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ABSTRACT Women are significantly underrepresented in those occupations most highly valued in Western society. To investigate sex role stereotypes as the discriminant variable between female students in male programs and in traditionally female programs, female Israeli vocational high school students (N=1,138) completed the Bem Sex Role Inventory (BSRI), assessments of fear of success, attitudes toward women's roles, orientation toward work, and rated 30 occupations from Holland's six occupation fields. Analyses of results pointed to significant differences between the two groups. Female students in traditionally male programs, in contrast to females in traditional female programs, perceived more occupations as suitable for men and women, presented an androgynous self-concept, exhibited less fear of success and more liberal attitudes toward women's roles, and were more work-oriented. The findings support the hypothesis that sex role stereotypes are significantly related to women's choice of innovative versus traditional fields of study. (MCF)

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SEX ROLE STEREOTYPES AND WOMEN'S CHOICE  
OF INNOVATIVE FIELDS OF STUDY

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Women are underrepresented in 254, or 72%, of the occupations, and only a minority of them advances into jobs which are valued most highly in the Western society. The segregation of men and women is already evident at the high school level. Seventy-eight percent of the women studying in the vocational high school stream in Israel are majoring in subjects in which they are proportionally overrepresented, such as secretarial courses and home economics (their overall proportion in vocational high schools is 45%). In the academic high school stream, where women constitute 65% of the students, only 30% of the students majoring in mathematics and physical sciences are women.

Studies have shown that the desire to pursue a broader range of occupations is present in young women. However, personal and social forces appear to have limited their belief that in real life these occupations could actually be pursued.

The purpose of this study is to explore the relationships of sex-role stereotypes to the occupational choice of Israeli high school female students. Based on Holland's (1973) theory that people seek the occupational environment most congruous to them, the influence of sex-role stereotypes will be examined in twofold: (a) the sex-typing of occupations, and (b) the sex-role stereotypes in the individual's self-concept, motivation, and attitudes.

It is hypothesized that female students in innovative versus traditional areas of study (a) perceive more occupations as equally suitable for both men and women, and (b) are less sex-role stereotyped in their self-concept, motivation and attitudes toward women's roles.

## Method

### Subjects

Participants were 1,138 female high school students distributed into the following categories:

- (1) n = 681 in the vocational stream of which:
  - (a) n = 105 in "innovative" majors, e.g., electronics.
  - (b) n = 191 in "mixed" majors, e.g., drafting.
  - (c) n = 369 in "traditional" majors, e.g., home economics and secretarial courses.
- (2) n = 470 in the academic high school stream, of which:
  - (a) n = 79 in the "innovative" major of mathematics and physical science.
  - (b) n = 199 in "mixed" majors, social studies and biology.
  - (c) n = 192 in the "traditional" major humanities.

### Procedure

Data were collected by individually administered questionnaires in one-hour sessions.

### Measures

Sex-Stereotyping of Occupations - was measured by the subjects' responses to a list of 30 occupations from Holland's six occupational fields (1973).

For each occupation, participants were requested to indicate the extent to which it is suitable (1) for men only; (2) for men more than for women; (3) equally for men and women; (4) for women more than for men; and (5) for women only.

### The Individual's Sex-Role Stereotypes

Self-Concept - was measured by Bem Sex-Role Inventory (BSRI) (Bem, 1974) which consists of 20 feminine, 20 masculine, and 20 neutral adjectives to which

individuals respond in terms of how descriptive each characteristic is of themselves. Reliability coefficients are: Masculinity  $\alpha = .84$  and Femininity  $\alpha = .78$ .

The androgyny score was computed as the student's t-ratio for the difference between the Masculinity and the Femininity Scales.

Fear of success in a male-dominant environment - assessed by each subject's responses to six statements (based on Horner, 1972 and Hawley, 1971) referring to the desirability of competition with men, as well as the possible consequences for women who are successful in male domains.

Attitudes Toward Women's Roles - were assessed by each participant's responses to 18 statements dealing with three aspects of women's roles, based on Hawley's (1971) and Steinman, Levi, and Fox's (1964) questionnaires: (a) Woman as Partner, (b) Woman as Ingenue, and (c) Woman as Homemaker.

Reliability coefficients were .68, .51 and .66 respectively.

Orientation Toward Work - based on the subjects' choice of one out of five preferred lifestyles ranging between being a homemaker with no outside employment and working on a continuous basis while exercising self-imposed limitations on marriage and a family life.

### Results and Discussion

Differences in sex-typing of occupation between "innovative," "mixed," and "traditional" female students in vocational and non-vocational studies are summarized in Table 1.

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Insert Table 1 here

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Findings pointed at significant differences between the groups ( $F(7,1126) = 15.96, p < .000$ ). The proportion of occupations equally suitable for males and females is the highest for the innovative groups, lower in the "mixed" groups, and lowest in the "traditional" groups. Similarly, the proportion of occupations

considered to be suitable only or more for males is the lowest for the "innovative" groups and the highest for the "traditional" groups. Note that the proportion of occupations considered to be equally suitable is much higher than the real distribution of women in the labor market even for the traditional group.

Differences in self-concept (Bem's Androgyny Scale), fear of success and attitudes toward women's roles between the groups are summarized in Table 2.

Insert Table 2 here.

Findings point at significant differences between the groups on all three variables ( $p < .000$ ). The traditional groups score highest on the Androgyny Scale toward its feminine role. The innovative groups are more equally scored on the Femininity and the Masculinity Scales (the first scale being slightly higher). Fear of success is significantly lower for the innovative groups, and increases gradually toward the traditional groups. Attitudes toward woman's role as a partner, as an ingenue, and as a homemaker are most liberal for the innovative groups and the most traditional for the traditional groups. Additional findings on the orientation toward work indicate that the proportion of innovative students who are work oriented (62%) rather than home oriented (4%) is significantly higher ( $X^2 = 69.8, p < .000$ ) than that of traditional students (33% work oriented and 25% home oriented).

To summarize, findings support the hypothesis that sex role stereotypes are significantly related to women's choice of majoring in an innovative versus a traditional field of study. Two sets of variables relevant to the subjective person-environment fit were examined: the perceived suitability of various occupations for women, and the individual characteristics such as self-concept, motivation, and sex role attitudes which are congruent with the innovative or

the traditional choice. Results indicate that innovative female students, in contrast to the traditional group, perceive more occupations as equally suitable for men and women. They incorporated into their self-concept desirable feminine as well as masculine attributes. They have less fear of success in male-dominated environments, their attitudes toward woman's role are more liberal and they are more work-oriented than home-oriented students.

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Table 1  
 One-Way Analysis of Variance  
 of Sex-Typing of Occupations According to High School Majors

High School Majors	N	Proportion of Occupation		
		Only Suitable For Men	More Suitable For Men	Equally Suitable
Innovative Majors				
Technical-Vocational	105	.0214	.1477	.7354
Mathematics	79	.0077	.1131	.8171
Mixed Majors				
Vocational-Mixed	191	.0351	.1501	.7231
Social Sciences	67	.0159	.1652	.7393
Biology	132	.0370	.1709	.7151
Traditional Majors				
Humanities	192	.0317	.1575	.7379
Vocational-Home Econ.	154	.0412	.1732	.7123
Vocational-Secretarial	214	.0857	.1975	.6306
F (7,1126)		15.962 p < 0.000	7.622 p < 0.000	11.834 p < 0.000



Table 2

One-Way Analysis of Variance of Bem's Androgyny Score,  
Fear of Success, and Attitudes Toward Women's Roles

Majors	N	Bem's Androgyny t-Score	Fear of Success	Attitudes Toward Women's Role As:		
				Partner	Ingenué	Homemaker
Innovative Majors						
Technical-Vocational	104	.084	4.93 <sup>a</sup>	5.24 <sup>b</sup>	4.70	4.11
Mathematics	79	.070	4.98	5.28	5.01	4.45
Mixed Majors						
Vocational-Mixed	189	.070	4.99	5.21	4.56	4.18
Social Sciences	65	.090	4.82	5.22	4.67	4.33
Biology	132	.090	4.68	5.11	4.62	4.08
Traditional Majors						
Humanities	191	.095	4.70	5.14	4.56	4.20
Vocational-Home Econ.	154	.104	4.71	5.18	4.44	4.10
Vocational-Secretarial	215	.128	4.41	4.75	4.31	3.73
F (7,1121)		3.681	11.455	10.862	9.922	9.601
		p < .000	p < .000	p < .000	p < .000	p < .000

a. High scores indicate low fear of success.

b. High scores indicate liberal attitudes.