

AN ABSTRACT OF THE THESIS OF

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Title: EFFECTIVENESS OF THREE METHODS OF EXPANDING
SEX-ROLE PERCEPTIONS TO A MORE ANDROGYNOUS
STATE

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Purpose of the Study

The purpose of this study was to determine the effectiveness of three methods of changing vocational educators' sex-role perceptions of themselves and their sex-role perceptions of males and females to a more androgynous state. The hypotheses tested were: (1) there is no difference in sex-role perceptions of self among groups one, two, and three after the treatments; (2) there is no difference in sex-role perceptions of males among groups one, two, and three after the treatments; and (3) there is no difference in sex-role perceptions of females among groups one, two, and three after the treatments.

Procedures

This study used the pretest-posttest control group design. Sixty male and female Oregon State University Vocational Education

students, summer 1977, volunteered to participate in the study and were randomly assigned to one of three treatment groups. The Dittman adaptation of the Bem Sex-Role Inventory was completed by all participants as a pretest and posttest. Groups received treatments as follows: group one experienced a lecture on sex-role perceptions and two placebo treatments; group two received the lecture, a slide treatment on eliminating stereotyped sex-role perceptions and a placebo treatment; and group three participated in the lecture, the slide presentation, and role-playing treatments all focused on expanding sex-role perceptions. The final sample consisted of 15 subjects in each of the three groups, 75 percent of the original sample.

Group Androgyny Difference Scores were calculated from the Dittman adaptation of the BSRI, for running the analysis of covariance. The F-statistic tested the hypotheses for identifying if differences existed among the three groups for self sex-role perceptions and the perceived sex-roles of males and females. Hypotheses one and two were retained, and hypothesis three was rejected. The Least Significant Difference follow-up test identified that the difference in sex-role perceptions of females existed between groups one and three.

Conclusions

The groups did not differ in their perceptions of self and males but did differ in their perceptions of females. Group perceptions of

female sex roles differed between group one which received the lecture treatment and group three which experienced the lecture, slide presentation, and role-playing treatments. It was concluded that the slide presentation and role-playing treatments were not any more effective in expanding sex-role perceptions to a more androgynous state than a lecture.

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Sex-Role Perceptions to a More
Androgynous State

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EFFECTIVENESS OF THREE METHODS OF EXPANDING SEX-ROLE PERCEPTIONS TO A MORE ANDROGYNOUS STATE

I. INTRODUCTION

Statement of the Problem

Vocational educators perceive males and females in sex-stereotyped roles (Dittman, 1976a, b). These biased perceptions can limit a student's present experiences and expectations as well as future vocational and personal opportunities. Therefore, it becomes important for educators to alter self sex-role perceptions as well as their perceptions of males and females by developing a more androgynous personality in order to increase students' academic and career possibilities (Bem, 1974, 1975a; Dittman, 1976a, b). This study is intended to determine the effectiveness of three methods of expanding vocational educators' perceptions of their own sex-roles and the perceived sex-roles of males and females.

Background

Sex-role adoption takes place through cultural decree and social interaction (Biller and Borstellman, 1967; Harriman, 1975). Schools are one institution where social roles are learned. Therefore, acceptance of roles is partially related to how educators view

masculinity and femininity. Pressure from peers, parents, teachers, and society in general, to conform to sex-appropriate behavior can be damaging. For example, a small child told that "big boys don't cry" is taught at an early age to suppress important feelings. This can result in stress as well as emotional harm (Doyle, 1974). Incompetence, passivity, and dependence are assumed when girls are not encouraged to explore, to be adventuresome, or to express independence (Sugawara, 1971; Bem, 1974, 1975a; Doyle, 1974; Kaplan and Bean, 1976; McCune, 1976). Sex-role stereotyping is counterproductive to the educator's goal of helping students develop their full potential.

Sex-typed role perceptions affect educators' feelings about students and in turn influence how educators treat students in relation to instructional experiences and expectations. Therefore, educators' sex-role perceptions could limit student development and goals. Eliminating stereotyped sex-role perceptions is one step towards helping instructors provide optimal experiences for students in multiple roles regardless of sex.

Title IX Legislation makes sex-discrimination practices in education illegal. The major provision of Title IX (Education Amendments of 1972) requires that:

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. . . (p. 373).

Although sex-discrimination is illegal, biased assumptions about appropriate roles for males and females still exist and inhibit student growth. According to Kaufman (1975), sex-role stereotypes are still being reinforced and perpetuated in vocational education programs:

. . . vocational education. . . is being restricted by the prevailing stereotypes as to the proper occupations for women. These are the same stereotypes that restrict the vocational self-concepts of young girls. Few jobs are perceived as appropriate, and even these are considered subsidiary to the real female roles of wife and mother (p. 143).

Educators can help students view themselves and others as androgynous human beings with unlimited opportunities for personal expression and professional pursuits on the basis of non-biased, sex-role perceptions. This study is designed to test the effectiveness of three treatments in changing the stereotyped sex-role perceptions of one's self and one's view of males and females to a more androgynous state.

Definition of Terms

The definition of terms as related to this thesis include:

Androgyny: a model of mental health that allows people to feel free to express the best traits of both sexes (Bem, 1975a; Kaplan and Bean, 1976).

Biased: underlying assumptions that say men and women should be different, not only physically but in their tastes, talents, and interests (Smith, 1976).

Discrimination: that which is against the law in relation to selecting one sex over the other on the basis of social norms (Smith, 1976).

Neutral-roles: activities or characteristics socially acceptable for either sex to perform or possess (Grimes and Brun, 1975; Adelberger et al., 1976).

Non-traditional roles: activities or characteristics performed or possessed by a person that are not customarily assigned to that sex (Grimes and Brun, 1975; Adelberger et al., 1976).

Sexism: usage of words, actions, or illustrations that delegate traditional roles or characteristics to people on the basis of sex, therefore limiting the aspirations or abilities of either sex (Schenck, 1976).

Sex-role stereotyping: the belief that males or females share common interests, abilities, behavior, values, and roles just because they share a common gender (Howe, 1971; Adelberger et al., 1976).

Traditional-roles: activities or characteristics performed or possessed by a person that are considered appropriate for that sex based on past social customs (Grimes and Brun, 1975; Adelberger et al., 1976).

Limitations

This study is designed to use the scoring method which calculates an individual's Androgyny Difference Score by subtracting the masculinity score from the femininity score to yield masculine, feminine, and androgynous categories. Bem and Watson (1976) now suggest this method only for people already committed to this scoring procedure because recent data indicate a need to classify persons as masculine, feminine, androgynous, or undifferentiated.

The subjects for this study are undergraduate and graduate students enrolled in Vocational Education classes during summer, 1977 at Oregon State University. Thus, the findings of this study may not be generalized to students enrolled in other programs.

II. REVIEW OF RELATED LITERATURE

This chapter examines the literature on sex-role perceptions and stereotyping. The review of literature is divided into the following sections: Sex-Role Stereotyping Process; Measuring Sex-Role Perceptions; Sexism in Education; Title IX Legislation; and Recommendations for Eliminating Sex-Role Stereotyping in Education.

Sex-Role Stereotyping Process

Children learn about sex-roles early in life, certainly long before they enter school. This is done primarily through simple patterning. Boy babies are rough-housed while girl babies are fondled and handled delicately (Howe, 1971). Sex-related colors and toys are chosen for children at an early age. Infant girls are touched and spoken to more by their mothers while they are playing than are infant boys (Goldberg and Lewis, 1969).

Unconscious sex-stereotyped patterns are also reflected in behavioral differences such as encouraging girls to use their tears and boys to use their fists, or for boys to bow and girls to curtsy (Weitzman and Rizzo, 1975; Schenck, 1976; Smith, 1976). Adults often say to a boy who has failed, "go back and try again," while a girl with the same failure is given help to finish the task. The girl learns to be dependent by leaning on others while the boy learns

independence (Doyle, 1974; Hoyt, 1974; Hutton, 1976; Smith, 1976). If a girl or boy does not act in a stereotyped manner, choices are more open when a situation does not call for a particular behavior based on sex (Schenck, 1976).

When children enter school, sex-stereotyped patterns from parents, friends, and culture at large are reinforced, because schools reflect the society they serve (Verheyden-Hilliard, 1976). Boys become aggressive, competitive, and individualistic while girls are encouraged to take a more passive role in solving problems (Barry, Bacon, and Child, 1957; Sears, Maccoby, and Leving, 1957; Lundy, 1975). Sex-role identity is nearly formed by the time a student enters high school (Hurlock, 1975). Therefore, the school years are a particularly vulnerable period for sex-role impressions, and restrictions placed on aspirations and self-images of boys and girls can be damaging (Howe, 1971; Bem and Bem, 1974; Lundy, 1975; Hutton, 1976; Hernandez, 1977).

One of the obstacles preventing people from changing biased sex-role attitudes is their perception of roles in light of past socially sanctioned ideas about the relationship between men and women. Historically, society has encouraged certain roles for middle and upper class men and women that promoted a sexual division of labor based on economy (Bem and Bem, 1974; Harriman, 1975; Schenck, 1976). In the past a career and family were strongly incompatible for

a female because a woman's place was in the home, while males were the hunters and gatherers and moved into the labor force (Harriman, 1975; Schenck, 1976). Reasons for division of labor based solely on sex no longer exist (Bem and Bem, 1974; Schenck, 1976). However, social forms often outlive the purpose for which they were developed.

Social support systems continue to reinforce and encourage unconscious myths that shape present attitudes about sex roles (Harriman, 1975; Weitzman and Rizzo, 1975). Factually speaking the myths are false, yet they can be influential factors in a person's life (Lundy, 1975). The presumed incompatibility of family and career for a female can be a limiting factor when a woman pursues a job (Bem and Bem, 1974). Fear of success is another unconscious myth that can affect a woman's self-perception (King, 1974). In a study about achievement motivation, Horner (1969) found that female respondents rated higher than male subjects on test-anxiety scores, indicating strong fears of social rejection as a result of success. Therefore, sex-biased factors place mental barriers on women's attitudes and feelings, and today's girls continue to plan for a past life style in the present world and give little thought to their aging years (Bem and Bem, 1974; Smith, 1976). Even the most independent feminists feel that they will eventually be provided for. Often women realize too late that they have made no financial preparations for retirement (Patton, 1975).

More women than ever are entering the labor force and expect to remain in it for longer periods of time as indicated by these facts (U.S. Department of Labor and Bureau of Statistics, 1976): women are now over 40 percent of the entire work force; nine out of ten girls will work outside the home at some time in their lives; and since 1947, the number of working wives has increased 205 percent. The status and roles of women are becoming more in line with those of the male counterpart. Work outside the home for females is going to be viewed as a major adult role as more women work at various stages of the family life cycle (Gillie, 1974; Kievit, 1974; Greenwood, 1975; Harriman, 1975; Dearmin, 1976; Hutton, 1976). The married life style will necessitate dual-roles for both husbands and wives (Harriman, 1975).

However, there are problems associated with the dual-role trend. Society's sex-role conditioning encourages many women to choose service oriented jobs instead of administrative positions (Harriman, 1975). In choosing a career instead of a job, a woman must take on personality characteristics such as dominance or assertion that are not society's concept of femininity (Brun, 1975). Society disapproves when a woman breaks out of traditional roles and adopts traits such as assertiveness which are considered positive qualities for men. A woman can develop pseudo-masculine strength or remain in a serving capacity (Bem and Bem, 1974; Doyle, 1974).

Until a person's socialization enhances uniqueness rather than sex-typed characteristics, one will not be prepared to pursue non-traditional positions (Bem and Bem, 1974; Kievit, 1974).

A greater percentage of women than men end up in dead end jobs such as clerical workers, factory workers, or sales clerks because they are female (Bem and Bem, 1974; Kievit, 1974; Kaser, 1975; Verheyden-Hilliard, 1976). Thus, a woman's talents, education, interests, ability, and motivation are not significant factors for determining a woman's career (Bem and Bem, 1974).

Men as well as women suffer the effects of sexism. Role transition may be difficult for men who have been socialized to believe that life roles are predetermined on the basis of sex. In this period of transition, it is necessary to be less concerned with what is male or female and more aware of what is human (Kaser, 1975).

Human relationships will be improved if women and men become more independent of traditional roles (King, 1974). Acceptance of a dual-role where income-earning is shared with the wife could enable the father to spend more time with the family. Also, women might be happier when involved in more activities outside the home and family (Brun, 1975). Children would be able to grow up with a greater sense of independence, a broader understanding of the world of work, and a greater tolerance of non-traditional sex-roles (King, 1974; Brun, 1975).

Measuring Sex-Role Perceptions

Formerly, to be classified as masculine for males and feminine for females had been perceived as psychologically healthy for the sexes (Bem, 1975a). Sex-role attitude tests reflect this bias by rating a person as either masculine or feminine. For example, the California Psychological Inventory (CPI) (Gough, 1966) and the Guilford-Zimmerman Scale (Bem, 1974) operate strictly from a masculinity-femininity scale. However, the Bem Sex-Role Inventory (BSRI) (Bem, 1974) in its original scoring method characterized sex-role perceptions of one's self as masculine, feminine, or androgynous. Of the 723 subjects tested, 34 percent of the males and 27 percent of the females perceived themselves as androgynous (Bem, 1974). In a follow-up study of 194 subjects, results indicated that 44 percent of the males and 38 percent of the females described themselves as androgynous (Bem, 1974). The revised scoring method for the BSRI (Bem and Watson, 1976) suggests that subjects now be categorized as masculine, feminine, androgynous, or undifferentiated.

Androgyny has been recommended as a flexible framework from which to examine human personality and as a model of mental health (Bem, 1974; Dittman, 1976a, b; Kaplan and Bean, 1976). Androgynous individuals perceive themselves and others with greater flexibility in relation to the traditional sex-role norms accepted by society (Kaplan

and Bean, 1976). This allows an individual to be both independent and tender, assertive and yielding, masculine and feminine by expanding the range of behavior and feelings open as alternatives (Kaplan and Bean, 1976). A standard of psychological health for both sexes removes the burden of stereotyping and allows people to feel free to express the best traits of both men and women (Bem and Bem, 1974; Bem, 1975b; Dittman, 1976a; Kaplan and Bean, 1976; Gough, 1977). Kaplan and Bean (1976) state that in spite of the findings, society is not accepting of the positive aspects of an androgynous personality and teaches restrictions rather than flexibility.

Sexism in Education

Social change has altered life styles, leading to restructuring of responsibilities, rights, and privileges of many families (Harriman, 1975). One of the most evident shifts is that of women entering the labor force. Adjustments are essential during a role transition period. Presently, many female students are planning for only part of their lives by overlooking or underestimating their roles as wage-earners while boys are overlooking their roles as fathers and joint homemakers (Smith, 1976). Consequently, there is an increased need for boys and girls to have formal educational experiences in home and family living. Teachers have the opportunity to help students identify role changes in order to successfully cope with stress during

a transition period (Harriman, 1975; Kohlman, 1975; Dearmin, 1976; Smith, 1976).

When educators express prejudiced attitudes based on sex roles, they may inhibit students from expressing themselves freely, experiencing new situations, and pursuing their own talents and interests (McCune, 1976; Gough, 1977). McCune (1976) states:

. . . sex discrimination and sex stereotyping stifle growth and achievement. Sexism is evident throughout the organization of schools, the programs they offer, the policies they reflect, and their patterns of employment. It is perpetuated through sex segregation in schools and classes, stereotypes in textbooks and instructional materials, the behavior of school personnel, counseling and guidance, physical education and athletics, student rules and policies, and sex typing in educational employment. Outmoded sex-based stereotypes limit both males and females. They keep boys and girls from giving free reign to their hopes and dreams, deter them from following their own talents and inclinations and prevent them from realizing their true potential as human beings (p. 195-196).

Attitudes and perceptions of teachers and students are major factors restricting the choices for male and female students in vocational education programs (Dearmin, 1976; Dittman, 1976a, b).

Dittman's (1976a, b) two studies involving sex-role perceptions of North Dakota vocational educators, and faculty and undergraduate students in the College of Home Economics at North Dakota State University concluded that subjects generally perceived males as masculine typed and females as feminine typed. This indicated a

predominantly stereotyped view of sex-role perceptions of other males and females.

Lundy (1975) indicates that students are traditional in their beliefs because they spend much of their lives under the influence of stereotyped television, advertising, textbooks, and educators. Non-verbal behavior such as eye patterns of the teacher can reflect stereotyped attitudes (Kaser, 1975). Educators need to be aware of their potentially restrictive mannerisms and recognize that the system in which they work and the ways in which they work have oppressed girls and boys (Kaser, 1975). Teachers directly and indirectly influence the socialization of students. Educators have the potential for promoting perceptions and attitudes through such means as language and texts (Weitzman and Rizzo, 1974, 1975; Adelberger et al., 1976). Presently, many teaching aids are closing rather than opening possibilities to students (Verheyden-Hilliard, 1976). In 1972 the American Federation of Teachers passed a resolution stating that:

Teaching materials that portray limiting sex-role stereotypes can result in irreparable psychic damage and distorted aspiration levels of women (Doyle, 1974, p. 6).

A need exists to emphasize the dual-role trend and the androgynous concept. This places an added responsibility on educators in helping students adjust to role changes and in career counseling (Lundy, 1975; Patton, 1975; Trotter, 1975; Dittman, 1976a, b; Hutton, 1976; Kaplan and Bean, 1976). Girls should see that women

working as mechanics or electricians, for example, are still feminine. Likewise, boys who choose to work with young children or be nurses need to be made aware that they are not less masculine (Smith, 1976).

Educational opportunities for girls are limited in the areas of sports and physical education. In 1974 the National Organization for Women (Doyle, 1974) issued reports on sex bias in public schools that documented the fact that girls were bound from 80 percent of the play and sports areas as well as from most school sports teams. The Citizen's Advisory Council on the Status of Women has documented areas of inferiority in educational as well as athletic opportunities for girls. The presumed physical weakness of women as a base on which to limit athletic opportunities for females is a myth. There is ample evidence indicating that females are capable of participating and excelling in sports (Doyle, 1974; Hernandez, 1977).

Title IX Legislation

The importance of confronting the issues of sex-discrimination and sex-role stereotyping in education, as related to sex-role perceptions of educators, has been reflected in legislation. Educational discrimination based on sex is prohibited by Title IX.

The Department of Health, Education and Welfare proposed regulations aimed at eliminating sex discrimination that call for

major adjustments on the part of schools. McCune (1976) summarizes Title IX Legislation as being organized into three major sections: admissions, treatment of students, and employment. Under the admissions policy there can be no classes offered exclusively for either sex, and there can be no discrimination on the grounds of sex as related to eligibility for services, financial aid and benefits. In regard to treatment of students, there can be no discriminatory rules of behavior and appearance, and there is to be equal opportunity regarding participation in sports. Through these regulations, Title IX confronts the major issues of sex discrimination in education.

Although the legal aspects of sex-discrimination are being confronted, one effect Title IX does not have is the elimination of socialized biases that prevent individuals from reaching their full potential (Dittman, 1976a, b; McCune, 1976). Philosophies, values, and attitudes supporting the present system of channeling students into life roles or courses will need to be examined and special recruitment efforts launched to attract male and female students to classes considered non-traditional on the basis of sex (Kievit, 1974; Dearmin, 1976). Compliance with legislation regarding non-discrimination on the basis of sex requires the institution and educator to have commitment and take steps to actively insure the provision of optimal educational experiences for students, regardless of sex (McCune, 1976; Caulfield, 1977).

Recommendations for Eliminating Sex-Role
Stereotyping in Education

For educators in the vocational area, Dearmin (1976) recommends:

Career education, especially for females, should be mandatory. . .so that students will be oriented and prepared to compete in the world of work. School schedules and programs should be made more flexible to meet the needs of students to be prepared in a wider variety of occupationsdefined performance competencies enabling both men and women to assume the dual-role of homemaker-wage earner (p. 6).

Brun (1975) contends that the procedure to eliminate sex-role stereotyping in education demands action on the part of home economists to better prepare boys and girls for a dual role:

Attitudes, feelings, and values of human beings are not static but do change, the direction of change being influenced by one's experiences and education (p. 81)

The family unit as we know and like it will not be destroyed as more wives and mothers work outside the home (p. 83).

Bem and Bem (1974) make recommendations based on their concept of freedom of choice:

. . .prepare the way for an identity crisis for both sexes (p. 20).

. . .it is better to prepare a woman for a career which she may later decline than to prematurely limit her capabilities. The best education is that which leaves open the largest spectrum of possibilities (p. 22-23).

Remove sources of sex-role stereotyping within schools (p. 23).

Simpson's (1974) points are centered around the elimination of discrimination against women in preparation for work. Vocational educators need to develop and implement affirmative action programs and encourage consciousness-raising activities. It is the educator's responsibility to provide accurate information regarding qualifications for jobs and to give the choice of accepting or rejecting positions (Simpson, 1974).

Much of the stereotyping of sex-role perceptions in education is that of socially influenced blind bias rather than overt discrimination. Sexism is not self-evident. Therefore, it is difficult to recognize a bias when an educator does not know what to look for. Students will be restricted from exploring their personal and vocational goals by the existence of stereotyped sex-role attitudes and expectations (Dittman, 1976a, b). Specific educational programs are needed to help educators overcome limiting sex-role perceptions of themselves and males and females in order to maximize opportunities for students.

III. PROCEDURES

The objective of this study was to determine if one treatment was more effective than another in changing sex-stereotyped perceptions of one's self and of males and females to a more androgynous perceptual state. This chapter includes the following sections: Hypotheses; Statistical Design; Instrumentation; Treatments; Pilot Test; Subjects; Data Collection; and Method of Data Analysis.

Hypotheses

The study tested the following null hypotheses:

Hypothesis I: There is no difference in sex-role perceptions of self among groups one, two, and three after the treatments.

Hypothesis II: There is no difference in sex-role perceptions of males among groups one, two, and three after the treatments.

Hypothesis III: There is no difference in sex-role perceptions of females among groups one, two, and three after the treatments.

Statistical Design

The pretest-posttest control group experimental design (Campbell and Stanley, 1963) with equal size groups was used in this study (Table 1). This design controls for the effects of the following variables on internal validity: history, maturation, testing,

Table 1. Pretest-Posttest Control Group Design^a Describing Groups as Related to Pretest, Treatments, and Posttest.

$R_1 \longrightarrow 0_1 \longrightarrow X_1 \longrightarrow P_1 \longrightarrow P_2 \longrightarrow 0_2$

$R_2 \longrightarrow 0_3 \longrightarrow X_1 \longrightarrow X_2 \longrightarrow P_2 \longrightarrow 0_4$

$R_3 \longrightarrow 0_5 \longrightarrow X_1 \longrightarrow X_2 \longrightarrow X_3 \longrightarrow 0_6$

R_1 = randomly selected group 1 (control)

R_2 = randomly selected group 2

R_3 = randomly selected group 3

$0_{1,3,5}$ = Dittman adaptation of Bem Sex-Role Inventory (Dittman, 1976a, b), pretest

X_1 = experimental treatment 1, lecture on sex-role perceptions

X_2 = experimental treatment 2, slide presentation on sex-role attitudes

X_3 = experimental treatment 3, sex-role stereotyped role-playing

P_1 = placebo treatment 1

P_2 = placebo treatment 2

$0_{2,4,6}$ = Dittman adaptation of Bem-Sex-Role Inventory (Dittman, 1976a, b), posttest

^aPretest-Posttest Control Group Design (Campbell and Stanley, 1963, p. 13).

instrumentation, statistical regression, selection biases, experimental mortality. These factors can directly affect posttest scores ($0_2, 0_4, 0_6$) and produce changes which might be mistaken for results of treatments one, two, and three (X_1, X_2, X_3). However, group one (R_1), which experienced only the lecture treatment (X_1), controlled for this and was the basis on which the effectiveness of experimental treatments two and three (X_2, X_3) was determined. The pretest-posttest design controlled for the differences between the control group (R_1) and the experimental groups (R_2, R_3) through randomized assignment of subjects into groups for treatment and analysis (Campbell and Stanley, 1963, p. 13-24). The control group (R_1) and the two experimental groups (R_2, R_3) were randomly designated as one, two, or three by use of a table of random numbers (Downie and Heath, 1974, p. 324-325).

Initially, the Dittman version of the Bem Sex-Role Inventory (BSRI) (Dittman, 1976a, b) was administered as a pretest ($0_1, 0_3, 0_5$) to all subjects. The inventory appears in Appendix A. Group one (R_1) received a lecture on sex-role perceptions (X_1) and two placebo treatments (P_1 and P_2). Group two (R_2) received the lecture (X_1), a slide presentation with discussion (X_2), both on sex-role perceptions, and placebo treatment two (P_2). Group three (R_3) received the lecture (X_1), the slide presentation with discussion (X_2), and role-playing with discussion (X_3), all on sex-role attitudes. After the

experimental and placebo treatments were administered, the Dittman adaptation of the BSRI (Dittman, 1976a, b) ($0_2, 0_4, 0_6$) was given to subjects as a posttest.

Instrumentation

The instrument used in this study was the Dittman adaptation of the Bem Sex-Role Inventory (BSRI) (Dittman, 1976a, b). The original BSRI was developed at Stanford University on the premise that sex-typed people abide by society's sex-typed standards of desirable behavior for men and women and not on the basis of individual differential endorsement (Bem, 1974). The BSRI includes a 20-item masculinity list, a 20-item femininity list, and a 20-item sexually non-biased list. It sex-types a person as masculine, feminine, or androgynous through use of a Likert scale from one ("never or almost never true") to seven ("always or almost always true"). The BSRI was administered to female and male students at Stanford University during 1973 and to female and male volunteers from a junior college. The data ($n = 2000$) from the original administration of the instrument indicated that it is a reliable instrument. The femininity and masculinity scores from Bem's (1974) experiments vary independently, and are also empirically independent (average $r = -0.03$). The androgyny score (t-ratio) is internally consistent (average $\alpha = 0.86$). The BSRI self sex-role perceptions were found to be reliable over a four-week

period (average $r = 0.93$), and uncorrelated with the tendency to describe one's self in a socially desirable direction (average $r = -0.06$) (Bem, 1974, 1975b). Dittman (1976a, b) did not indicate reliability factors as related to the Dittman adaptation of the BSRI.

In this study the administration of the BSRI as proposed by Dittman was used. Subjects marked three copies of the BSRI: the first time as to how they perceived females; secondly, for how they perceived males; and the third time for how they perceived themselves.

Treatments

Three experimental treatments were used in this study: (1) a lecture on sex-role perceptions; (2) a slide presentation of traditional and non-traditional sex-roles; and (3) participation in role playing situations related to sex-role attitudes. Group discussion was included in both the slide presentation and the role-playing situations. Effort was made to provide the same experiences for each group when experimental treatments were presented more than once. In order to reduce the error factor, placebo treatments were administered to subjects not receiving experimental treatments two or three.

Treatment I (Control--Lecture)

The purpose of treatment I was to test the effectiveness of a lecture method to change stereotyped sex-role perceptions. The lecture covered the following points: definition of terms; legal reasons to face the issue of sex-role stereotyping; sex-role stereotyping as a limiting influence on students' futures; formation of sex-role identity and the education system; and perpetuation of sex-role stereotyping versus androgyny as a model of mental health.

Treatment II (Slide Presentation and Discussion)

Treatment II consisted of a slide presentation and discussion. The slides offered a shared baseline of experiences from which the participants discussed perceptions and attitudes related to sex roles. Selection of the 36 slides was based on society's view of stereotyped roles according to the Committee to Study Sex Discrimination in the Kalamazoo Public Schools (Jacobs, 1973). Discussion questions were adapted from Grimes and Brun (1975).

The first six slides were used as introductory illustrations for defining traditional, non-traditional, and neutral roles or personality characteristics. Part one included women and men in traditional roles or settings. The discussion questions were: What part do parents play in assigning sex-stereotyped roles to children? What

part do teachers play in perpetuating these role assignments to students? Men and women in neutral roles or settings were shown in part two, and discussion centered around the appropriateness of these activities or traits for both males and females, now and in the past. Non-traditional roles for both men and women were presented in part three. Discussion centered around the following questions: Why is there a need to change biased role perceptions based on sex? How can teachers change traditionally stereotyped perceptions of males and females to promote non-sexist education in the classroom?

Treatment III (Role-Playing Situations and Discussion)

Role-playing offered an opportunity for active experience in checking one's own sex-role attitudes and expectations. Group three observed a two minute videotaped example of a sex-role stereotyped role-playing situation, part I (Appendix B). The example in reverse, part II (Appendix B) was then shown. Participants were divided into pairs to role-play the two minute situation, part I (Appendix C). The total group discussed the following questions: What attitudes about sex-roles were evident in this situation and how did they limit individual expression and potential to grow? How do society's stereotypes affect a person when that person is trying to perform in a non-traditional role? The two minute situation in reverse, part II (Appendix C) was role-played by the same couples, who then discussed

the following questions: In what ways have you treated yourself and other males and females differently because of sex? What was indicated in the reversed situation that showed advantages of adopting non-biased sex-role attitudes? How can educators help students identify opportunities open to them on the basis of non-stereotyped sex-role perceptions?

Placebo Treatments

Placebo treatments were administered to the groups not experiencing treatments two or three. These treatments controlled for the experimenter's presence and influence by spending equal time with all subjects. The placebo treatments were unrelated to sex-role perceptions; placebo I focused on vocational education legislation, and placebo II oriented participants to the use of newspapers in the classroom.

Pilot Test

Faculty members involved in Home Economics Education and Business Education Theory and Practicum III class during spring term 1977 were sent a letter (Appendix D) explaining the project and asked permission to solicit volunteers for pilot testing from their classes. Eight students volunteered to participate in the pilot test. The pilot test was not a trial run of the entire study but a test run of

the Dittman version of the BSRI to determine the clarity of instructions and the time necessary for administering it. The experimental treatments were also pilot tested.

In light of the pilot test the three experimental treatments were revised. Transparencies were utilized to clarify information in treatment I. Slides in treatment II were regrouped so that traditional, neutral, and non-traditional slides were placed together. One role-playing situation was used in treatment III and proposed videotaping was eliminated.

Subjects

Vocational education faculty members teaching during summer session 1977 were notified by letter (Appendix E) explaining the project. They were asked for permission to present the project to their students in order to request volunteers. A total of 60 male and female graduate and undergraduate students from Agricultural Education, Business and Distributive Education, Home Economics Education, Industrial Education, and general Vocational Education courses participated in this study. A table of random numbers (Downie and Heath, 1974, p. 324-325) was used to assign males and females separately to one of three treatment groups (Table 2).

Table 2. Random Assignment of Initial Sample of Males and Females into Treatment Groups.

	Group I (n=20)	Group II (n=20)	Group III (n=20)
Males	7	8	9
Females	13	12	11

Data Collection

The treatment sessions were administered to the three groups during summer term 1977. Each treatment took one-half hour. All volunteers completed the Dittman adaptation of the BSRI as a pre-test. A posttest (Dittman version of the BSRI) was administered after the last experimental or placebo treatment.

The final sample consisted of 45 students or 75 percent of the original sample. Table 3 indicates group distribution of males and females in the treatment groups.

Table 3. Final Sample of Males and Females in Treatment Groups.

	Group I (n=15)	Group II (n=15)	Group III (n=15)
Males	5	7	9
Females	10	8	6

Method of Data Analysis

Data from the Dittman adaptation of the BSRI were analyzed for one's self sex-role perception. Mean scores were obtained for each subject's ratings of the masculine and feminine adjectives for self sex-role perceptions. The masculinity score was the mean of an individual's ratings of masculine characteristics, and the femininity score was the mean of the same individual's ratings of the feminine adjectives. The masculinity score was then subtracted from the femininity score to obtain the Androgyny Difference Score. Androgyny Difference Scores were computed in the same manner for each group as they completed the BSRI perceptions of males and females.

Androgyny Difference Scores were used to determine group mean scores. The null hypotheses were tested using one-way analysis of covariance (ANCOVA). The inventories were computer scored and the data analyzed using the Statistical Package for the Social Sciences (SPS), version 6.5A, Northwestern University, Vogelback Computing Center. Campbell and Stanley (1963, p. 23) indicate that analysis of covariance with pretest scores as the covariate is the preferred significance test for pretest-posttest control group experimental designs. Courtney and Sedgwick (1974b) define analysis of covariance as the "method of statistical control through which scores on the dependent variable are adjusted according to scores on a related,

often antecedent, variable" (p. 1). The dependent variable was the posttest and the antecedent variable was the pretest. The analysis of covariance adjusts the means for initial differences in the data, such as initial attitude variations among subjects, by using regression analysis procedures (Courtney and Sedgwick, 1972).

The F-statistic is the appropriate tool for testing null hypotheses for differences among two or more means (Courtney and Sedgwick, 1974d). In order for results to be valid when using the F-statistic, the following criteria must be observed: equidistant interval data, common or equal variances, and a random sample (Courtney and Sedgwick, 1974d). The 0.05 level of significance was used as a basis for retaining or rejecting the null hypotheses (Courtney and Sedgwick, 1974c).

Cell sizes were equal, with 15 subjects in each of the three groups for the one-way analysis of covariance. An analysis of covariance table was determined for group self sex-role perceptions, group sex-role perceptions of males, and group sex-role perceptions of females as follows:

<u>Source of variance</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Group	2	A	A/2	<u>MS group</u>
Error	41	B	B/41	MS error
Total	43	C		

As a follow-up to the F-statistic, the Least Significant Difference (LSD) test was run if a null hypothesis was rejected to determine where the difference existed among the groups (Courtney and Sedgwick, 1974a). The formula for the LSD test is (Courtney and Sedgwick, 1974a):

$$\text{LSD} = t_{.05} \sqrt{2 S^2 / n}$$

The LSD tool was conducted as an a priori hypothesis comparing the mean scores as follows:

$$M_3 = M_1$$

$$M_3 = M_2$$

where:

M_1 = mean scores of group 1;

M_2 = mean scores of group 2; and

M_3 = mean scores of group 3.

IV. ANALYSIS OF DATA

Introduction

This study was designed to test the effectiveness of three treatments in expanding the sex-role perceptions of one's self and one's view of males and females to a more androgynous state. Analysis of covariance was used to test the null hypotheses as cited in Chapter III. The 0.05 level of significance was used for retaining or rejecting the null hypotheses. The Least Significant Difference (LSD) test was used to determine where differences existed among mean scores when a null hypothesis was significant.

This chapter presents the data obtained from analysis of the Dittman adaptation of the BSRI for testing each of the three hypotheses.

Hypothesis I

There is no difference in sex-role perceptions of self among groups one, two, and three after the treatments.

Null hypothesis I was retained. Significant differences were not found in relation to self sex-role perceptions among groups one, two, and three. Table 4 presents the analysis of covariance data for self sex-role perceptions of the three groups.

Table 4. Analysis of Covariance Data for Groups One, Two, and Three: Sex-Role Self Perceptions.

Source of variance	df	SS	MS	F
Group	2	0.118	0.059	0.412
Error	41	5.857	0.143	
Total	43			

Hypothesis II

There is no difference in sex-role perceptions of males among groups one, two, and three after the treatments.

Null hypothesis II was retained. The analysis of covariance indicated that significant differences were not found among the groups as related to sex-role perceptions of males. Table 5 presents analysis of covariance data for sex-roles of males as perceived by the three groups.

Table 5. Analysis of Covariance Data for Group Sex-Role Perceptions of Males for Groups One, Two, and Three.

Source of variance	df	SS	MS	F
Group	2	1.311	0.655	1.544
Error	41	17.406	0.425	
Total	43			

Hypothesis III

There is no difference in sex-role perceptions of females among groups one, two, and three after the treatments.

The analysis of covariance test indicated that significant differences existed among mean scores for groups one, two, and three as related to the group's perceptions of sex-roles for females.

Table 6 presents the analysis of covariance data for sex-roles of females as perceived by the three groups. Hypothesis III was rejected. To determine where the difference existed among the groups the LSD was computed. Table 7 represents the results of the Least Significant Difference test.

Table 6. Analysis of Covariance Data for Group Sex-Role Perceptions of Females for Groups One, Two, and Three.

Source of variance	df	SS	MS	F
Group	2	5.160	2.580	4.199*
Error	41	25.188	0.614	
Total	43			

*Significant at the 0.05 level.

Table 7. Least Significant Difference Test Results for Significant Difference among Groups One, Two, and Three Regarding Perceived Female Sex-Roles.

Group	Ranked mean scores	Differences	Computed LSD	Results
3	1.12		0.578	
		0.54		$M_3 = M_2$
2	0.58			
		0.27		$M_2 = M_1$
1	0.31			

Group 1 received the lecture treatment.

Group 2 received the lecture and slide treatments.

Group 3 received the lecture, slide, and role-playing treatments.

The LSD showed that means for groups three and two were equal as were means for groups two and one at the 0.05 level. A limitation of using the LSD test is that the test does not allow for a comparison between means of groups one and three. Thus, it can be assumed that the difference lies between groups one and three (Courtney and Sedgwick, 1973).

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains a summary in the following sections: Purpose; Design of the Study; Conclusions; and Recommendations for Further Study.

Purpose

The purpose of this study was to test three treatment methods in order to determine their effectiveness in expanding personal sex-role perceptions of one's self and of males and females to a more androgynous state. The following null hypotheses were tested:

Hypothesis I: There is no difference in sex-role perceptions of self among groups one, two, and three after the treatments.

Hypothesis II: There is no difference in sex-role perceptions of males among groups one, two, and three after the treatments.

Hypothesis III: There is no difference in sex-role perceptions of females among groups one, two, and three after the treatments.

Design of the Study

The review of related literature provided evidence that educators' stereotyped perceptions of sex-roles for females and males can limit students' present and future opportunities (Horner, 1969;

Bem, 1974; 1975a; Steele, 1974). Sex-role perceptions and stereotyping were examined by inspecting writings and research on the following topics: Sex-Role Stereotyping Process; Measuring Sex-Role Perceptions; Sexism in Education; Title IX Legislation; and Recommendations for Eliminating Sex-Role Stereotyping in Education. It was concluded that specific educational programs are necessary in order to eliminate the effects of sex-role biases (Bem and Bem, 1974; Simpson, 1974; Brun, 1975; Dearmin, 1976).

The pretest-posttest control group design (Campbell and Stanley, 1963) (Table 1) was used for this research. The 60 male and female volunteers from Vocational Education classes, summer 1977, at Oregon State University were randomly assigned to one of three groups for treatments (Table 2). Group one received the lecture on sex-role perceptions, group two experienced the lecture and slide presentations on sex-role views, while group three participated in the lecture, the slide presentation and role-playing on expanding sex-role perceptions. Groups not receiving treatments two or three participated in placebo treatments. All participants completed the Dittman adaptation of the Bem Sex-Role Inventory (BSRI) (Dittman, 1976a, b) as a pretest and as a posttest. The final sample consisted of 45 students, 75 percent of the original sample (Table 3).

The instrument used in this study was the Dittman adaptation of the BSRI. Group Androgyny Difference Scores were obtained for each

group on self sex-role perceptions, sex-role perceptions of males, and sex-role perceptions of females. A one-way analysis of covariance was run for each hypothesis to determine if differences existed among the groups. Null hypotheses I and II were retained while null hypothesis III was rejected. The Least Significant Difference test was used as a follow-up test to determine where the difference occurred among the three groups for group perceptions of female sex-roles. The difference occurred between group one which received the lecture treatment and group three which experienced all three experimental treatments: lecture, slide presentation, and role-playing.

Conclusions

The following conclusions were based on the data collected and on the procedures used in this study.

For perceived sex-roles of females, group three's Androgyny Difference Score indicated a significantly higher rating toward femininity characteristics than did group one. Because group three received all three of the treatments on sex-role perceptions, and theoretically should have moved to a more androgynous state of viewing others, it was concluded that treatments two and three were not any more effective in expanding sex-role perceptions to a more androgynous state than a lecture.

Attitude studies can involve unlimited variables that affect the results of research. Subjects indicated that the limited time to discuss was "frustrating." For this study a longer period of time than 30 minutes for the slide presentation and role-playing may have allowed for a more in-depth discussion, resulting in different attitude ratings on the Dittman adaptation of the BSRI. More heterogeneous subjects, at varied consciousness levels regarding sex-role perceptions of males and females, could have provided for a more stimulating discussion, consequently influencing the results of this study. Subjects indicated that the Dittman adaptation of the BSRI was too long and repetitious. Fatigue and boredom may have affected the ratings on the instrument. Perhaps audio-visual methods (slides, videotape) and active participation technique (role-playing and discussion) alone are not effective methods for trying to expand sex-role perceptions to a more androgynous state. Continued emphasis, as was experienced by group three, on the controversial subject of sex-role attitudes may have aroused negative as well as positive reactions about the topic and thus affected subjects' responses on the inventory.

Recommendations

The following recommendations for further research were made in light of the procedures used and conclusions drawn in this study.

1. Group data from responses on the Dittman adaptation of the

BSRI should be analyzed separately according to demographic information such as occupation, year in school, sex, or major.

2. Studies should be done to see how subjects are classified before and after treatments as to being feminine, masculine, androgynous, or undifferentiated as described by Bem and Watson (1976).
3. Further studies on modifying sex-role perceptions to a more androgynous state should be conducted with a male/female team approach.
4. Future research using treatments and the Dittman adaptation of the BSRI should be designed so that the instrument is administered at a time separate from treatment sessions.
5. Future research testing the effectiveness of various treatments that focus on changing attitudes should provide for a follow-up questionnaire or study two to three weeks after the last experimental treatment.

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APPENDICES

APPENDIX A

BEM SEX-ROLE INVENTORY

Bem Sex-Role Inventory

Sex:	<input type="checkbox"/> 1. Male	Last Academic Year:	<input type="checkbox"/> 1. Junior
	<input type="checkbox"/> 2. Female		<input type="checkbox"/> 2. Senior
Major:	<input type="checkbox"/> 1. Agricultural Education		<input type="checkbox"/> 3. Graduate Student
	<input type="checkbox"/> 2. Business and Distributive Education		<input type="checkbox"/> 4. Teacher
	<input type="checkbox"/> 3. Home Economics Education		<input type="checkbox"/> 5. Other _____
	<input type="checkbox"/> 4. Industrial Education		
	<input type="checkbox"/> 5. Vocational Education		
	<input type="checkbox"/> 6. Other _____		
	(Specify)		(Specify)

I. We are investigating what people expect other people to be like. We would like you to imagine that you are going to meet someone for the first time, and the only thing you know in advance is that she is an adult female. What would you expect that she will be like? On the following page, you will be shown a large number of personality characteristics. Use these characteristics to describe what you think an adult female is like. Indicate on a scale from 1 to 7 how true each of these characteristics is of an adult female. Please do not leave any characteristics unmarked.

Example: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that females are sly.

Mark a 2 if it is USUALLY NOT TRUE that females are sly.

Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that females are sly.

Mark a 4 if it is OCCASIONALLY TRUE that females are sly.

Mark a 5 if it is OFTEN TRUE that females are sly.

Mark a 6 if it is USUALLY TRUE that females are sly.

Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that females are sly.

Thus, if you feel it is sometimes but infrequently true that females are "sly," never or almost never true that females are "malicious," always or almost always true that females are "irresponsible," and often true that females are "carefree," then you would rate these characteristics as follows:

<input checked="" type="checkbox"/> 3	Sly	<input checked="" type="checkbox"/> 7	Irresponsible
<input checked="" type="checkbox"/> 1	Malicious	<input checked="" type="checkbox"/> 5	Carefree

DESCRIBE AN ADULT FEMALE

1	2	3	4	5	6	7
Never or Almost Never True	Usually Not True	Sometimes But Infrequently True	Occasionally True	Often True	Usually True	Always or Almost Always True
<input type="checkbox"/> 21	Self reliant	<input type="checkbox"/> 41	Reliable		<input type="checkbox"/> 61	Warm
<input type="checkbox"/> 22	Yielding	<input type="checkbox"/> 42	Analytical		<input type="checkbox"/> 62	Solemn
<input type="checkbox"/> 23	Helpful	<input type="checkbox"/> 43	Sympathetic		<input type="checkbox"/> 63	Willing to take a stand
<input type="checkbox"/> 24	Defends own beliefs	<input type="checkbox"/> 44	Jealous		<input type="checkbox"/> 64	Tender
<input type="checkbox"/> 25	Cheerful	<input type="checkbox"/> 45	Has leadership abilities		<input type="checkbox"/> 65	Friendly
<input type="checkbox"/> 26	Moody	<input type="checkbox"/> 46	Sensitive to the needs of others		<input type="checkbox"/> 66	Aggressive
<input type="checkbox"/> 27	Independent	<input type="checkbox"/> 47	Truthful		<input type="checkbox"/> 67	Gullible
<input type="checkbox"/> 28	Shy	<input type="checkbox"/> 48	Willing to take risks		<input type="checkbox"/> 68	Inefficient
<input type="checkbox"/> 29	Conscientious	<input type="checkbox"/> 49	Understanding		<input type="checkbox"/> 69	Acts as a leader
<input type="checkbox"/> 30	Athletic	<input type="checkbox"/> 50	Secretive		<input type="checkbox"/> 70	Childlike
<input type="checkbox"/> 31	Affectionate	<input type="checkbox"/> 51	Makes decisions easily		<input type="checkbox"/> 71	Adaptable
<input type="checkbox"/> 32	Theatrical	<input type="checkbox"/> 52	Compassionate		<input type="checkbox"/> 72	Individualistic
<input type="checkbox"/> 33	Assertive	<input type="checkbox"/> 53	Sincere		<input type="checkbox"/> 73	Does not use harsh language
<input type="checkbox"/> 34	Flatterable	<input type="checkbox"/> 54	Self-sufficient		<input type="checkbox"/> 74	Unsystematic
<input type="checkbox"/> 35	Happy	<input type="checkbox"/> 55	Eager to soothe hurt feelings		<input type="checkbox"/> 75	Competitive
<input type="checkbox"/> 36	Strong personality	<input type="checkbox"/> 56	Conceited		<input type="checkbox"/> 76	Loves children
<input type="checkbox"/> 37	Loyal	<input type="checkbox"/> 57	Dominant		<input type="checkbox"/> 77	Tactful
<input type="checkbox"/> 38	Unpredictable	<input type="checkbox"/> 58	Soft-spoken		<input type="checkbox"/> 78	Ambitious
<input type="checkbox"/> 39	Forceful	<input type="checkbox"/> 59	Likable		<input type="checkbox"/> 79	Gentle
<input type="checkbox"/> 40	Feminine	<input type="checkbox"/> 60	Masculine		<input type="checkbox"/> 80	Conventional

II. Now we would like you to go through this same list for a second time. Again, imagine that you are going to meet a person for the first time, and the only information you have is that he is an adult male. This time, indicate on a scale from 1 to 7 how true each of these characteristics is of an adult male. Please be sure to mark every item.

DESCRIBE AN ADULT MALE

1	2	3	4	5	6	7
Never or Almost Never True	Usually Not True	Sometimes But Infrequently True	Occasionally True	Often True	Usually True	Always or Almost Always True
<input type="checkbox"/> 21	Self reliant	<input type="checkbox"/> 41	Reliable		<input type="checkbox"/> 61	Warm
<input type="checkbox"/> 22	Yielding	<input type="checkbox"/> 42	Analytical		<input type="checkbox"/> 62	Solemn
<input type="checkbox"/> 23	Helpful	<input type="checkbox"/> 43	Sympathetic		<input type="checkbox"/> 63	Willing to take a stand
<input type="checkbox"/> 24	Defends own beliefs	<input type="checkbox"/> 44	Jealous		<input type="checkbox"/> 64	Tender
<input type="checkbox"/> 25	Cheerful	<input type="checkbox"/> 45	Has leadership abilities		<input type="checkbox"/> 65	Friendly
<input type="checkbox"/> 26	Moody	<input type="checkbox"/> 46	Sensitive to the needs of others		<input type="checkbox"/> 66	Aggressive
<input type="checkbox"/> 27	Independent	<input type="checkbox"/> 47	Truthful		<input type="checkbox"/> 67	Gullible
<input type="checkbox"/> 28	Shy	<input type="checkbox"/> 48	Willing to take risks		<input type="checkbox"/> 68	Inefficient
<input type="checkbox"/> 29	Conscientious	<input type="checkbox"/> 49	Understanding		<input type="checkbox"/> 69	Acts as a leader
<input type="checkbox"/> 30	Athletic	<input type="checkbox"/> 50	Secretive		<input type="checkbox"/> 70	Childlike
<input type="checkbox"/> 31	Affectionate	<input type="checkbox"/> 51	Makes decisions easily		<input type="checkbox"/> 71	Adaptable
<input type="checkbox"/> 32	Theatrical	<input type="checkbox"/> 52	Compassionate		<input type="checkbox"/> 72	Individualistic
<input type="checkbox"/> 33	Assertive	<input type="checkbox"/> 53	Sincere		<input type="checkbox"/> 73	Does not use harsh language
<input type="checkbox"/> 34	Flatterable	<input type="checkbox"/> 54	Self-sufficient		<input type="checkbox"/> 74	Unsystematic
<input type="checkbox"/> 35	Happy	<input type="checkbox"/> 55	Eager to soothe hurt feelings		<input type="checkbox"/> 75	Competitive
<input type="checkbox"/> 36	Strong personality	<input type="checkbox"/> 56	Conceited		<input type="checkbox"/> 76	Loves children
<input type="checkbox"/> 37	Loyal	<input type="checkbox"/> 57	Dominant		<input type="checkbox"/> 77	Tactful
<input type="checkbox"/> 38	Unpredictable	<input type="checkbox"/> 58	Soft-spoken		<input type="checkbox"/> 78	Ambitious
<input type="checkbox"/> 39	Forceful	<input type="checkbox"/> 59	Likable		<input type="checkbox"/> 79	Gentle
<input type="checkbox"/> 40	Feminine	<input type="checkbox"/> 60	Masculine		<input type="checkbox"/> 80	Conventional

III. Finally, please go through the same list for a third and last time, indicating on a scale from 1 to 7 how true of you these characteristics are. Please do not leave any characteristic unmarked.

DESCRIBE YOURSELF

1	2	3	4	5	6	7
Never or Almost Never True	Usually Not True	Sometimes But Infrequently True	Occasionally True	Often True	Usually True	Always or Almost Always True
<input type="checkbox"/> 21	Self reliant	<input type="checkbox"/> 41	Reliable		<input type="checkbox"/> 61	Warm
<input type="checkbox"/> 22	Yielding	<input type="checkbox"/> 42	Analytical		<input type="checkbox"/> 62	Solemn
<input type="checkbox"/> 23	Helpful	<input type="checkbox"/> 43	Sympathetic		<input type="checkbox"/> 63	Willing to take a stand
<input type="checkbox"/> 24	Defends own beliefs	<input type="checkbox"/> 44	Jealous		<input type="checkbox"/> 64	Tender
<input type="checkbox"/> 25	Cheerful	<input type="checkbox"/> 45	Has leadership abilities		<input type="checkbox"/> 65	Friendly
<input type="checkbox"/> 26	Moody	<input type="checkbox"/> 46	Sensitive to the needs of others		<input type="checkbox"/> 66	Aggressive
<input type="checkbox"/> 27	Independent	<input type="checkbox"/> 47	Truthful		<input type="checkbox"/> 67	Gullible
<input type="checkbox"/> 28	Shy	<input type="checkbox"/> 48	Willing to take risks		<input type="checkbox"/> 68	Inefficient
<input type="checkbox"/> 29	Conscientious	<input type="checkbox"/> 49	Understanding		<input type="checkbox"/> 69	Acts as a leader
<input type="checkbox"/> 30	Athletic	<input type="checkbox"/> 50	Secretive		<input type="checkbox"/> 70	Childlike
<input type="checkbox"/> 31	Affectionate	<input type="checkbox"/> 51	Makes decisions easily		<input type="checkbox"/> 71	Adaptable
<input type="checkbox"/> 32	Theatrical	<input type="checkbox"/> 52	Compassionate		<input type="checkbox"/> 72	Individualistic
<input type="checkbox"/> 33	Assertive	<input type="checkbox"/> 53	Sincere		<input type="checkbox"/> 73	Does not use harsh language
<input type="checkbox"/> 34	Flatterable	<input type="checkbox"/> 54	Self-sufficient		<input type="checkbox"/> 74	Unsystematic
<input type="checkbox"/> 35	Happy	<input type="checkbox"/> 55	Eager to soothe hurt feelings		<input type="checkbox"/> 75	Competitive
<input type="checkbox"/> 36	Strong personality	<input type="checkbox"/> 56	Conceited		<input type="checkbox"/> 76	Loves children
<input type="checkbox"/> 37	Loyal	<input type="checkbox"/> 57	Dominant		<input type="checkbox"/> 77	Tactful
<input type="checkbox"/> 38	Unpredictable	<input type="checkbox"/> 58	Soft-spoken		<input type="checkbox"/> 78	Ambitious
<input type="checkbox"/> 39	Forceful	<input type="checkbox"/> 59	Likable		<input type="checkbox"/> 79	Gentle
<input type="checkbox"/> 40	Feminine	<input type="checkbox"/> 60	Masculine		<input type="checkbox"/> 80	Conventional

APPENDIX B

Example of Pre-recorded (Parts I and II) Sex-Role
Stereotyped Role-playing Situation for
Experimental Treatment Three

Example role-playing situation: Anne, recently married has just graduated from the university in the top of her class. At a dinner party welcoming her husband into a well noted law firm, Anne is confronted by the senior partner. He is persistent in questioning her future as the wife of an up-and-coming attorney. He is adamant about his belief that a marriage is not complete without children. Money needs should be the only reason for a wife and homemaker to go to work outside of the home. Anne feels the pressure not to "look bad for her husband" who previously warned her about the conservative attitudes of the firm, but she also feels the need to be honest in expressing her non-traditional views.

Part I: Anne compromises her values and beliefs and acquiesces to her husband's partner. She feels trapped, discouraged and bitter. Stress and inner turmoil are the evident results of the situation.

Part II: During the reversed role-playing example, Anne openly and honestly expresses her beliefs in an assertive but nonaggressive manner. Self-assurance is evident, as she continues in conversation with the man.

APPENDIX C

Role-playing Situation Modified from Adelberger (1976)
for Experimental Treatment Three

A teacher has just given Gregg considerable encouragement to pursue becoming a doctor based on results of a vocational interest inventory and aptitude test. Linda received the same if not higher scores and is being advised by the same teacher.

Part I: The teacher acknowledges Linda's interests and aptitude but encourages her to be a nurse. Even after expressed desire by Linda to be a doctor, the teacher is relentless and says that it is reality that boys become doctors and girls become nurses and it was about time that she faced the facts of the world outside of school.

Part II: The teacher indicates the same enthusiasm for Linda to become a doctor as was done for Gregg and channels her into the appropriate course work.

APPENDIX D

Letter Sent to Faculty for Pilot Test

Mrs. Mary Jane Grieve
Associate Professor
Home Economics Education

Dear. Mrs. Grieve:

As a graduate student in Home Economics Education, I am in the process of designing my research study. Your assistance is requested in securing volunteers to participate in a pilot test for my study. The study is designed to determine the effectiveness of three treatments in changing sex-stereotyped perceptions of oneself and males and females. The subjects will complete a sex-role perception inventory followed by these treatments on sex-role perceptions: 1) lecture; 2) slide presentation and discussion; and 3) role-playing and discussion. Each treatment will take one hour to administer. The proposed dates for the pilot study are May 17, 24, and 25.

Would it be possible for me to present my request to your TP III Home Economics Education class? I would like to make an appointment to further explain my study if you desire and to arrange for a convenient time to visit your class for ten minutes.

Thank you for your assistance. If you have any questions please contact me or Sylvia Lee.

Sincerely yours,

Chris Van Winkle
Graduate Student
Home Economics Education 754-3101

cc: Dr. Donald L. Beringson
Business Education

APPENDIX E

Letter Sent to Faculty for Study

TO: Dr. Donald L. Beringson, Dr. Leno Christensen, Dr. Joel D. Galloway, Mrs. Mary Jane Grieve, Dr. Joseph F. Hlebichuk, Dr. Anne Keast, Dr. Sylvia L. Lee, Dr. Pete Martinez, Dr. John Oades, Dr. Earl E. Smith, Dr. Charles Stamps, Dr. Warren Suzuki, Dr. Henry Ten Pas, Mr. W. Hoeye

FROM: Chris Van Winkle
Graduate Student
Home Economics Education 754-3101

RE: Securing volunteers for research study

As a graduate student in Home Economics Education, I am in the process of designing my research study. Your assistance is requested in securing volunteers to participate in my study. The study is designed to determine the effectiveness of three treatments in changing sex-stereotyped perceptions of oneself and males and females. The subjects will complete a 15-minute sex-role perception inventory followed by these treatments on sex-role perceptions: 1) lecture; 2) slide presentation and discussion; and 3) role-playing with discussion. Each treatment will take 30 minutes to administer. After completing all of the treatments, subjects will again take the 15-minute sex-role perception inventory.

Would it be possible for me to present my request to your classes during the first week of summer term? I would like to make an appointment to further explain my study if you desire and to arrange for a convenient time to visit your classes for ten minutes.

Thank you for your assistance. If you have any questions please contact me or Sylvia Lee.