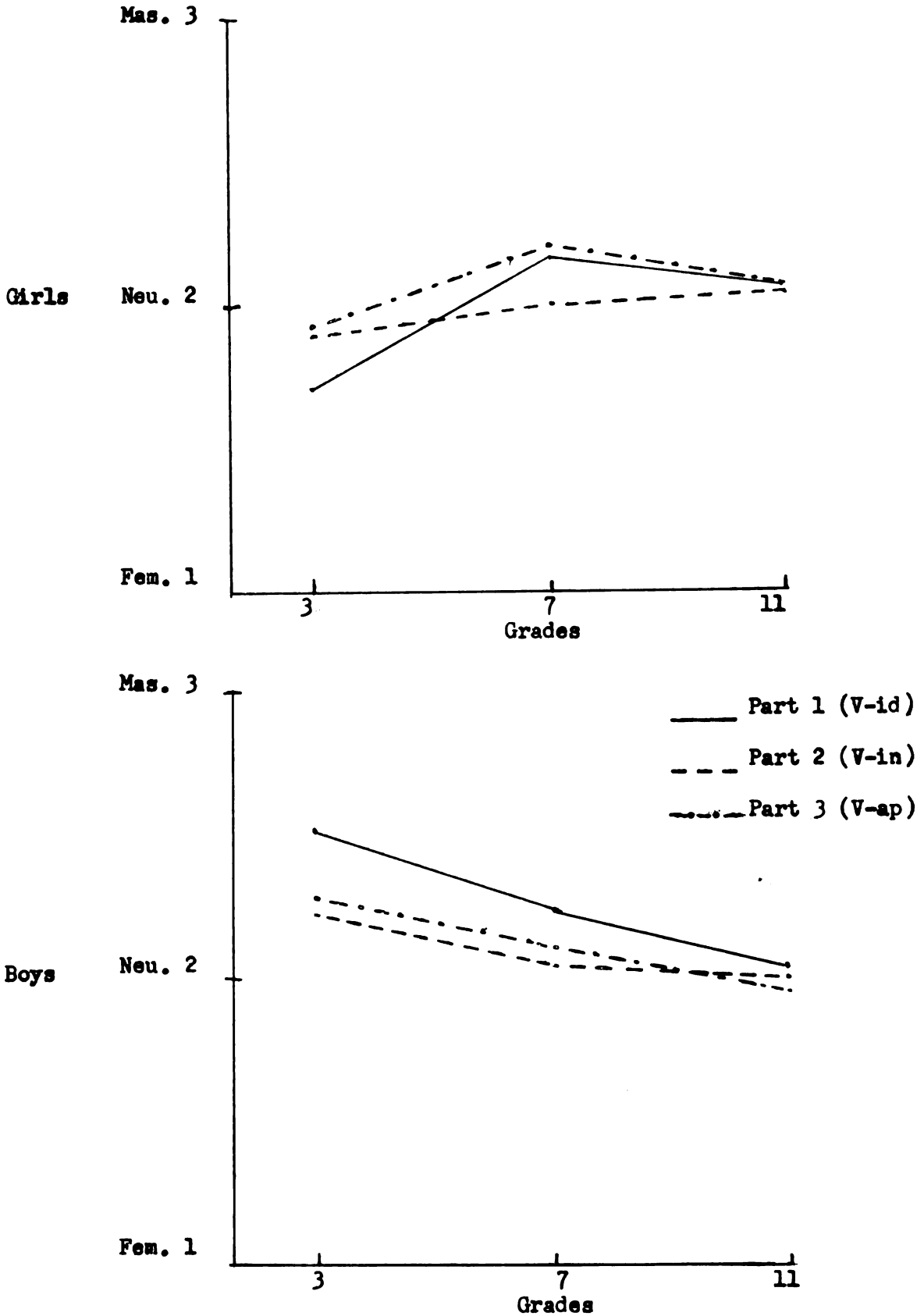

Figure 5.--Plots of the scores of grade-by-part interaction for boys and girls.

same for high and low socio-economic status groups.

7b. The longitudinal vocational response pattern will be different for high and low socio-economic status groups.

Results of this grade by socio-economic status interaction was found to be significant at $p < .01$ as shown in Table 8. Therefore, high and low socio-economic status groups in grades three, seven and eleven do differ significantly in their vocational response pattern (hypothesis 7b). Figure 6 indicates that the interaction is primarily attributable to the difference between high and low socio-economic status groups at the third grade, as seventh and eleventh grade responses are nearly identical.

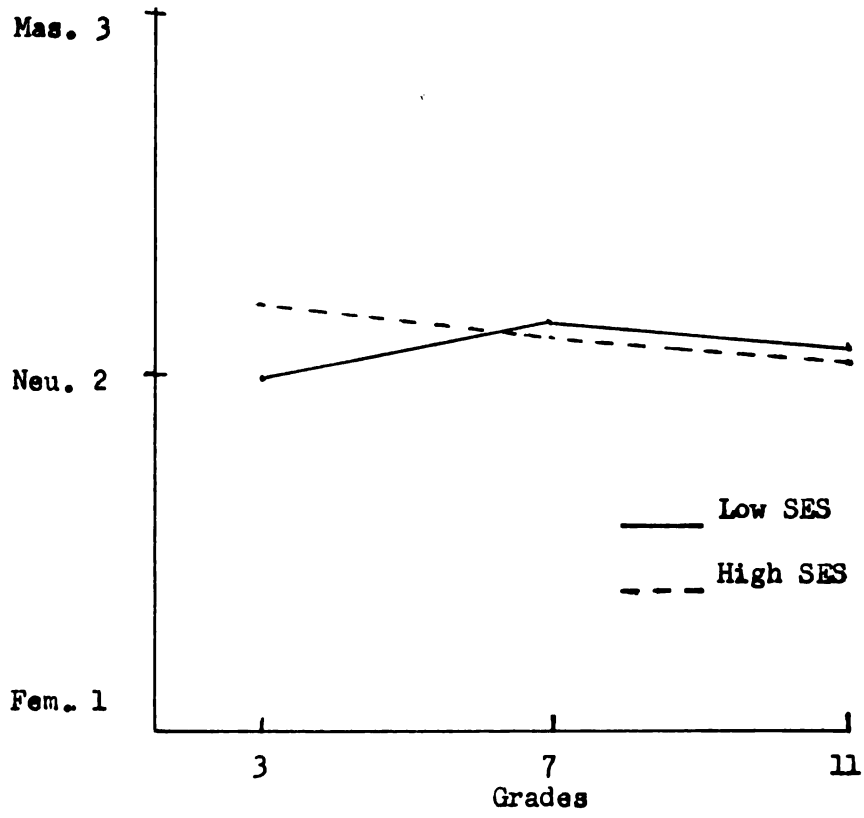

Figure 6.--Plots of mean scores of high and low socio-economic status groups by grades.

Hypothesis Eight. The alternate hypotheses were:

8a. The longitudinal vocational response pattern will be the same for high and low socio-economic status groups by boys and girls.

8b. The longitudinal vocational response pattern will be different for high and low socio-economic status groups by boys and girls.

From Table 8 it can be seen that grade-by-sex-by-socio-economic status is not significant and therefore alternate hypothesis 8a is supported. That is, boys and girls will react similarly across the grade levels by socio-economic status.

Hypothesis Nine. The alternate hypotheses were:

9a. Grades three, seven and eleven will have the same vocational response pattern toward masculine, feminine and neutral occupations.

9b. Grades three, seven and eleven will have different response patterns toward masculine, feminine and neutral occupations.

Grade-by-scale (f,m,n) interaction is significant at $p < .01$ thereby supporting hypothesis 9b. Figure 7 indicates nearly parallel patterns between seventh and eleventh grades, but a different pattern from the third grade. The nature of the interaction is identified as being due to the third grade, particularly on the masculine scale.

Hypothesis Ten. The alternates were:

10a. Boys and girls in grades three, seven and eleven will have the same vocational response pattern for masculine, feminine and neutral occupations.

10b. Boys and girls in grades three, seven and eleven will have different vocational response patterns for masculine, feminine

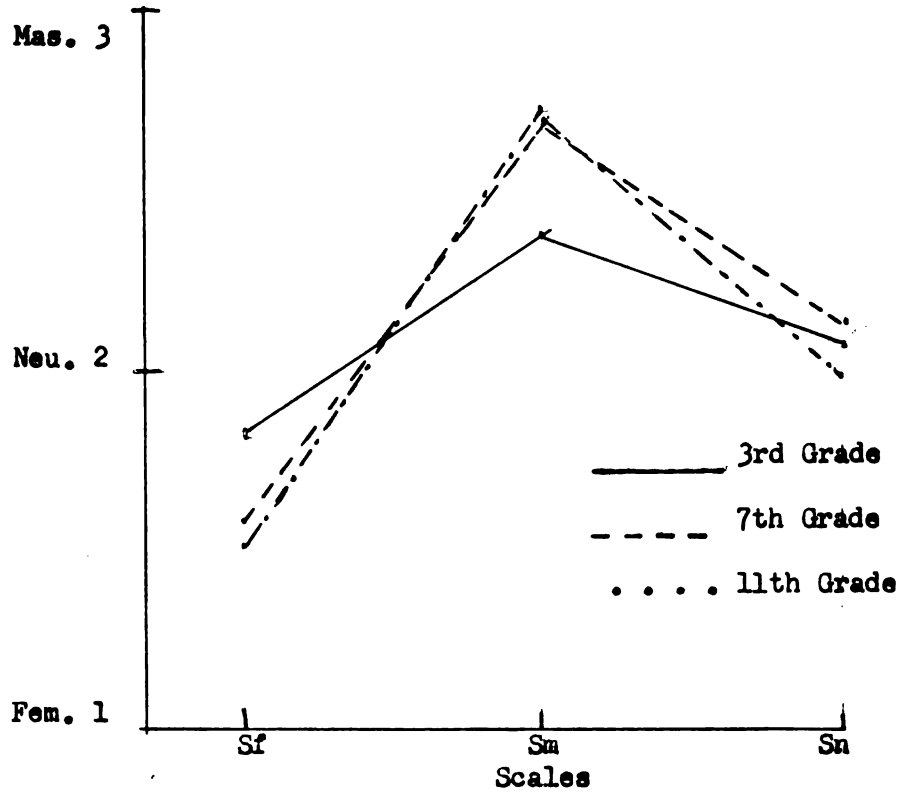

Figure 7.--Plots of mean scores of 3rd, 7th and 11th grades by feminine, masculine and neutral scales.

and neutral occupations.

Alternate 10a is supported as grade-by-sex-by-scale (f,m,n) interaction is not significant in Table 8. That is, boys and girls will react similarly across grade levels to masculine, feminine and neutral occupations.

Hypothesis Eleven. The alternates were:

11a. High and low socio-economic status groups in grades three, seven and eleven will have the same vocational response patterns for masculine, feminine and neutral occupations.

11b. High and low socio-economic status groups in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations.

Results of the grade-by-scale-by-socio-economic status

interaction was found to be significant at $p < .01$ so hypothesis 11b is supported. With the focus on patterns as developed across grades, the interaction of high and low socio-economic groups and scales (f,m, n) was plotted within grades. From inspection of Figure 8 it can be seen by comparing the three graphs that the high socio-economic status groups in grades three, seven and eleven parallel each other, but that the third grade low socio-economic status group does not parallel the others. The significance of this interaction, then, is primarily due to the responses of the low socio-economic status group in the third grade to the masculine scale.

Hypothesis Twelve. The alternate hypotheses were:

12a. Boys and girls of high and low socio-economic status in grades three, seven and eleven will have the same vocational response patterns for masculine, feminine and neutral occupations.

12b. Boys and girls of high and low socio-economic status in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations.

Alternate 12a was supported. The interaction of grade-by-sex-by-socio-economic status-by-scale (f,m,n) was not significant (Table 8). Therefore, boys and girls will react similarly across grade levels to masculine, feminine and neutral occupations by high and low socio-economic status groups.

Supplementary Findings

Two significant results in the analysis of variance which were not concerned with patterning and thus were not in the hypotheses should be pointed out. Sex, as a main effect, was significant at $p < .01$, and sex-by-part (v-id, v-in, v-ap) was significant at $p < .01$.

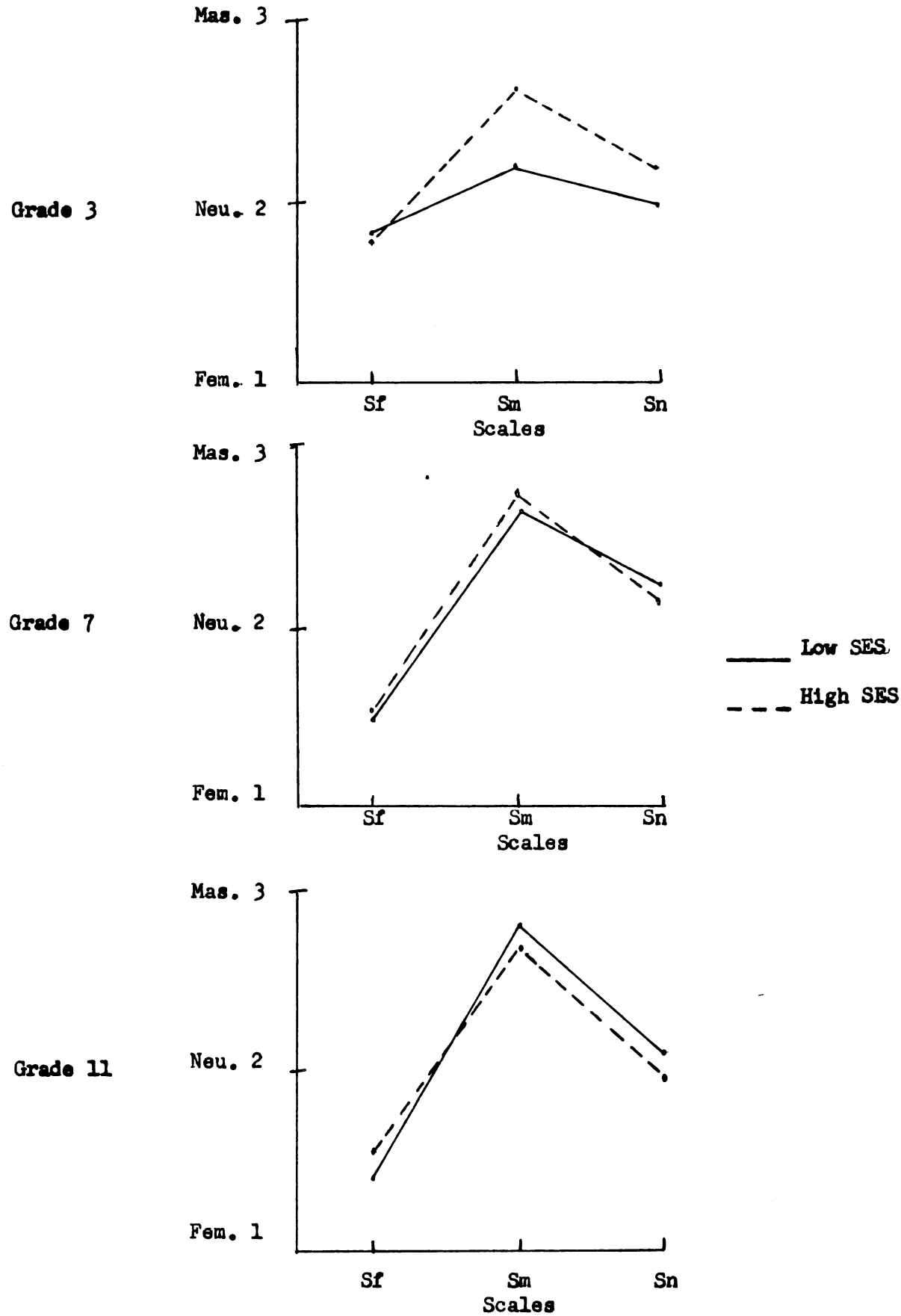

Figure 8.--Plots of mean scores of masculine, feminine and neutral occupations for high and low socio-economic status groups by grades.

Plotting the interaction of boys and girls with the three parts shows that the significance is accountable by the difference between boys and girls on Part One (vocational identification). (See Figure 9.)

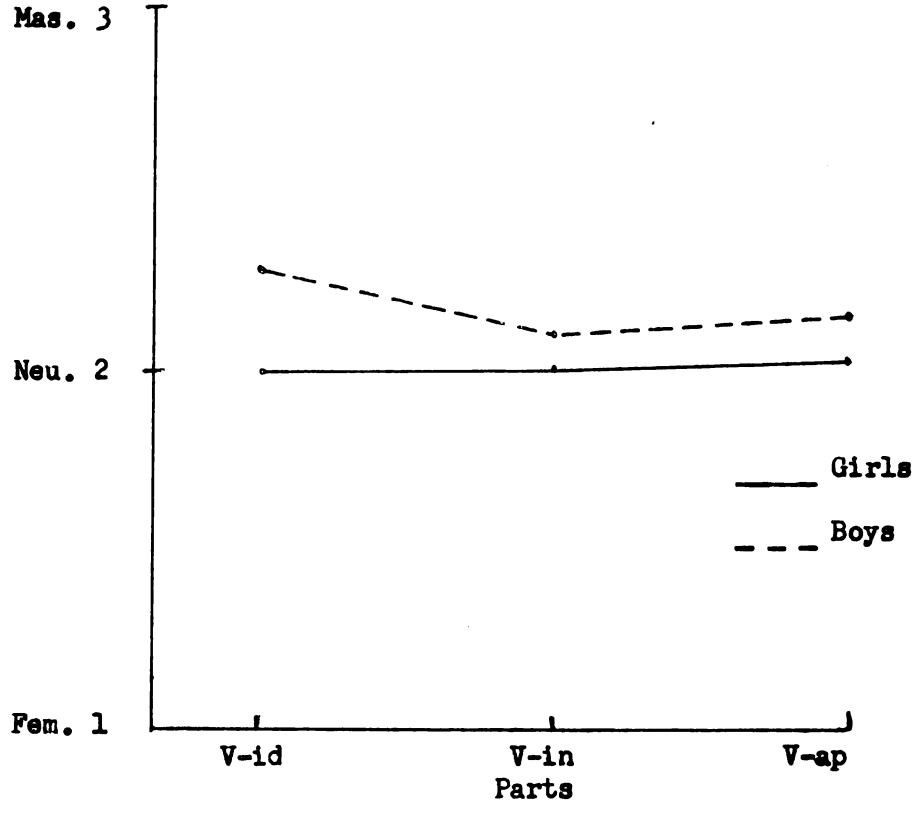

Figure 9.--Plots of mean scores of boys and girls for parts 1, 2, and 3.

Other data concerned with perceptions of sex-linked occupations, and not specifically related to the hypotheses, provides valuable information. As male occupations were coded a value of three and female occupations a one the degree to which boys and girls saw occupations as masculine or feminine could be determined by the scale value given them. To assess the most masculine and most feminine occupations Tables 9, 10 and 11 were constructed using an arbitrary range of 2.5 - 3.0 for most masculine occupations and a 1.0 - 1.5 range for most feminine occupations. In examining the data it is

Table 9.--Occupations seen as most feminine and most masculine by 3rd grade boys and girls of high and low socio-economic status.

		Part 1 (V-id)		Part 2 (V-in)		Part 3 (V-ap)	
		Feminine	Masculine	Feminine	Masculine	Feminine	Masculine
Girls	High SES	Secretary 1.11 Nurse 1.22 Actress 1.44 Presser 1.44	Truck Driver 2.56	Presser 1.33 Nurse 1.33 Secretary 1.44	Policeman 3.00 Truck Driver 3.00	Secretary 1.22 Nurse 1.22	Machinist 3.00 Truck Driver 2.89 Police 2.67 El.Operator 2.55
	Low SES	Secretary 1.21 Presser 1.28 Nurse 1.36 Engineer 1.36 El. Oper. 1.36 Usher 1.42 Actress 1.43	-	Secretary 1.28 Actress 1.28 Engineer 1.36 Nurse 1.43	Truck Driver 2.57	Secretary 1.21 Nurse 1.21 Actor 1.43 Engineer 1.50	Police 2.5
Boys	High SES	-	Truck Driver 3.00 Police 2.86 Machinist 2.71 Engineer 2.71 El.Teacher 2.71 Presser 2.57 Baker 2.57	-	Engineer 2.71 El.Operator 2.71 Machinist 2.57 Police 2.57	-	Usher 3.00 Engineer 3.00 Police 2.86 Truck Driver 2.71 Machinist 2.71 El.Teacher 2.57
	Low SES	-	Presser 2.89 Machinist 2.61 Truck Driver 2.56	-	Truck Driver 2.61 Police 2.50	-	-

Table 10.--Occupations seen as most feminine and masculine by 7th grade girls and boys of high and low socio-economic levels.

		Part 1 (V-id)			Part 2 (V-in)			Part 3 (V-ap)		
		Feminine		Masculine	Feminine		Masculine	Feminine		Masculine
Girls	High SES	Secretary Elementary Teacher	1.15 1.31	Truck Driver 2.85 Police 2.69 Machinist 2.54 Engineer 2.54	Secretary Nurse	1.15 1.38	Truck Driver 2.54 Machinist 2.54	Secretary Nurse	1.15 1.31	Machinist 2.92 Police 2.85 Truck Driver 2.77
	Low SES	Secretary Nurse	1.00 1.25	Truck Driver 3.0 Engineer 2.87 Police 2.75 Machinist 2.62 Usher 2.50 Elevator Operator 2.50	Secretary Baker Nurse	1.25 1.38 1.50	Machinist 2.88	Secretary	1.25	Truck Driver 2.88 Engineer 2.87 Usher 2.75 Machinist 2.75 Police 2.62 Elevator Operator 2.50
Boys	High SES	Secretary Presser	1.31 1.46	Police 2.85 Truck Driver 2.85 Elevator Operator 2.77 Machinist 2.77 Engineer 2.62	Secretary Presser	1.15 1.38	Truck Driver 2.77 Police 2.77 Machinist 2.62 Engineer 2.62	Secretary	1.15	Truck Driver 3.00 Machinist 3.00 Police 3.00 Engineer 2.77
	Low SES	Secretary Nurse	1.23 1.38	Truck Driver 3.00 Police 2.85 Machinist 2.84 Engineer 2.77	Secretary	1.00	-	Secretary Elementary Teacher	1.31 1.46	Truck Driver 3.0 Machinist 2.84 Police 2.62 Engineer 2.61 Usher 2.53

Table 11.--Occupations seen as most feminine and most masculine by 11th grade girls and boys of high and low socio-economic levels.

Table 11.--Occupations seen as most feminine and most masculine by 11th grade girls and boys of high and low socio-economic levels.

		Part 1 (V-id)			Part 2 (V-in)				Part 3 (V-ap)			
		Feminine		Masculine		Feminine		Masculine		Feminine		Masculine	
Girls	High SES	Secretary	1.00	Truck Driver	3.00	Secretary	1.17	Machinist	2.67	Secretary	1.00	Truck Driver	3.00
		Baker	1.33	Police	2.83	Elevator Operator	1.33	Truck Driver	2.50	Elevator Operator	1.50	Police	2.83
		Nurse	1.33	Machinist	2.67							Machinist	2.50
		Elementary Teacher	1.5	Engineer	2.5								
				Usher	2.5								
	Low SES	Secretary	1.22	Truck Driver	3.00	Secretary	1.22	Machinist	3.00	Secretary	1.22	Machinist	3.00
		Elementary Teacher	1.33	Police	2.89			Truck Driver	3.00	Presser	1.33	Truck Driver	3.00
		Nurse	1.44	Machinist	2.89			Engineer	2.89	Nurse	1.44	Police	2.89
				Engineer	2.67			Police	2.78	Elementary Teacher	1.44	Engineer	2.67
				Usher	2.56							Usher	2.56
Boys	High SES	Secretary	1.11	Truck Driver	3.00	Secretary	1.22	Truck Driver	2.89	Secretary	1.11	Machinist	3.00
				Machinist	2.89	Elementary Teacher	1.44	Machinist	2.89	Presser	1.44	Truck Driver	2.89
				Police	2.78			Engineer	2.67	Elementary Teacher	1.44	Engineer	2.67
								Police	2.56			Police	2.56
	Low SES	Secretary	1.08	Police	2.85	Secretary	1.23	Engineer	2.85	Secretary	1.23	Police	2.77
				Machinist	2.62	Presser	1.31	Truck Driver	2.54	Nurse	1.38	Machinist	2.77
				Truck Driver	2.54	Nurse	1.31	Machinist	2.54	Presser	1.38	Truck Driver	2.69
												Engineer	2.54

important to remember the occupational classifications used in the instrument. They were: feminine occupations--secretary, nurse, elementary teacher and laundry-dry cleaning presser; masculine occupations--truck driver, policeman, machinist and engineer; and neutral occupations--elevator operator, actor-actress, baker and usher. Tables 9, 10 and 11 list the data by grade, sex and socio-economic status.

By merging the data from the preceding three tables a composite picture of the degrees of masculinity and femininity given various occupations can be obtained by tabulating the total number of times an occupation has been mentioned as most masculine or most feminine. Looking at Table 12 it can be seen that secretary was seen as a most feminine occupation eighteen times out of a possible eighteen times by the girls while the boys viewed it as most feminine twelve times out of eighteen. Combining girls' and boys' results, secretary and nurse are seen as the most feminine, and truck driver, machinist and policeman as the most masculine. There are differences, however, in the boys' and girls' views of the feminine occupations. Girls see feminine occupations more often to be feminine than do the boys while both girls and boys tend to agree on masculine occupations.

In three instances reversals took place in that a traditional sex-linked occupation was given a rating of the opposite sex. These reversals all occurred with third grade subjects. All four neutral occupations were given most feminine and/or most masculine ratings by every subject group except the low socio-economic status boys.

Each subject was asked to indicate the basis upon which he

Table 12.--The total number of times that occupations were seen as most masculine and most feminine by boys and girls of high and low socio-economic status groups.

		Girls			Boys			Total
	Occupation	LSES	HSES	Total	LSES	HSES	Total	
Feminine	Secretary	9	9	18	6	6	12	30
	Nurse	7	6	13	3	0	3	16
	El. Teacher	2	2	4	1	2	3	7[1]
	Presser	2	2	4	2	3	5	9[2]
Masculine	Machinist	6	7	13	6	9	15	28
	Police	6	6	12	5	9	14	26
	Truck Driver	6	9	15	7	8	15	30
	Engineer	5	2	7	4	8	12	20[3]
Neutral	Baker	2 fem	1 fem	3 fem	-	-	-	3 fem
		-	-	-	-	1 mas	1 mas	1 mas
	Actor	3 fem	1 fem	4 fem	-	-	-	4 fem
		-	-	-	-	-	-	-
	El.Operator	1 fem	2 fem	3 fem	-	-	-	3 fem
		2 mas	1 mas	3 mas	-	2 mas	2 mas	5 mas
	Usher	1 fem	-	1 fem	-	-	-	1 fem
		4 mas	1 mas	5 mas	1	1 mas	1 mas	7 mas

1 Two masculine ratings given by 3rd grade boys, HSES, on Part 1 (V-id) and Part 2 (V-in).
2 Two masculine ratings given by 3rd grade boys, HSES and LSES, on Part 1 (V-id).
3 Three feminine ratings given by 3rd grade girls, LSES, on Part 1 (V-id), Part 2 (V-in), Part 3 (V-ap).

made his picture decisions for each of the three parts (v-id, v-in, v-ap). The questions were, "Why did you like the pictures you chose?" "How did you choose which person likes each job best?" and "How did you decide which person made the best choice of each job?" Alternative responses were provided which were developed from open-ended responses in the pilot study. These choices were randomly placed for each part in order to avoid a response set. The choices were, "By choosing the person who looks like he is doing the job best", "By choosing the women workers", "By choosing the person who is best for the job", "By choosing the men workers", and "Other (write-in)". There are some slight variations for the responses for Part One due to the form of the question. (See Appendix D.)

An inspection of the sub-totals presented in Table 13 shows that "By choosing the person who is best for the job" is the preferred response for the majority of the subjects (chosen 190 times) although "By choosing the person who looks like he is doing the job best" also was frequently cited (97 times). The choice of men and/or women workers was confined almost exclusively to the third grade. These results will be discussed in Chapter 5.

Summary

Twelve hypotheses were studied. Each contained two alternate forms. Graphic presentation and data were used to determine whether or not either form could be supported. The first three results were presented graphically. The remaining hypotheses were tested statistically. The following hypotheses were accepted:

When indicating a preference for a male or female worker in identical vocational activities subjects will select the picture where

Table 13.--Summary of responses to decision-making criteria for picture selection.

			Part 1 (V-id)					Part 2 (V-in)					Part 3 (V-ap)				
			A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
3rd Grade	Girls	HSES	1	1	4	2	1	1		5	1	2		1	3	3	2
		LSES	1	2	4	3	4	1	2	5	4	4	1	3	4	3	3
	Boys	HSES	2		3	1	1	2		2	2	1	2		2	2	1
		LSES	8	1	2	3	3	8		1	7	2	9		1	5	2
7th Grade	Girls	HSES			8	1	4			4	4	5			9	2	2
		LSES			6	2				3	2				3	4	
	Boys	HSES			8	5				9	3	1			11	2	
		LSES			9	2	2		1	8	3	1			8	3	2
11th Grade	Girls	HSES			2	4				3	2				4	2	
		LSES		1	7	1				8	1				8	1	
	Boys	HSES			6	1	1			6		3			6	2	1
		LSES			6	5	2			5	5	3			7	4	2
Sub-totals			12	4	65	30	18	12	3	59	34	21	12	4	66	33	15

Note: A= By choosing the men workers
B= By choosing the women workers
C= By choosing the person who is best for the job
D= By choosing the person who looks like he is doing the job best
E= Other (write-in)

the worker represents the traditional sex-linkage. (1b)

When comparing the interest of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage. (2b)

When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage. (3b)

The longitudinal vocational response pattern will be different for boys and girls. (5b)

The longitudinal vocational response pattern for each part will be different for boys and girls. (6b)

The longitudinal vocational response pattern will be different for high and low socio-economic status groups. (7b)

The longitudinal vocational response pattern will be the same for high and low socio-economic status groups by boys and girls. (8a)

Grades three, seven and eleven will have different response patterns toward masculine, feminine and neutral occupations. (9b)

Boys and girls in grades three, seven and eleven will have the same vocational response pattern for masculine, feminine and neutral occupations. (10a)

High and low socio-economic status groups in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations. (11b)

Boys and girls of high and low socio-economic status in grades three, seven and eleven will have the same vocational response pattern for masculine, feminine and neutral occupations. (12a)

Neither of the fourth hypotheses could be supported.

Supplementary findings presented significant results for sex as a main effect and for the interaction of sex and part (v-id, v-in, v-ap). By means of tables, occupations seen as most feminine and most masculine were presented for girls and boys of high and low socio-economic status for each of the three grades. A composite table of occupations made it possible to rank occupations as to their perceived degree of masculinity or femininity. Secretary and nurse were seen as most feminine, and truck driver, machinist and policeman as most masculine. There were differences, however, between the perceptions of the boys and girls.

An examination of the decision-making criteria (see Table 13 sub-totals) used by subjects for their choice of picture in each part (v-id, v-in, v-ap) showed that most subjects picked the response "By choosing the person who is best for the job." "By choosing men workers" or "By choosing women workers" was selected as a response almost exclusively by third grade subjects.

CHAPTER V

DISCUSSION AND CONCLUSIONS

Introduction

This chapter will discuss the results of the present investigation which were presented in Chapter IV. Causes and influences operating to affect the data will be suggested and examined. Implications of the study for vocational counseling will be stated and suggestions for further research proposed. A summary will complete the chapter.

Results

The alternate forms of the first three hypotheses that were supported were:

When indicating a preference for a male or female worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage. (1b)

When comparing the interest of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage. (2b)

When comparing the appropriateness of the vocational choice of a female and male worker in identical vocational activities subjects will select the picture where the worker represents the traditional sex-linkage. (3b)

The first three alternate hypotheses confirmed that whether responding to vocational identification, vocational interest or

vocational appropriateness, boys and girls as a whole tend to see the culturally expected worker in a sex-linked occupation most favorably. Implied in their responses appears to be a value judgment about males and females in their proper roles and functions in society. This was also reflected in the trend toward sex-linkage conformity shown in hypothesis four. Neither of the alternate forms of this hypothesis (the longitudinal vocational response pattern for each part will be characterized by an increasing trend toward the same sex as the individual responding (4a) or toward the traditional sex-linkage conformity (4b))could be supported because the full criteria were not met. However, there were more trends within the data toward sex-linkage conformity than toward the sex of the respondent. The number of variables represented in this hypothesis (part, scale, grade and sex) provided many sources of variation and deviation from a consistent, predictable longitudinal vocational response pattern.

Incorporating the variable of grade with sex, some significant other factors need to be viewed. The alternative forms of hypotheses five, six, and nine that were supported clearly indicated that the view of sex-linked occupations changes over time.

The longitudinal vocational response pattern will be different for boys and girls. (5b)

The longitudinal vocational response pattern for each part will be different for boys and girls. (6b)

Grades three, seven and eleven will have different response patterns toward masculine, feminine and neutral occupations. (9b)

Although the trend was toward acceptance of traditional sex-linkage conformity, as shown in the first three alternate hypotheses,

there were significant differences between the third grade and the seventh and eleventh grades, and between boys and girls as shown by the alternate forms of hypotheses five, six and nine. Third grade boys appear to have a very male orientation to the occupational world; every occupational group, regardless of its traditional sex-linkage, was seen as more masculine than either neutral or feminine. Particularly did these boys prefer the male workers in vocational identification. It would seem that third grade boys have not yet been sensitized to or discovered "appropriate" roles for male and female workers. The boys viewed the men as best liked in all occupations, the men as liking all occupations best, and the men as having made the best occupational choices regardless of the sex-linkage of those occupations. The same phenomena appeared with the third grade girls, but not to the degree it did with the boys as only in vocational identification did all three occupational groupings (masculine, feminine, neutral) fall between the feminine and neutral ratings. In vocational interest and vocational appropriateness neutral and masculine occupations moved more closely to their sex-linked status.

It seems clear that boys and girls in grade three identify with male and female workers on the basis of their sex rather than on the basis of their work role. It also is clear that this phenomenon has ended by the seventh grade when the boys and girls are similar in their views of sex-linked occupations and adhere to the cultural stereotype.

The hypothesis ten alternative that was supported indicated that boys and girls in grades three, seven and eleven had the same vocational response pattern for masculine, feminine and neutral

occupations. In view of the previous results it seems contradictory, but two factors need examination. First, the results approached significance ($F = 3.74$, $p<.05$ $F = 3.84$). Second, as sex-by-grade-by-part was significant this hypothesis is indicating that collapsing the sex-linked occupational groups across vocational identification, vocational interest and vocational appropriateness, causes the sex and grade to vary predictably across the scales (m,f,n).

Another important variable along with sex and grade was the socio-economic status of the subjects. Hypotheses seven, eight eleven and twelve dealt with this variable. The alternative forms of hypotheses seven and eleven that were supported are:

The longitudinal vocational response pattern will be different for high and low socio-economic status groups. (7b)

High and low socio-economic status groups in grades three, seven and eleven will have different vocational response patterns for masculine, feminine and neutral occupations. (11b)

Both these results indicated that students in various grades of high and low socio-economic status viewed the occupational world of sex-linked occupations in significantly different ways. An examination of the results, however, narrowed the difference to the perceptions that third grade students of low socio-economic status had of masculine occupations. All other grades and socio-economic levels saw each of the three occupational groupings in a similar manner. Why did third graders of low socio-economic status see masculine occupations as more neutral than other grades? Results cited earlier indicated that third graders had not had the socialization in cultural stereotypes that seventh and eleventh graders had had, and they

identified more with sex than with work role. It then was highly possible that mothers who worked in the lower status had jobs which although traditionally masculine were seen as feminine by the girls. Knowing that third grade boys saw a masculine occupational world it was logical to assume the girls were pulling the masculine scale score toward a neutral rating. In fact, the data confirmed these assumptions. No working mothers among all the high socio-economic status subjects held jobs in any fields other than in typically feminine sex-linked occupations. Slightly less than half of the working mothers in the low socio-economic status group held factory type jobs such as running machines, a masculine type job. It is interesting subsequently to see that the third grade girls of high socio-economic status rated masculine occupations at a 2.47 while third grade girls of low socio-economic status rated masculine jobs at 1.92 (masculine= 3, neutral = 2, feminine = 1). It was quite clear that the high socio-economic subjects, particularly the girls, were introduced to the traditionally sex-linked occupational world before those of low socio-economic status simply by virtue of example.

The hypotheses eight and twelve alternates were:

The longitudinal vocational response pattern will be the same for high and low socio-economic status groups by boys and girls. (8a)

Boys and girls of high and low socio-economic status groups in grades three, seven and eleven will have the same vocational response patterns for masculine, feminine and neutral occupations. (12a)

Hypothesis eight indicated that grade and socio-economic status varied predictably with boys and girls. As grade-by-socio-economic

status was significant no further significance was found by breaking the data apart for boys and girls. The same was true of the twelfth hypothesis. The addition of sex to the significant interaction of grade-by-socio-economic status-by-scale (f,m,n) resulted in the no difference statement. That is, these variables varied together across sex. Upon the basis of the four alternative hypotheses related to socio-economic status, the conclusion can be reached that grade rather than sex was most important in relation to socio-economic status and the perceived occupational world.

Supplementary Findings

It was stated in the results that sex and sex in relation to vocational identification, vocational interest and vocational appropriateness provided significant results. Further examination of the data (Table 8) indicated that the three factors, scale (f,m,n), sex, and grade, accounted for most of the variance in the analysis. Scale, sex, sex-by-grade, and grade-by-scale accounted for eighty-eight percent of the variance. From this data a conclusion can be drawn that there are strong stereotypic ways of behaving toward traditionally sex-linked occupations but the sexes, and grades three, seven and eleven differ in these responses.

The categorization of occupations by degrees of masculinity and femininity provided interesting data and raised interesting questions. Third grade boys gave no occupations a most feminine rating (Table 9); this confirmed previous data of a male world for these subjects. However, low socio-economic status third grade boys listed only five jobs as most masculine while high socio-economic status boys listed thirteen. At this stage of development are low

socio-economic status boys less rigid in their views of acceptable occupational roles than high socio-economic status boys or have they not yet become aware of cultural influences? On the basis of previously cited results in regard to working mothers the latter seems the most tenable explanation.

The third grade girls saw many more most feminine occupations than masculine ones. In fact low socio-economic status girls rated an engineer as a feminine occupation in each of the three areas, vocational identification, vocational interest and vocational appropriateness. This would seem to confirm earlier statements about the roles in which the low socio-economic status subjects are apt to see their mothers and with which they can identify. In this data for the third grade it is reasonable to suspect that children of high socio-economic background tended to become aware of and accept traditional sex-linked occupational patterns before those of low socio-economic status.

The seventh grade presented the most liberal view of the three grades toward the vocational interests of men and women in the various occupations. (Table 10) In the parts of vocational identification and vocational appropriateness they listed many more occupations than they did in the vocational interest area. It suggests that as a group seventh graders did not tie interest in an occupation to the sex of the individual in that occupation. By eleventh grade this flexibility was gone; interest paralleled sex appropriateness for the occupation. Of the three grades the eleventh grade most clearly and rigidly moderated its choices in its entire vocational response pattern by the appropriate worker for the particular sex-linked occupation.

Some of the specific occupations deserve special consideration.

Table 12 provided the summary data on the degrees of masculinity and femininity given various occupations. Every group of girls by grade and socio-economic level saw secretary as being most feminine in every part. Except for the third grade boys who had no feminine occupations all other groups of boys also viewed secretary as being the most feminine. Nursing, the second most feminine for the girls, was not similarly seen by the boys. Does this imply that boys see nursing as an acceptable role for a male? They seem to be more liberal in their views than are the girls. Will girls, then, support and encourage men entering the field?

Some educators may be pleased and surprised to see that an elementary teacher was not viewed as a strongly feminine occupation; in fact, high socio-economic third grade boys saw it as a masculine occupation. If these results are truly reflective of boys and girls generally, there should be strong support for the current movement to encourage more men to enter elementary education.

The boys and girls seemed to perceive the machinist, policeman and truck driver with relatively the same degree of masculinity while engineer was more male oriented from the boys' view than from the girls'. Still all four of the masculine occupations had stronger masculinity ratings than all but the secretary had femininity ratings. This would seem to indicate that the traditional sex-linkage of occupations is stronger in male dominated occupations than in female dominated ones.

There was no evidence in this study to defend the oft-stated belief that girls identify more closely with traditional feminine occupations than boys do with traditional masculine occupations

(Powell and Bloom, 1962, Bezler, 1967, O'Hara, 1962, Clark, 1967). Nor, if one can assume that agression for girls would be reflected in an acceptance of male occupations for women, does this study indicate a "last fling of aggression" for seventh grade girls as might have been anticipated from Matthews' study (1963). The patterns of identification for seventh and eleventh grade boys and girls was very similar in relation to sex-linked occupations and, overall, masculine occupations were seen as more masculine by the boys than feminine occupations were seen as feminine by the girls. The asset of this study, however, in providing the same list of occupations for both boys and girls gave more complete data than most studies from which to draw conclusions. Thus, the information that girls saw masculine jobs having nearly the same degree of masculinity as boys did, and that boys saw feminine jobs (except nursing) as having nearly the same degree of femininity as girls did eliminates an apparent, but not actual, difference in identification patterns. This information also substantiated the idea put forth by Stefflre, Resnikoff, and Lezotte (1968) and Simmons (1962) that prestige may not be independent of sex.

Examination of the bases upon which the subjects made their responses to the instrument confirmed suppositions made earlier. (Table 13) That is, the male and female identification pattern for third graders again appeared. "Choosing men workers" or "choosing women workers", had almost completely dropped out as a basis for decision-making by seventh grade. The male identification pattern was much stronger for the third grade boys than the female identification pattern was for the third grade girls suggesting that the girls

were either more mature than the boys or that they became aware of socialization patterns toward sex-linked occupations earlier.

"By choosing the person who looks like he is doing the job best" elicited responses from all grades although it was not the predominant response. It was somewhat puzzling in that the pictures of the workers were taken so that no facial expressions were evident, clothes were as similar as possible, and the work settings were identical. Subjects either responded to minimal cues (clothes, hair style, etc.) or interpreted "looks like" in a broad sense approaching the same meaning as the response of "choosing the person best for the job." In other words, a worker may have been seen as doing a job best because he was a man or because she was a women. Some subjects may also have had trouble understanding the difference between "doing the job best" and "best for the job."

However, by far the majority of the responses, "By choosing the person who is best for the job", indicated that the subjects made value judgments related to the word "best." As they had no information on the skill and/or background of the workers, and as the pictures were identical as to occupational task and performance it can be asserted that their choices were based on the appropriateness of a particular occupation for the particular sex. As this response was predominant throughout the grades, but became more pronounced in the eleventh grade, it paralleled previous data showing that the stereotypic response to sex-linked occupations is a developmental or socialization process.

Suggestions for Further Research

There is a continued need for exploration in the area of

vocational development and the effects of sex and grade upon that development in order to develop a comprehensive normal vocational development pattern. The current research has shown that vocational patterning does occur and that it does change as a function of time. We need to know more. "To teach effectively one must have knowledge of the nature and rate of change that takes place in human organisms. One must know what interrelated factors affect growth at various stages of development and when various aspects of growth are first observable, sprint forward, remain stationary, reach optimal development and decline." (Van Dalen, 1966, p. 228) When does the vocational response pattern change between the third and seventh grades? Is it a gradual change or is it evident at a specific grade? How does it occur? Is socialization the process which instills in a child concepts of acceptable roles and aspirations? We need to know these factors in regard to vocational development.

As group totals obscure individual scores a next step to the present study might be to look at individual scores deviant from the grade norm. How is the individual different? What factors might account for the difference? For instance, in the present study were boys who identified with males consistently in Part One, vocational identification, in the upper grades less mature than other boys? Does intelligence or achievement have an effect?

Another area of investigation revolves around the sociology of occupational choice and the socialization process in families. Not enough is known in these areas to develop a comprehensive conceptual framework about how children develop their views of the occupational world. How do families go about presenting the world of work to

children? Does it vary by socio-economic status? What effect do working mothers have? Do college students have the same stereotypic views of occupations that eleventh graders do? Comprehensive studies in this area could add significant knowledge to understanding factors impinging upon vocational development.

Studies need to be constructed assessing the impact of vocational guidance and counseling upon students' views of the world of work and upon their occupational choice-making. If counselors are to be effective in effecting change they need to know how the developmental pattern toward sex-linked occupations can be influenced by occupational experiences.

Conclusions

The results of this study have clearly indicated that boys and girls have strong stereotypic ways of responding to sex-linked occupations but these views change over time and are significantly different for boys and girls. Too, it is apparent that various sex-linked occupations have varying degrees of masculinity and femininity and these degrees vary by boys and girls. This data showing the patterns of perceptions and attitudes toward masculine and feminine occupations through childhood and adolescence has implications for counseling practice. It would seem appropriate, then, that counselors take the initiative for promoting a program of vocational counseling which would have an effect on broadening the vocational horizons of boys and girls. To do this, counselors must have an awareness of the developmental stages of their counselees as it has been shown that grades differ in their occupational perceptions. Therefore, differential experiences should be planned for the various grades.

As sexual identification, as hypothesized by Havighurst (1964), has been shown to be important to the third grade child a wide spectrum of vocations with both male and female workers should be presented to that age. Having both men and women in such as the following fields, science, dance, architecture, beauty culture, nursing, engineering and factory work, tell about their jobs would help children link their own abilities and interests to a job regardless of its present sex-typing. As Welch (1949) indicated that social approval acts as a powerful force on vocational choice the role modeling which these types of experiences can provide in the third grade may act to increase the appropriateness and acceptability of a greater variety of occupations for both sexes and for low and high socio-economic status groups. Rossi (1964) would support these types of vocational experiences, for he has stated, "Changing the sex ratio within an occupation can only be achieved by altering the sex typing of such occupations long before young people make a career decision. It is during the early years of elementary school education that young people develop their basic views of appropriate characteristics, activities and goals for their sex." (p. 638) Counselors can help to give positive social recognition to all occupations; to break down a cultural stereotypic set toward various occupations; to modify social attitudes toward occupations; and to use a rational approach toward occupational choice (Welch, 1949). They also can develop materials for all ages which do not stereotype occupations by sex.

Currently, in the upper grades a counselor needs an understanding of occupational stereotyping as it may affect an individual's occupational exploration and career planning (Ulrich, 1966). There is

some suggestion, however, that occupational stereotyping may have more impact on the high school student than on the junior high student. A study by Hartley (1961) indicated that eleven year old girls had more interest areas than younger or older girls and the present study showed seventh graders had more liberal views toward the occupational interests of men and women than third or eleventh grade students. The middle school years, then--grades six, seven and eight--realistically might be a good time to involve students in the world in which men and women can and do live. Also, it may be effective to provide role models at this age. As this is the most tolerant period with regard to interests, this period may be also a most appropriate time for dealing with and exploring the boys' and girls' views of appropriate occupational choices for each other. Developmentally they are aware of masculine and feminine roles, but are flexible enough to let males and females be interested in a variety of occupations. With exploration and discussion this might lead to a greater acceptance of the appropriateness of more occupations for both sexes.

Super (1963) pointed out that the reality of society plays an increasingly important part in occupational choice from early adolescence to adulthood. This was reflected in the rigid acceptance by eleventh graders of the traditional view of sex-linked occupations. Although these students determined appropriateness of occupational choice on the basis of the traditional sex-linked roles, the varying degree of masculinity and femininity they gave to the various occupations provides some possible approach to even changing some views at this age. The three occupations which currently seem to have the most chance of breaking the cultural stereotype are elementary

teaching for males, nursing for males, and engineering for females. All other occupations are so strongly identified with a particular sex that attitude change needs to be initiated in the earlier years in order to be effective.

The kinds of vocational experiences that have been suggested should help boys and girls make vocational decisions upon the basis of interest and ability rather than as a response to societal pressure toward occupations of a traditionally sex-linked conformity. This, then, should result in the societal structure accommodating men and women in all areas in which they are capable and in providing an even distribution of manpower to job opportunity, two important and needed changes as presented in Chapter I.

Summary

This chapter discussed the results of the study which indicated that there are strong stereotypic ways of behaving toward traditionally sex-linked occupations but the sexes, and grades three, seven and eleven differ in these responses. Socio-economic status also was shown to have a significant effect in the third grade.

Occupations were shown to have varying degrees of masculinity and femininity with the male dominated occupations having a stronger traditional sex-linkage than the female dominated occupations.

Methods by which counselors could affect the change of sex stereotyping of occupations were proposed as were suggestions for further research.

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APPENDICES

APPENDIX A

Instructions for Research Administrators

To Research Administrators:

Your cooperation in the administration of the paired picture instrument for this vocational inquiry study is greatly appreciated. Knowing the schedules of public school teachers, we are grateful for the extra time you are giving to participate in this project.

Vocational counseling is becoming increasingly important in today's complicated world. To be more effective we need to know more about individuals' views and attitudes toward various occupations at different age levels. Thus this research is directed at 3rd, 7th and 11th graders in an attempt to discover similarities and differences between boys and girls, and between age levels. The results will be made available to participating schools.

Procedures to be followed in administering the instrument are as follows:

1. Distribute answer sheets and pictures.
2. Read instructions.
3. Collect pictures and answer sheets separately.

The instructions are standardized and should be followed carefully in order to assure comparable results.

Manila envelopes are provided which contain answer sheets and the pictures. When you have completed the administration please put all materials in the envelope and label with your name, school and grade level. They will be collected at your school.

Thank you again for your assistance.

Marilyn M. Meyer
Counseling Psychologist
University Counseling Center
Wisconsin State University-Oshkosh

APPENDIX B

Instructions to be Read to Students

VOCATIONAL INQUIRY STUDY

Instructions to be read to students:

Today you are being asked to answer some questions about twelve occupations. Some members of the College of Education at Wisconsin State University-Oshkosh are conducting a study to learn more about people's feelings toward different jobs. This information will be used to help boys and girls as they plan their futures.

First, look at the yellow answer sheet. At the bottom put your age, check boy or girl, and put the grade you are in. (Pause)

Next, put down the jobs your mother and father have. If your mother does not work do not put anything in the space. If you do not know the exact name of the jobs your mother and father have try to describe what they do. For example, you might put teacher, carpenter or salesman, or you might put drives a truck, builds houses or runs a machine. Do not put down <u>where</u> your parents work, but <u>what they</u> do. (Pause)

Next, put an X opposite the statement that best describes how much education your father has had. (Read statements on answer sheet) (Pause)

Now write down the job or jobs you'd like to do when you grow up and begin to work.

Now let's look at the pictures. There are twelve pairs of pictures. The numbers go down the middle of the page. Each pair of pictures is the same job; one picture has a woman doing the job, the other picture has a man doing the job. So in number 1 the two workers are secretaries. Let me make sure the rest of them are clear to you. Number 2 - elevator operators, number 3 - police, number 4 - bakers, number 5 - actor and actress, number 6 - truck drivers, number 7 - machinists, number 8 - nurses, number 9 - ushers, number 10 - elementary teachers, number 11 - laundry-dry cleaning workers and number 12 - engineers (drafting).

Now find <u>Part I</u> on the yellow answer sheet. Put the pictures where you can see them. Notice again that each pair of pictures is of the same job. Now look at the two pictures in number 1. If you like picture A best, put an X over A next to number 1 on your answer sheet. If you like picture B best put an X over B on your answer sheet. Try hard to make a choice, but if you like the pictures the same put an X over C on your answer sheet. Now look at the pictures in number 2 and do the same thing. Put an X over A if you like it best, over B if you like it best, and over C if you like them the same. Are there any questions? Now do the same thing until you have done all twelve pairs of pictures. When you have finished please look up so I will know when everyone has completed the first part. (Pause)

Now you are ready for <u>Part 2</u>. Find <u>Part 2</u> on your yellow answer sheet. <u>This time choose the person who likes each job best.</u> Look at the two pictures in number 1. If you think the person in picture A <u>likes this job best</u> put an X across A next to number 1 on

your answer sheet. If you think the person in picture B likes this job best put an X across B. Try hard to make a choice, but if you think the people like the job the same put an X across C. Now do the same thing until you have done all twelve pairs of pictures. When you have finished please look up so I will know when everyone has completed the second part. (Pause)

Now you are ready for Part 3. Find Part 3 on your yellow answer sheet. This time choose the person who made the best choice of each job. If you think the person in picture A made the best choice of this job put an X across A next to number 1 on your answer sheet. If you think the person in picture B made the best choice put an X across B. Try hard to make a choice, but if you think the two people made equally good choices put an X across C. Are there any questions? Now do the same thing until you have done all twelve pairs of pictures. When you have finished please look up so I will know when everyone has completed the third part. (Pause)

Now look at the green answer sheet. Find Part 1. The question says, "Why did you like the pictures you chose?" The answers given are: (read answers from answer sheet). Put an X across the letter that best tells why you liked the pictures you did. If you do not know why you liked the picture you chose write "do not know" where it says "other." (Pause)

Find Part 2. This question says, "How did you choose which person likes each job best?" The answers given are: (read answers from answer sheet). Put an X across the letter that best tells how you chose which person liked each job best. If you do not know how you chose the people write "do not know" where it says "other." (Pause)

Find Part 3. This question says, "How did you decide which person made the best choice of each job?" The answers given are: (read answers from answer sheet). Put an X across the letter that best tells how you decided which person made the best choice of each job. If you do not know how you decided write "do not know" where it says "other." (Pause)

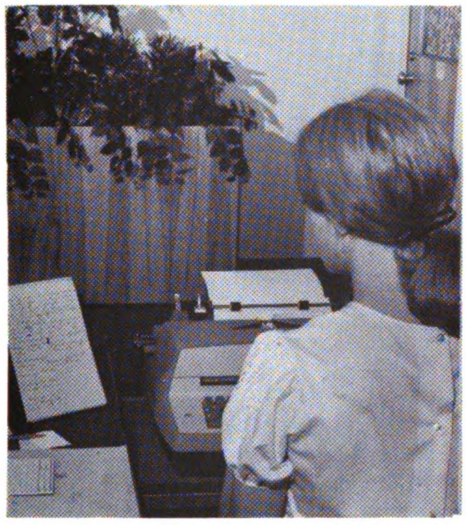
You are finished! You did a good job. Thank you very much for your help and cooperation.

APPENDIX C

Instrument Pictures

PICTURES

A



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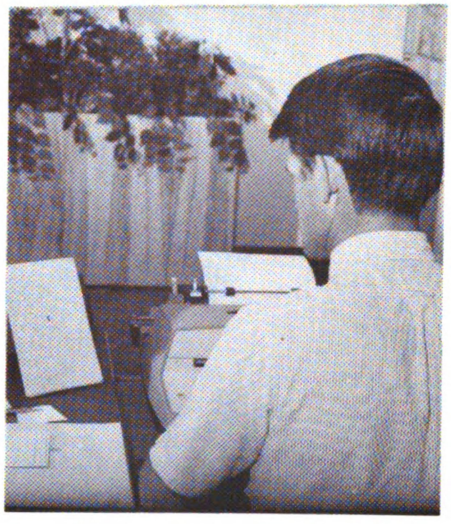


B

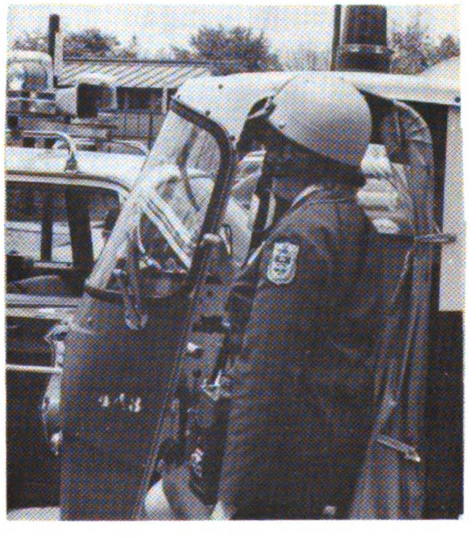
A

2

B

A

3



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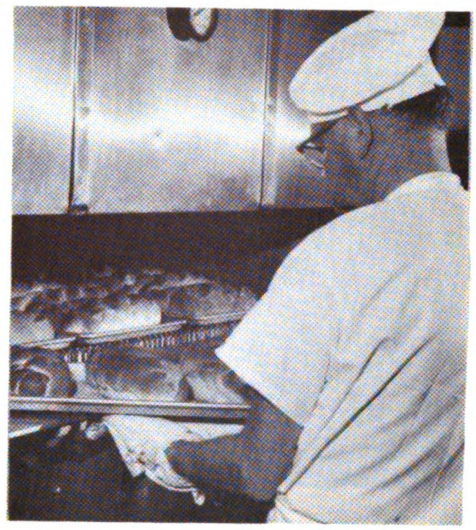
A

4



B

A

5

B

A

6

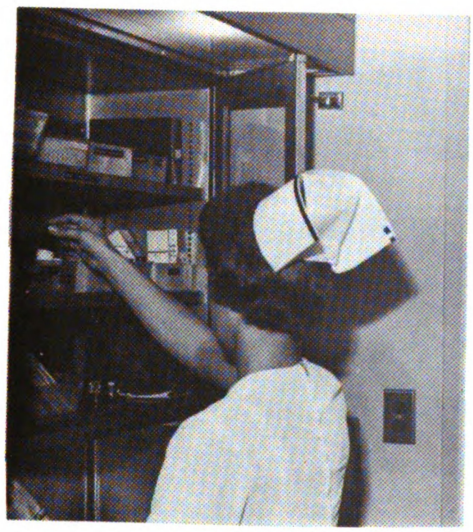
B

A

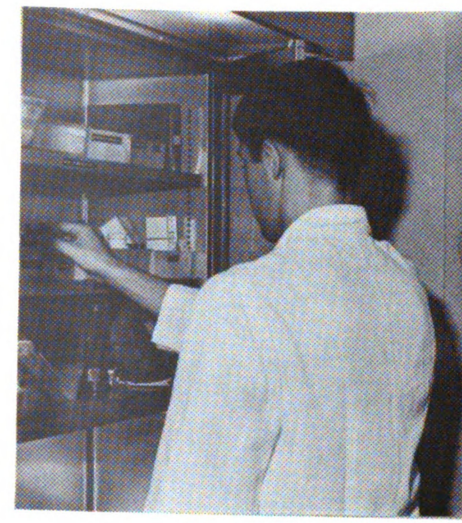
7

B

A



8



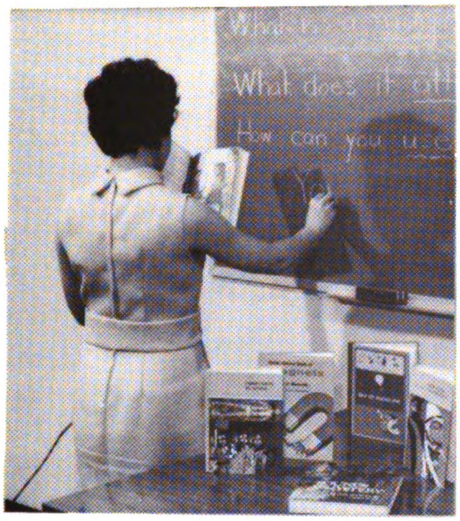
B

A

9

B

A



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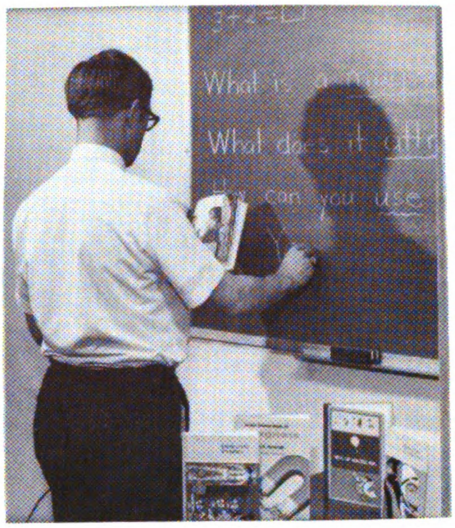
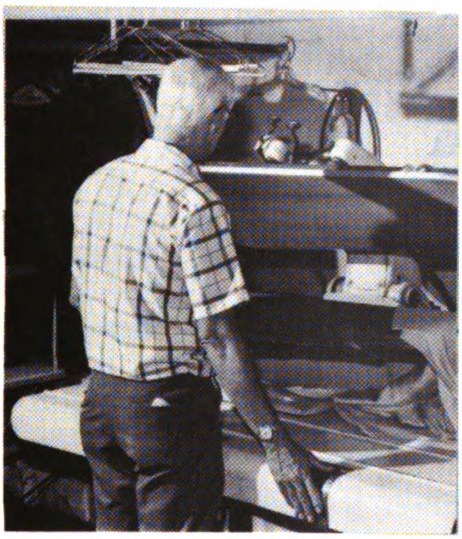


B

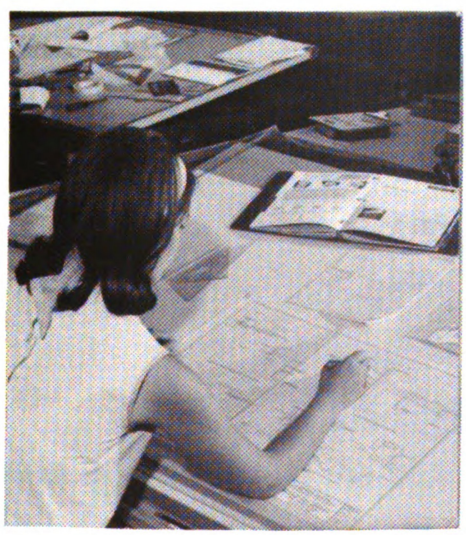
A



11

B

A



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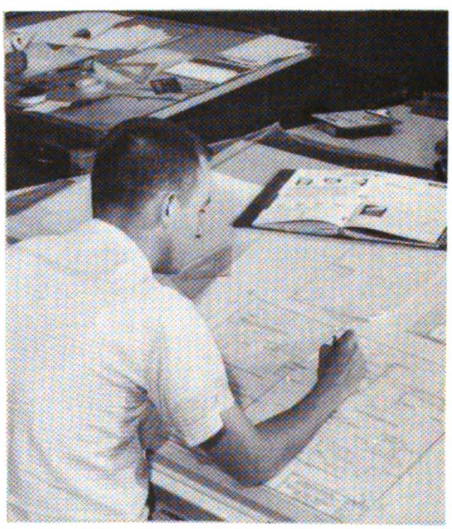

B

APPENDIX D

Instrument Answer Sheet

ANSWER SHEET

PART 1				PART 2				PART 3			
1.	A	B	C	1.	A	B	C	1.	A	B	C
2.	A	B	C	2.	A	B	C	2.	A	B	C
3.	A	B	C	3.	A	B	C	3.	A	B	C
4.	A	B	C	4.	A	B	C	4.	A	B	C
5.	A	B	C	5.	A	B	C	5.	A	B	C
6.	A	B	C	6.	A	B	C	6.	A	B	C
7.	A	B	C	7.	A	B	C	7.	A	B	C
8.	A	B	C	8.	A	B	C	8.	A	B	C
9.	A	B	C	9.	A	B	C	9.	A	B	C
10.	A	B	C	10.	A	B	C	10.	A	B	C
11.	A	B	C	11.	A	B	C	11.	A	B	C
12.	A	B	C	12.	A	B	C	12.	A	B	C

AGE _____ GRADE _____

BOY _____ GIRL _____

What is your mother's job? _____

What is your father's job? _____

Which of the following best tells how much education your father has had? Put an X in front of it.

_____Some elementary school

_____Completed elementary school (grade 8)

_____Some high school

_____Completed High School

_____Some college

_____Completed college

_____Graduate work

What job or jobs do you want to do? _____

_____

ANSWER SHEET

PART 1 Why did you like the pictures you chose?

A. Because they had men workers

B. Because they had the person who is best for the job

C. Because they had the person who looks like he is doing the job best

D. Because they had women workers

E. Other (write in) _____

PART 2 How did you choose which person likes each job best?

A. By choosing the person who looks like he is doing the job best

B. By choosing the women workers

C. By choosing the person who is best for the job

D. By choosing the men workers

E. Other (write in) _____

PART 3 How did you decide which person made the best choice of each job?

A. By choosing the women workers

B. By choosing the person who looks like he is doing the job best

C. By choosing the men workers

D. By choosing the person who is best for the job

E. Other (write in) _____