Does the BSRI Inventory Sex Roles?[1]

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Two studies were done to see whether self-descriptions on the Bem Sex Role Inventory (BSRI) are stable across various social roles, or whether adopting familiar gender-segregated social roles produces more traditionally sex-typed BSRI self-descriptions. Parents of 41 infants completed the BSRI under standard instructions, and thinking of themselves in their parental roles. And 76 undergraduates completed it under standard instructions, and thinking of themselves as students, and as boyfriends or girlfriends. Both scales of the BSRI changed significantly across roles for both genders in each study. Traditionally sex-typed self-descriptions did not increase in the parent roles or the boyfriend role. The student and boy- or girlfriend roles produced the same changes in men and women. Results appear inconsistent with Bem's interpretation of the BSRI in terms of masculinity, femininity, and sex roles, and support Spence and Helmreich's emphasis on instrumentality and expressiveness.

The Bem Sex Role Inventory (BSRI; Bem, 1974, 1977) is designed to measure sex role self-concept in terms of four mutually exclusive sex role types: androgynous, traditional masculine, traditional feminine, and undifferentiated. These are defined in terms of two relatively independent scales of masculinity and femininity, with androgynous subjects high on each. This basic con-

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ceptual approach has been widely acknowledged as an important advance
(e.g., Kaplan & Bean, 1976; Pleck, 1976) over the shortcomings of previous
masculinity–femininity research (e.g., Constantinople, 1973), and has been
adopted by other investigators and measures (e.g., Berzins, Welling, & Wet-
ter, 1978; Spence & Helmreich, 1978). But the measure has also been criti-
cized. Questions have been raised about the BSRI's scoring procedure (Myers
& Sugar, 1979), factor structure (Gaudreau, 1977; Pedhazur & Tetenbaum,
1979), and purported relationship to psychological adjustment (Locksley &
Colton, 1979; Stark-Adenec, Graham, & Pyke, 1980).

Probably the most fundamental criticism of the BSRI concerns the in-
terpretation of the masculinity and femininity scales upon which the four
sex role types are based. The construction of the BSRI is based on the assump-
tion that there are widely held global sex role stereotypes of masculinity and
of femininity, which people readily report when they are asked the personality
characteristics most desirable for men and for women, according to American
stereotypes of masculinity and femininity (the instructions used in selecting
BSRI items; Bem, 1974). Interpretation of the BSRI further assumes that
people have adopted these global stereotypes as components of their self-
concepts, to the extent that their *self*-descriptions resemble the stereotypes.

Myers and Gonda (1982b) raised questions about how adequately the
BSRI scales reflect global stereotypes of masculinity and femininity, and how
invariant these stereotypes' content is between men and women. They asked
almost a thousand subjects to define *masculine* and *feminine,* and coded their
open-ended responses. Over 86% of the responses were not represented on
the BSRI, being instead descriptions of gender, physical appearance, social
and biological roles, etc. Of those responses describing "personality or
behavioral characteristics," over 58% were not represented on the BSRI.
These same investigators (1982a) also had subjects rate BSRI adjectives in
terms of their social desirability, both according to other people and
themselves. Significant differences were found between these instructions.
There were also significant differences between men and women in attributing
these adjectives to male and female targets. So even the content of global
masculinity and femininity on the BSRI seems to vary with the sex of sub-
ject, and according to whether the stereotype is one's own or others'.

Clifton, McGrath, and Wick (1976) questioned the importance of such
global stereotypes as femininity in describing others by examining common
stereotypes of specific social roles held by women. They had subjects describe
the typical housewife, bunny, clubwoman, career woman, and woman athlete
by checking the applicable adjectives from a list of 153. Only "active" was
checked for all five roles, and there was generally little overlap among the
roles in descriptors. Though all five are female sex roles, no core of "feminini-
ty" was evident. Thus the global sex role stereotype of femininity is not the

same as stereotypes of specific social roles restricted to women. This suggests that sex role stereotyping is multidimensional, that there are distinct stereotypes of specific gender-segregated social roles, and that some of these are quite different from the global sex role stereotypes of masculinity and femininity. More recent research by Ashmore (e.g., Ashmore & DelBoca, 1979) and Deaux (1984) further documents the complexity and multidimensionality of sex role stereotypes.

Locksley and Colton (1979) have even argued that the global stereotypes of masculinity and femininity may not actually reflect beliefs about the covariates of gender per se, but instead reflect beliefs about the modal or average characteristics of occupational and family social roles that happen to covary with gender in this society. Thus, "the content of general sex stereotypes may be nothing other than reified personality characteristics associated with ideal representatives of adult, sex segregated social roles" (Locksley & Colton, 1979, p. 1021).

These findings raise several interesting issues concerning interpretation of the BSRI scales in *self*-descriptions. Clifton et al.'s (1976) demonstration of several role-specific female stereotypes suggests that self-descriptions on the femininity scale may vary as a function of which social roles are most salient to respondents when they complete the BSRI scales. The standard instructions for the BSRI mention no social roles, presumably in order to assess global self-concept in terms of global masculinity and femininity. However, most respondents occupy several specific social roles, and many of these are gender segregated and stereotyped. Would making such social roles salient change respondents' BSRI scores and types? If the BSRI self-concept consists of aspects of personality that do not vary across roles or situations, asking respondents to describe themselves in particular social roles should not change their self-descriptions. But if respondents' self-concepts do vary from one social role to another, even on global masculinity and femininity, role-specific instructions should change BSRI scale scores and respondents' types. Thus one issue is the stability of the BSRI self-concept across the social roles that respondents already know and occupy.

A second issue concerns the direction of change, if it occurs, Predictions on this issue depend upon one's concept of the BSRI scales as either measures of global masculinity and femininity, or measures of self-concept dimensions only incidentally related to sex roles.

Spence and Helmreich (1978, 1980) have offered such an alternative conceptualization of the BSRI scales. They view them, and their own 24-item Personal Attributes Questionnaire (PAQ) scales, as measures of socially desirable instrumental traits and expressive traits. While these are sometimes stereotypically associated with masculinity and femininity, respectively, "these trait dimensions have little or no relationship with global self-images of

masculinity-femininity, with sex role attitudes, or with sex role preferences or behaviors that do not quite directly call upon instrumental or expressive capacities" (Spence & Helmreich, 1981, p. 367). In fact, Spence (1982) has flatly stated that "global constructs of masculinity and femininity or 'masculinity-femininity,' as ordinarily conceived, have no scientific utility" (p. 77). Viewing the scales this way leaves their relationships to specific social roles (either sexual or not) as a set of open empirical questions.

The two studies reported here attempted to contrast the views of Bem with Spence and Helmreich's by having subjects complete the BSRI under standard self-description instructions, and then under instructions to describe themselves as they are in one or two specific social roles that they know well. Our expectations were that these self-descriptions would differ from each other, and that the content of these differences would favor either Bem's or Spence and Helmreich's views. The specific social roles were chosen with these two alternatives in mind.

In both studies, men and women were asked to describe themselves in gender-segregated social roles: the parent roles of mother and father in Study 1, and the romantic partner roles of girlfriend and boyfriend in Study 2. Bem's interpretation of the BSRI scales as masculinity and femininity leads in two ways to predicting that subjects should describe themselves as more traditionally sex typed in these roles. First, these are basic sex roles, in both the biological and cultural sense. Global sex role stereotypes are presumably based upon how people think they and others behave, and/or should behave in such roles. Even if the global stereotypes represent some kind of average across many gender-segregated social roles, these roles of parent and romantic partners should weigh heavily in such an average. Thus, self-consciously describing oneself in the role of mother, or girlfriend, should make a woman more feminine (and perhaps less masculine) because these roles are important bases for defining what it means to be feminine.

Secondly, Bem's gender schema theory also suggests that more traditional sex role descriptions should result from considering oneself in these roles: "Gender-typed individuals are seen as differing from other individuals not primarily in how much masculinity or femininity they possess, but in terms of whether or not their self-concepts and behaviors are organized on the basis of gender" (1981, p. 356). Asking subjects to describe themselves on the BSRI as they are in a particular sex role should activate gender schemata, and make it more likely that these schemata will organize their self-descriptions. So Bem's interpretation of the BSRI would seem to predict that if people change their self-descriptions under these instructions, they should become more sex role traditional, because these traditional sex roles, *par excellence.* Men should increase their masculinity and decrease their femininity, and women should increase their femininity and decrease their masculinity. This would yield a gender by role by scale interaction.

In addition, different BSRI types may change by different amounts. Consider the clearest cases — androgynous and traditionally sex-typed people. There are two possible sets of predictions. On the one hand, both the finding that androgynous people's behavior is more flexible across situations (Bem, 1975; Bem & Lenney, 1976; Bem, Martyna, & Watson, 1976), and the lower accessibility of their gender schemata under standard instructions suggests that androgynous people will change their self-descriptions more than the sex-typed will, when describing themselves in traditional sex roles. Sex role instructions may activate schemata usually not active, and these may have greater influence on their more flexible self-concepts. On the other hand, gender schema theory (Bem, 1981) could also predict that sex-typed people would change more, since their schemata are more elaborated, more traditional in content, and more important in processing self-information. Thus, sex role instructions might activate their gender schemata even more than other people's. This would produce greater change among the traditional BSRI types, in the direction of sex role traditionalism. In either case, there would be differences between BSRI types, with role instructions producing change toward more traditionalism among either flexible androgynous subjects, or traditionally schematic sex-typed subjects. This would yield a gender by type by role by scale interaction.

In summary, Bem's conception of the BSRI leads to predictions of greater sex role traditionalism under sex role instructions, either for all subjects, or specifically for androgynous or traditional subjects.

The predictions implied by Spence and Helmreich's interpretation of the BSRI only depend upon each social role's instrumental and expressive requirements. If these requirements are the same for men and women, they should show similar changes. That is, role demands should change self-concepts in the same way, regardless of subjects' gender and regardless of whether the role is a sex role or not. For example, in Study 1 we predicted a priori that being an infant's parent calls for more expressiveness and nuturance from *both* mothers and fathers (affectionate, sensitive, compassionate, warm, tender, etc.), so femininity should increase for both. No predictions were made for instrumentality. In short, the Spence and Helmreich position predicts merely role by scale interactions.

Our prediction from Bem's position, that the parental role instructions will increase traditionalism, is supported by results reported by Abrahams, Feldman, and Nash (1978). They compared BSRI scores for four groups of 15 couples each: cohabiting, married but childless, expecting, and parents. For both men and women, the largest differences between masculinity and femininity occurred for parents, and they were in the direction consistent with the parents' gender. Abrahams et al. concluded that becoming a parent increases sex role traditionalism for men and women. Thus, parental role instructions for those already parents may have the same effect.

STUDY 1

In this first study, we asked parents to fill out the BSRI twice: first simply describing themselves (the standard instructions), and then describing themselves in their role as mother or father. We predicted that there would be significant changes on BSRI scale scores and among BSRI types. Bem's view suggested that these changes would increase sex role traditionalism either among all subjects, or specifically among androgynous or traditional subjects. Spence and Helmreich's view suggested that expressiveness would increase for all subjects regardless of gender.

Method

Subjects

Forty-one pairs of parents of four- to nine-month old infants were recruited for a study of parent–infant interactions (Weston, 1982). About a third of the couples volunteered at three meetings of parents or prospective parents, addressed by the second author. The rate of volunteering was about 25%. The others were obtained by phoning personal contacts, where the volunteer rate was over 80%. Questionnaires were mailed to 42 couples. One couple moved out of the area before the home visit could be scheduled. No incentives were offered for participation besides contributing to a research project and having a brief opportunity to talk about parent–infant interactions.

Parents were largely professional and upper middle class. Most mothers had interrupted full-time careers for the birth of their children and planned to resume their careers. All were currently at home with their infants full time. Mothers' ages ranged from 23 to 39, with a median of 29. Fathers' ages ranged from 24 to 56, with a median of 31. Twenty-two of the infants were girls, and 26 were first borns. The other infants had one to three siblings.

Procedure

After being initially contacted by telephone, parents received an introductory letter and three questionnaires by mail. The letter described the study as an investigation of parent-infant interactions, asked them to fill out the questionnaires and return them by mail, and told them that a one-hour home visit would then be scheduled. During this visit, the second author

would observe and code each parent playing for about 15 minutes with the baby. The three questionnaires were a BSRI with standard instructions for each parent and the Carey Infant Temperament Questionnaire (Carey & McDevitt, 1978), a 95-item survey of the infant's behavior.

During the home visits one to four weeks later, parents were asked to complete the BSRI again under parental role instructions while the other parent was playing with the infant. Fathers and mothers filled out the questionnaire first about equally often. The parental role instructions read: "On the attached sheet you will be shown a large number of personality characteristics. We would like you to use those characteristics in order to describe yourself in your role as *MOTHER (FATHER)*. That is, we would like you to indicate, on a scale from 1 to 7, how true of you as a *MOTHER (FATHER)* these various characteristics are."

While one parent completed the BSRI for this second time, the other interacted as naturally as possible with the infant for 15 minutes. The second author coded these interactions using categories developed by Lamb (1976): conventional play (e.g., peek-a-boo), major physical play (tossing in the air), minor physical play (holding in lap), play with large toys, and play with small toys (including reading). The dominant type of interaction during each 15-second interval was recorded, as well as the presence of parent and/or infant vocalizations. Periodic reliability checks were obtained with a second trained observer; these averaged 83%. For details, see Weston (1982).

Results and Discussion

Following recommendations by Bem (1977), and Spence and Helmreich (1978), the medians on masculinity and femininity under standard instructions for the full sample ($N = 82$) were used to determine sex role types. The masculinity median was 5.06; the femininity median was 4.93. Table I presents the frequencies of each of the four sex role types among mothers and fathers for standard and parental role instructions.

In order to test whether the frequency distributions of BSRI sex role types are different under the two instructions, one-sample chi-square tests were calculated for mothers and fathers. The standard instruction frequencies were taken as the expected frequencies, and the parental role instruction frequencies were the observed frequencies, under the null hypothesis of no difference between them. Results are shown in Table I. For both mothers and fathers, chi-square was highly significant ($p < .001$).

McNemar's test was used to examine which changes in BSRI types produced these frequency differences. This test examines changes in proportions of subjects classified into dichotomous categories, e.g., androgynous and

Table I. Frequencies of Each BSRI Sex Role Type Among Mothers and Fathers Under Standard and Parental Role Instructions

Sample and instructions	BSRI sex role type[a]				χ^{2b}
	Undifferentiated	Masculine	Feminine	Androgynous	
Mothers					
Standard	7	7	21	6	
Parental	2	0	20	19	38.79^d
Fathers					
Standard	11	16	4^c	10	
Parental	4	9	16	12	43.92^d

[a]Means and types were determined under standard instructions, both genders combined.
[b]One-sample chi-square tests of parental frequencies, using standard frequencies as the expected values; $df = 3$.
[c]Since this expected value <5 makes the chi-square test questionable, chi-square was recalculated with an expected value of 6 in this cell, which is a conservative correction. $\chi^2 = 25.69$, $df = 3$, $p < .001$.
[d]$p < .001$.

not androgynous. For mothers, there were significant changes in the frequency of masculine (two-tailed binomial $p = .016$) and androgynous ($p = .0002$) types. Both effects (which are not statistically independent of each other) were due to to an increase in androgynous mothers. Of the 7 masculine mothers under standard instructions, 6 became androgynous. All 6 mothers who were androgynous stayed androgynous under parental role instructions, and 13 more were added to their ranks, 5 previously feminine and 2 previously undifferentiated. Fathers showed significant changes from the undifferentiated type ($p = .039$) and to the feminine type ($p = .004$). Under parental role instructions, 4 undifferentiated fathers became feminine, 3 became androgynous, and 1 became masculine; only 1 other became newly undifferentiated. Parental role instructions produced 14 newly feminine fathers who had been undifferentiated ($n = 4$), masculine ($n = 6$), and androgynous ($n = 4$) under standard instructions. Two originally feminine fathers became undifferentiated and androgynous.

In short, parental role instructions produced more androgynous mothers and more feminine fathers ($ps < .01$).

A second way to analyze the data is through a $2 \times 4 \times 2 \times 2$ ANOVA (Subject Gender $\times$ Subject Type $\times$ Role—Standard and Parental $\times$ Scale—Masculinity and Femininity), with the last two factors within subjects. Please note that type is a between-subjects BSRI factor, based on standard instructions, whereas role refers to our role instructions manipulation. An unweighted-means solution was used because of unequal cell sizes. As noted above, Bem's viewpoint suggests that traditionalism should increase from the standard to the parental role instructions, either among all subjects, or among androgynous or traditional types, yielding Gender $\times$ Role $\times$ Scale, or Gender $\times$ Type $\times$ Role $\times$ Scale interactions, respectively. Spence and Helmreich's viewpoint suggests that parental role instructions will increase femininity for all subjects, yielding a Role $\times$ Scale interaction.

There was only one significant effect for gender: Gender × Role, $F(1,74) = 7.11, p = .009$. Across both scales, men and women did not differ under standard instruction (4.97 and 4.99), but under parental role instructions men (5.26) were higher than women (5.05). The interactions suggested by Bem's viewpoint did not approach significance $Fs < 1.0, ps > .40$.

On the other hand, the Role × Scale interaction suggested by Spence and Helmreich's viewpoint was highly significant, $F(1,74) = 22.19, p < .0005$. It was qualified by a Type × Role × Scale interaction, $F(3,74) = 5.00, p = .003$. Both these interactions were examined more closely through separate 2 × 4 × 2 (Gender × Type × Role) ANOVAs on each scale. On masculinity, there was a Type × Role interaction, $F(3,74) = 3.96, p = .011$, as well as a by-definition main effect of type, $F(3,74) = 22.12, p < .0005$. Parental role instructions increased scores for those initially low [undifferentiated types up + 0.19 from 4.60, n.s.; feminine types up + 0.30 from 4.37, $t(24) = 2.22$, $p = .036$]; they decreased scores for those initially high [masculine types down − 0.37 from 5.76, $t(22) = 3.46, p = .002$; androgynous types down − 0.30 from 5.56, $t(15) = 2.76, p = .015$]. There was also a similar Gender × Role interaction $F(1,74) = 4.20, p = .044$. Contrary to predictions from Bem's viewpoint, parental role instructions increased women's masculinity [+ 0.10 from 5.03, $t(40) = 2.10, p = .039$], and decreased men's masculinity [− 0.19 from 5.19, $t(40) = 2.79, p = .007$]. That is, subject type and gender each had independent interactions with role, and in both cases the parental role instructions increased scores of those initially low and decreased scores of those initially high. On femininity, there were the expected main effects for type, by definition, $F(3,74) = 20.01, p < .0005$, and for gender, $F(1,74) = 7.30, p = .009$, with women (5.15) higher than men (4.94). In addition, there was a main effect for role, $F(1,74) = 60.72, p < .0005$, and a Type × Role interaction, $F(3,74) = 5.97, p = .001$. Parental role instructions again increased scores for those initially lower [undifferentiated types up + 0.57 from 4.38, $t(17) = 5.55, p < .0005$; masculine types up + 0.61 from 4.47, $t(22) = 6.72, p < .0005$], but also tended to increase scores for those initially higher [feminine types up + 0.15 from 5.40 $t(24) = 2.25, p = .034$; androgynous up + 0.18 from 5.19, $t(15) = 1.76, p = .098$]. In other words, role instructions decreased the differences among types and genders on masculinity. And they increased femininity, particularly for types initially lowest, regardless of subject gender. This confirms the Spence and Helmreich prediction for femininity.[4]

[4]The overall ANOVA also yielded four other effects. Following from the definition of type, there was a significant main effect for type $F(3,74) = 18.67, p < .0005$, and a Type × Scale interaction, $F(3,74) = 24.54, p < .0005$. Across both scales, androgynous subjects scored highest (5.36), followed by masculine (5.22), feminine (5.00), and undifferentiated (4.68) subjects. On masculinity, masculine (5.63) and androgynous (5.42) were higher than undifferentiated (4.68) and feminine (4.62) subjects. On femininity, feminine (5.39) and androgynous (5.30) were higher than masculine (4.82) and undifferentiated (4.69) subjects. There was also a main effect for role, $F(1,74) = 17.90, p < .0005$, and a Type × Role interaction, $F(3, 74) = 4.13, p = .009$.

Table II. BSRI Item Changes Under Role Instructions, by Scale, Gender, and Role, for Both Studies[a]

Masculine items	Women			Men			Feminine items	Women			Men		
	1	2	3	1	2	3		1	2	3	1	2	3
Self-reliant	+			−			Yielding	+ +			+ +		+ +
Defends own beliefs	+ +					−	Cheerful	+ + +	+		+ +	−	
Independent				− − −		−	Shy	− − −			− − −		−
Athletic	+	− −	−	+	− −		Affectionate	+ + +	− −	−	+ + +	− −	+ + +
Assertive	+				− −		Flatterable		− −			− −	
Strong personality		−		+			Loyal	+	− −			−	
Forceful							Feminine			+ + +			+ + +
Analytical		−		−	+ +		Sympathetic	+ +		+ +	+		+ + +
Has leadership abilities		−			− − −		Sensitive to others' needs	+		+ +		−	+ +
Willing to take risks				− −			Understanding	+	− −			−	
Makes decisions easily	+ +						Compassionate	+	− −	+ + +	+ + +	−	+ + +
Self-sufficient	+						Eager to soothe hurt	+ +		+ + +	+ + +	−	+ + +
Dominant	+						Soft-spoken		+ +	+	+ +		
Masculine			−				Warm	+ + +	− −	+	+ + +		+ + +
Willing to take a stand							Tender	+ + +	− −	+	+ + +	−	+ + +
Aggressive	+						Gullible	−	− − −			−	
Acts as a leader	+ +	− −			−		Childlike		− − −		+ + +	−	
Individualistic	− −			− − −		− − −	Not use harsh language		− − −		+ +	− −	
Competitive		−	− − −	− − −		− − −	Loves children	+ +		− − −	+ + +	− −	
Ambitious				−			Gentle	+ + +	−	+ + +	+ + +	− − −	+ + +

[a]Roles: 1 = parent, in study 1; 2 = student; 3 = partner, in study 2. Comparisons are by correlated *t* tests with responses under standard instructions. (+) designates an increase, and (−) designates a decrease. Significance *p* values are < .05 for +, < .01 for + +, and < .001 for + + +.

In order to examine which BSRI items were most responsible for the significant changes in scores among men and women described above, disregarding type, correlated *t* tests on masculine and on feminine items under both instructions were calculated for men and women. Results for items yielding significant changes are shown in the four columns numbered "1" in Table II.[5]

The items that changed seem to reflect the subjects' conceptions of the role of mother and father, in their increased emphasis on nurturance and tenderness, and in de-emphasis of competitiveness. The global constructs of masculinity and femininity seem too broad to accurately describe these changes. Describing men in the father role as less masculine and more feminine on the BSRI is true, as far as it goes. But the item analysis indicates that it is more accurate to describe them as less independent and competitive, and more affectionate and nurturant. Similarly, women as mothers are more masculine and more feminine, but it is more accurate to say that they are more decisive and assertive, and more gentle and nurturant (see Table II). This is consistent with Spence and Helmreich's view of the BSRI.

There is an alternative interpretation of these results, in terms of social desirability and impression management, or other demand characteristics. Although the subjects knew from the outset that they would be studied as parents interacting with their infants, it is possible that this was especially salient during the home visit when these observations were made. This may have increased their concern about being seen as desirable parents, or nurturant parents, and influenced both their BSRI self-description under parental role instructions and their behavior with their infants. Thus the changes we found in the BSRI could have been the result of impression management or demand characteristics, rather than being "accurate" self-descriptions under role instructions.

The study does not provide any data for checking this alternative directly. However, if impression management or demand characteristics were major determinant of the second BSRI, they might also have been determinants of the 15-minute parent–infant play interactions as well, and these two would then have shown some correspondence. They did not (Weston, 1982). There

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Over both scales, scores increased the most from standard to parental role instructions for undifferentiated types (+ 0.39), increased less for feminine (+ 0.16) and masculine (+ 0.15) types, and hardly changed for androgynous types (− 0.01).

[5]Clearly, these *t* tests are not independent of each other, since the items are highly correlated. They are presented only for descriptive purposes. In fact, each scale's alpha reliability coefficient showed little change from standard to parental role instructions, underscoring each scale's internal consistency even under atypical role instructions. Masculinity's alpha went from .86 to .81 for men, and .90 to .88 for women. Femininity's alpha went from .78 to .68 for men, and .77 to .64 for women.

was only one relationships between the standard BSRI and play: feminine fathers engaged in more conventional play than masculine and undifferentiated fathers. And there were *no* significant relationships between play and the BSRI under parental role instructions. There was thus no evidence of impression management or demand characteristics.

STUDY 2

This study was designed to test the generality of the effects obtained in the first study. Would other gender-segregated social roles produce changes on the BSRI, and would they increase sex role traditionalism? And would other social roles that are not gender segregated change BSRI responses in directions Spence and Helmreich might predict? We were also interested in minimizing potential demand characteristics and in examining possible order effects in filling out the BSRI several times. College students described themselves on the BSRI under standard instructions, and then either in their roles as college students and as girlfriends or boyfriends, or in these latter roles in the reverse order.

Bem's view of the BSRI suggests no predictions for the student role instructions, especially at a large university with roughly equal numbers of men and women. However, the romantic partner role instructions were expected to increase sex role traditionalism for two reasons. First, these are traditional *sex* roles, biologically defined and well known to college students, not just *social* roles that differ in their expressiveness and instrumentality requirements. Second, these sex role instructions may activate gender schemata. Whether activation is greater among androgynous subjects because such schemata are normally not active under standard instructions; or activation is greater among traditional subjects because their schemata are more fully developed, traditional in content, and important when activated, there should be more traditionalism under romantic partner instructions than standard instructions. Thus, from Bem's viewpoint, we expected a gender by type by role by scale interaction.

In terms of Spence and Helmreich's viewpoint, the romantic partner roles were a priori expected to increase expressiveness and decrease instrumentality for both genders. We also expected the student role to have the opposite effect for both genders, decreasing expressiveness and increasing instrumentality. This should yield a role by scale interaction, and no effects for gender.

Method

Forty-five men and 31 women from introductory and social psychology classes at New York University participated by filling out a self-explanatory booklet in a "1/2-hour study of self-concept." After assurance of confidentiality and anonymity, and without putting their names on the booklets, they filled out the BSRI under standard instructions. Then, for approximately half the subjects, the next page in the booklet instructed them to "describe yourself in your role as a *COLLEGE STUDENT.* That is, we would like you to indicate, on a scale from 1 to 7, how true of you as a *COLLEGE STUDENT* these various characteristics are." The last page instructed them to fill out the BSRI in their "role as *BOYFRIEND, GIRLFRIEND,* or *SPOUSE* (whichever applies to you)." We did not attempt to distinguish between those who were currently in these roles, and those who simply imagined that they were. The other subjects received the student and partner role instructions in the reverse order, after the standard BSRI. This produced a $2 \times 2 \times 2 \times 3 \times 2$ ANOVA (Gender $\times$ Type $\times$ Order $\times$ Role—Self, Student, and Partner $\times$ Scale) design, with the last two factors within subjects.

Results and Discussion

Differences in the frequency distribution of BSRI types under the two role instructions were tested in the same way as in Study 1. Medians for determining BSRI types were based on standard instruction responses from both genders, equally weighted ($N = 76$); masculinity median = 4.78, femininity median = 4.88. Overall results are shown in Table III. Both role instructions had significant effects on type frequencies. Student role instructions produced different frequencies for women ($p = .01$) and for men ($p = .026$). Partner role instructions also produced different frequencies for both women ($p = .003$) and men ($p = .004$).[6]

McNemar tests for changes in proportions showed that the student role instructions increased the number of undifferentiated women ($p = .016$),

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[6]Note that BSRI type frequencies under each role instruction were compared with the *same* expected frequencies, obtained under standard instructions, in both these chi-square tests and the McNemar tests that follow. Thus the tests of role instructions are not statistically independent of each other since they use the same comparison data.

Table III. Frequencies of Each BSRI Sex Role Type Under Standard, Student, and Boy or Girlfriend Role Insturctions

Sample and instructions	BSRI sex role type[a]				χ^{2b}
	Undifferentiated	Masculine	Feminine	Androgynous	
Women					
Standard	9	4[c]	9	9	
Student	16	6	6	3	11.44[e]
Girlfriend	3	2	18	8	14.11[e]
Men					
Standard	10	15	8	11	
Student	13	21	7	3	9.24[d]
Boyfriend	8	6	16	13	13.34[e]

[a]Medians and types were determined under standard instructions, both genders weighted equally and combined ($N = 76$).
[b]One-sample chi-square tests of each role's frequencies, using standard frequencies as the expected values; $df = 3$. Row totals differ because of missing data.
[c]Since this expected value < 5 makes the chi-squares questionable, chi-squares were recalculated with an expected value of 6 in this cell. They were 10.99, $df = 3$, $p = .012$ for the student role; and 16.67, $df = 3$, $p = .001$ for the girlfriend role.
[d]$p < .05$.
[e]$p < .01$.

and decreased the number of androgynous women ($p = .031$) and men ($p = .008$). All undifferentiated women stayed undifferentiated, and 4 previously androgynous and 3 previously feminine types were added to their ranks. Of the 9 initially androgynous women, 4 became undifferentiated and 2 became masculine. Of the 11 initially androgynous men, 6 became masculine and 2 became feminine under Student instructions.

Girlfriend instructions primarily increased the number of feminine women ($p = .012$), adding 7 who were undifferentiated and 3 who were androgynous under standard instructions, and dropping only 1 who became androgynous. Boyfriend instructions also increased the number of feminine men ($p = .039$), adding 5 men who were undifferentiated, 4 who were androgynous, and 1 who was masculine. Only 2 initially feminine men changed under boyfriend instructions, becoming undifferentiated and androgynous. Boyfriend instructions also decreased the number of masculine men ($p = .022$), with 6 becoming androgynous, 2 becoming undifferentiated, and 1 becoming feminine. Only 1, who was androgynous under standard instructions, became masculine. (One other was dropped from the analysis due to missing data.) Thus partner instructions increased the number of feminine men and women, and decreased the number of masculine men.[7]

As in the Study 1, ANOVAs were also performed using unweighted means to deal with unequal cell sizes. First, order effects were examined with a 2 × 2 × 3 × 2 ANOVA (Gender × Order × Role × Scale). (A complete

[7]The two effects for men are relatively independent of each other, since there was only one initially masculine man who became feminine under partner instructions.

five-factor ANOVA was not possible because of empty cells.) None of the order effects were significant, so this factor was omitted in subsequent analyses.

A $2 \times 4 \times 3 \times 2$ (Gender $\times$ Type $\times$ Role $\times$ Scale) ANOVA was done next, with the last two within-subjects factors, and type based on the BSRI under standard instructions. Predictions based on Bem's viewpoint require a Gender $\times$ Role $\times$ Scale interaction, with or without type, since traditionalism is defined differently for each gender and scale combination. Neither of these interactions approached significance $Fs < 1.0$, $ps > .50$. In fact, there were no significant effects for gender at all.

The Spence and Helmreich viewpoint predicts a Role $\times$ Scale interaction which was significant, $F(2,130) = 46.58$, $p < .0005$, and was qualified by Type $\times$ Role $\times$ Scale interaction, $F(6,130) = 2.84$, $p = .012$. Hence, $2 \times 4 \times 3$ (Gender $\times$ Type $\times$ Role) ANOVAs were performed on each scale. On masculinity, only the by-definition effect of type was significant, $F(3,65) = 36.91$, $p < .0005$. Of specific predictions, t tests showed that both student (4.69) and partner (4.65) role instructions significantly lowered masculinity relative to standard instructions (4.79), ts (73) > 2.15, $ps < .035$. This supports our Spence and Helmreich prediction for the partner role, but contradicts it for the student role. On femininity, in addition to the by-definition type main effect, $F(3,66) = 40.23$, $p < .0005$, there was a main effect for role, $F(2,132) = 94.38$, $p < .0005$. Femininity under partner role instructions (5.17) was higher than under standard instructions (4.83), $t(74) = 8.42$, $p < .0005$, which was higher than under student role instructions (4.48), $t(74) = 7.81$, $p < .0005$. This supports our Spence and Helmreich predictions for both roles.[8]

As in Study 1, changes in individual items between standard and role instructions were examined for descriptive purposes, using correlated t tests. The items that changed significantly are identified in the columns numbered

[8]The overall ANOVA also yielded several other significant effects. Following from the definition of type, there was a significant main effect for type, $F(3,65) = 25.67$, $p < .0005$, and a Type $\times$ Scale interaction, $F(3,65) = 57.49$, $p < .0005$. Across both scales, androgynous subjects scored highest (5.19), followed by masculine (4.80), feminine (4.71), and undifferentiated (4.34) types. On masculinity, masculine (5.30) and androgynous (5.20) types were higher than undifferentiated (4.19) and feminine (4.06) types. On femininity, feminine (5.36) and androgynous (5.18) types were higher than undifferentiated (4.50) and masculine (4.29) types. There was a main effect for role, $F(2,130) = 32.89$, $p < .0005$, with partner highest (4.91), followed by standard (4.81) and student (4.58) role instructions. There was a main effect for scale, $F(1,65) = 6.03$, $p = .017$, with femininity (4.83) higher than masculinity (4.69).

There was also a Type $\times$ Role interaction from the $2 \times 4 \times 3$ ANOVA on femininity, $F(6,132) = 2.41$, $p = .03$. Cell means showed that while mean changes from standard to student role instructions were about the same for all types, varying from -0.29 to -0.43 [ts (16 to 19) > 3.45, $ps < .004$], types differed in mean changes from standard to partner role instructions. Those initially lowest changed the most [undifferentiated types $+0.54$ from 4.46, $t(18) = 5.50$, $p < .0005$; and masculine types $+0.41$ and 4.27, $t(18) = 5.44$, $p < .0005$], and those initially highest changed the least [feminine types $+0.22$ from 5.41, $t(16) = 2.92$, $p = .01$; and androgynous types $+0.20$ from 5.22, $t(19) = 3.87$, $p = .001$].

"2" and "3" in Table II.[9] In examining these, bear in mind that there was no significant gender by role interaction on total scores; men and women were similar, not dissimilar, in how their role self-descriptions differed. On the masculine items, men and women saw themselves as having weaker personalities and less leadership when they were in the student role. And they saw themselves as less independent and competitive in the boy- or girlfriend roles. On the feminine items, self in the student role was characterized by both genders as less affectionate, flatterable, loyal, compassionate, warm, tender, childlike, and gentile. Students are less expressive. The self in both boy- and girlfriend roles was characterized by both men and women as less shy, and more affectionate, sympathetic, sensitive, compassionate, eager to soothe hurt feelings, warm, tender, and gentle.

These results contradict the hypothesis that adopting sex roles such as boyfriend or girlfriend increases sex role traditionalism. They thus replicate the major results of the first study, with different social roles. Men *and* women became more feminine and less masculine under the role instructions for boyfriend or girlfriend, and these roles did not differ from each other. Student role instructions also had significant effects on BSRI self-descriptions, even though it is not a sex role or gender segregated.

GENERAL DISCUSSION

Both studies show that self-descriptions on the BSRI are not stable across imagined social roles. When subjects described themselves in the roles of mother or father, or student, or boy or girlfriend, their scores on masculinity and femininity changed significantly from their descriptions under standard instructions. So self-descriptions on the BSRI depend upon the social role one has in mind when completing it. This suggests that, like many other personality scales, the BSRI does not measure stable transsituational aspects of personality. It also suggests an important limitation on the standard BSRI's ability to predict behavior in various social roles. If adopting a social role or being in a particular situation changes self-descriptions, the standard self-description may not be as good a predictor of behavior in that role or situation as a role- or situation-specific description would be. Role-specific BSRI self-descruptions might increase the instrument's predictive utility, even

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[9]These tests are not orthogonal because both role instructions are compared with standard instructions and because items are highly correlated. In the standard, student and partner roles, respectively, masculinity's alpha coefficients of reliability were .88, .85, and .88 for men; and .89, .87, and .89 for women. Femininity's alphas were .82, .83, and .79 for men; and .72, .82, and .74 for women.

though it was not originally designed to measure role-specific self-concepts. Of course, this is an empirical question for future research.

Both studies also show that adopting specific sex roles, such as parent or romantic partner, does not increase sex role traditionalism. Increased traditionalism might be expected, either on the grounds that global stereotypes are composites of specific sex roles, and parent and romantic partner are among the most important specific sex roles, or on the basis of Bem's gender schema theory, since adopting specific sex roles should make the gender schema more salient. However, this did not occur.

In the first study, parental role instructions increased the number of androgynous mothers and feminine fathers. In terms of the two BSRI scales, parental role instructions had the same effects on BSRI types, regardless of subject's gender. Those types that were low on instrumentality (masculinity) under standard instructions increased in the parental role, and those that were high decreased. In addition, the parental role made men and women *less* traditional on masculinity. Parental role instructions also increased all subjects' expressiveness (femininity), though this increase was greatest for BSRI types that were initially lowest. All of this suggests that the role of being an infant's parent calls for high expressiveness, as predicted from a Spence and Helmreich perspective, and moderate instrumentality.

In Study 2, the romantic partner role instruction increased the number of feminine women, as both Bem, and Spence and Helmreich might predict. But it also increased the number of feminine men and decreased the number of masculine men. Such a result is difficult to reconcile with Bem's interpretation of the BSRI, but not surprising if the scales are reinterpreted as instrumentality and expressiveness. Men and women showed the same changes on these two scales. Both became more expressive and less instrumental as romantic partners, indicating that men and women in this population share a common conception of their own respective romantic partner roles, which calls for more expressiveness and less instrumentality than they ordinarily display. Scale changes as a function of BSRI type were also inconsistent with Bem's viewpoint, since they did not differ by subject sex. Instead, those types that were least expressive under standard instructions changed the most, toward the role demand for more expressiveness.

In addition, adopting the role of student (which is unrelated to sex roles) significantly decreased the number of androgynous men and women, and increased undifferentiated women. The results did not depend upon BSRI type. Rather, there was a uniform decrease for all types from standard to student role instructions in everyone's masculinity, and a uniform decrease in men's and women's femininity. How should this be interpreted? Table II shows that the student role is seen by both sexes as reducing leadership and strong personalities; calling for less affection, loyalty, compassion, warmth,

tenderness, and gentleness; and producing less flatterability and childlike behavior. Students must be followers, and relatively cool, distant, and skeptical of others' intentions. Is it more accurate, or conceptually clearer, to describe the student role as demanding less social instrumentality and less expressiveness, or to say that it calls for less masculinity and less femininity? The former seems more accurate and informative to us, and it also avoids interpreting self-descriptions under nonsex role instructions in terms of the sex role stereotypes on which the BSRI is based.

Our results from both studies are more consistent with Spence and Helmreich's (1978, 1980) view that the BSRI masculinity and femininity scales are imperfect measures of instrumentality and expressiveness, respectively. Interpreted this way, they indicate that, relative to general self-descriptions, men see themselves as less instrumental and more expressive in the role of an infant's father, and mothers see themselves as more instrumental and expressive. Men and women see themselves in the romantic partner role as less instrumental and more expressive, and in the student role as less instrumental (socially, at least) and less expressive. This reinterpretation of the BSRI scales avoids the unsupported predictions that sex role instructions will increase traditionalism, or that androgynous and traditional subjects will change in different ways. And it casts our findings in terms that are more clearly consistent with what we know of these social roles.

There are several caveats to our results that should be noted. First, predictions from Bem's position were more vulnerable to disconfirmation in these studies because they were both more specific and more numerous. Spence and Helmreich's interpretation of the BSRI is more consistent with our findings, and unlike Bem's, was not contradicted by our results. But findings *consistent* with their position are not the same as findings *predicted* from their position. To obtain those, we would have had to obtain independent assessment of perceived role requirements, and then predicted BSRI changes under role instructions from these. This we did not do. Second, the changes and role effects we found may be specific to samples like ours. Our parents were upper middle-class, urban professionals, for whom equality in child-rearing responsibilities is a common value. Our students were from psychology classes at a large coeducational urban university, and may not be representative of students elsewhere, in terms of their conceptions of the social roles we used.

Third, the BSRI was not designed to be taken under specific role instructions. The internal consistency of the scales was little affected by these novel instructions (see footnotes 4 and 6), but nothing is known about their effect on test–retest reliability or predictive validity. If this role instructions approach to the investigation of sex roles is pursued in the future, these issues will have to be addressed. And finally, the amount of change produced by

specific role instructions may be exaggerated by the present procedure of obtaining self-descriptions first under standard instructions, and then under role instructions. The effects of separating multiple administrations of the BSRI more, and of counterbalancing order of administration more fully should be investigated in future research.

Nevertheless, our results are more consistent with Spence and Helmreich's conception of the BSRI scales, and with a multidimensional conception of sex roles (e.g., Ashmore & DelBoca, 1979; Deaux, 1984). Gender-segregated social roles call for a variety of *different* personality traits. Women may become more instrumental in their roles as mothers and less instrumental as romantic partners. And though men's instrumentality decreased and their expressiveness increased in both the father and boyfriend roles, other gender-segregated roles such as soldier or breadwinner would almost certainly produce changes in the opposite directions. Indeed, asking subjects for descriptions of themselves in well-known roles may be another fruitful way to investigate the multidimensionality of sex roles. The relationship of such specific sex role characteristics to global sex role stereotypes, and the relative importance of each in person perception and discrimination, are two important areas for future research.

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