

Development of a Behavioral Phrase Form of the BSRI

An Honors Thesis (ID 499)

by

Teresa Huffman

Thesis Director

Deborah Marie Balogh

Ball State University

Muncie, Indiana

May 1984

Date of graduation (Spring/1984)

## DEVELOPMENT OF A BEHAVIORAL PHRASE FORM OF THE BSRI

The conceptualization of sex roles and investigation of the development of sex roles is a relatively new area of research interest. Until recently, the presence of sex roles was considered a consequence of innate characteristics unique to each sex and not necessarily a learned behavior or the result of the social norm (Hyde & Rosenberg, 1980). The last sixty years has brought a drastic change in the idea of sex role, possibly as a consequence of studies indicating differential sex role norms cross-culturally (Mead, 1935, 1961). This change in thought may also be related to the woman's movement and the gradual movement of women into the "male domain" (Mead 1935, 1961). Challenges of the traditional view of sex roles has been accompanied by increased interest in sex role research and, consequently, in finding ways to quantify sex role and sex role attributes.

Early sex role indices were constructed using either typological categorization in which people belong in either one of two distinct categories or a unidimensional, bipolar continuum in which masculinity and femininity can be represented by various graduations on the continuum ranging from extreme masculinity to extreme femininity (Hyde & Rosenberg, 1980; Constantinople, 1973; Terman & Miles, 1936; Strong, 1936; Hathaway & McKinley, 1943; Gough, 1952). Some researchers extended the bipolar conception with the suggestion that the endpoints are opposites and should be negatively correlated (English & English, 1958). Using these measurement devices people were classified as either all masculine

or all feminine (Constantinople, 1973; Carlson, 1972). Optimal psychological adjustment was assumed to be associated with appropriate sex-typing and cross-sex-typing was considered deviant. This implies that a female who scored within the feminine range was considered "normal" and well adjusted but a female who scored in the masculine range was considered "abnormal" and poorly adjusted.

In more recent years, researchers began to identify problems with unidimensional descriptions and measurement of masculinity and femininity. They suggested that a bipolar measurement of masculinity and femininity was simplistic and proposed that the construct may be more adequately conceptualized as multidimensional with several scales used to capture its complexity (Carlson, 1972; Constantinople, 1973). The initial tests were also based on the assumption that adoption of a sex-typed item meant the rejection of "opposite" sex-typed items. This may be an invalid assumption. In response to these problems, modifications of measurement devices have taken place (Bem, 1974, 1976; Block, 1973; Berzins, Welling & Wetter, 1978; Pleck, 1975; Spence, Helmreich & Strapp, 1975). These new indices were developed around the conceptualization of sex role as an orthogonal construct in which masculinity and femininity could be achieved dually, with the development and existence of one unimpeding the development of the other (Carlson, 1972; Bem 1973; Spence et al., 1975). For example, an individual could possess traditionally masculine ("ambitious") and feminine ("compassionate") characteristics dually. This conceptualization allowed Bem (1974) to empirically establish the concept of androgyny and to challenge the traditional assumption

of mental health being related to appropriate sex typing.

Bem argued that individuals could be "androgynous", possessing both masculine and feminine characteristics, which would enable them to act appropriately depending on situational demands. Conversely, Bem suggested, sex-typed individuals could be limited in their behavioral repertoire as they move from situation to situation as a consequence of possessing only those characteristics traditionally appropriate for their gender. One example of a scale which incorporates these ideas is the Bem Sex Role Inventory (BSRI).

The Bem Sex Role Inventory was developed by Sandra Bem in 1974. The BSRI contains several features that distinguish it from other commonly used measurement devices (Bem, 1974). First, it includes both a masculinity and a femininity scale, each of which contains 20 personality characteristics (adjectives). Second, because the BSRI was based upon the notion that the sex-typed person is someone who has internalized society's standards of desirable behavior for men and women, personality characteristics were selected on the basis of male and female stereotypes. Most other inventories have been based on differential item endorsement by males and females. Third, the BSRI contains a social desirability scale used during test construction to insure that the inventory was not merely tapping a general tendency to endorse socially desirable items. This scale, consisting of 20 adjectives, is now used to provide a neutral context for the masculine and feminine items and is not scored. Fourth, the original BSRI classifies a person as masculine, feminine or androgynous as a function of a difference score between

masculine and feminine scales. Subjects taking the BSRI are asked to rate each item on a scale from 1 (never or almost never true) to 7 (always or almost always true). The original scoring method involved summing items endorsed for each scale and obtaining a difference score. A t-score, referred to as the androgyny score, is found such that the person's difference score is normalized with respect to the standard deviations of his or her masculinity and femininity score. Scores with high absolute value indicate sex-typed classifications with positive scores indicating femininity and negative scores indicating masculinity. Sex-typed scores indicate not only the endorsement of items on one scale but also the rejection of items on the other scale. Androgynous scores, those close to zero, indicate the equal endorsement of items on both scales. The normative sample indicated that 34 percent of females were classified as feminine ( $t \geq 2.025$ ), 20 percent near feminine ( $1 < t < 2.025$ ), 34 percent androgynous ( $-1 \leq t \leq 1$ ), 12 percent near masculine ( $-2.025 < t < -1$ ) and eight percent masculine ( $t \leq -2.025$ ). The corresponding percentages for males was six, five, 34, 19, 36 (Bem, 1974).

The BSRI was criticized on the ground that the androgyny classification does not distinguish between scores with an equal but high endorsement of both masculine and feminine items and scores with an equal but low endorsement of both characteristics. The latter case makes up the fourth category and is labeled undifferentiated. In response to criticism of the BSRI scoring method Bem suggested a revised scoring and categorization procedure (Spence, Helmreich & Strapp, 1975; Bem, 1977). It is now recommended that subjects taking the BSRI be classified using

a revised scoring method, the median split, in which subjects are divided at the median on both feminine and masculine scales yielding the fourfold classification (Bem, 1977). Using this method for the normative sample, 39 percent of females are classified as feminine, 12 percent as masculine, 30 percent as androgynous, and 18 percent as undifferentiated. For males the corresponding percentages are 12, 42, 20 and 27 (Bem, 1977).

Although the BSRI is an improvement over original sex role measurement devices, no attempt at further modification has occurred until recently. Through our research with college students, additional problems with the BSRI have become evident. It appears that many subjects taking the BSRI do not know the definitions of all the adjectives and therefore their scores may not accurately reflect their actual sex role orientation. Secondly, the adjectives appear vague and may elicit differing behavioral referents among subjects, again resulting in inaccurate scores. Subjects may tend to take a more neutral stance when responding to items because of vagueness or unfamiliarity resulting in more equal masculine and feminine scores. This may lead to an artificially inflated number of subjects who are classified as androgynous or undifferentiated.

In addition to these problems found with a college student population, it became apparent that a form which could be used with other populations, such as children, would be useful. Researchers who have attempted to study sex roles in children have typically used a two-choice format in which children must label a trait or activity as either male or female (Kuhn, Nash

& Brucklen, 1978; Masters & Wilkinson, 1976; Williams, Bennett & Best, 1975; Urberg, 1982). It would be valuable to be able to measure sex role endorsement of children within the conceptualization of the BSRI. This would allow the study of sex role development and endorsement of children at various ages rather than just assessing their knowledge of stereotypes. One such device using a phrase form of the BSRI has been attempted by Stericker and Kurdek (1982).

The purpose of the present study was to devise a behavioral phrase form of the BSRI to clarify definitions and to create a concrete and consistent referent. It was hypothesized that the phrase form would produce a broader range of scores and would be more effective at discriminating sex-typed individuals from androgynous individuals. A second purpose of this study was to compare t-score and median split scoring methods. The criticisms of the scoring methods used for the BSRI warrant further investigation into the most accurate and desirable scoring method.

#### Method

Subjects. Fifty-eight males and 213 females from an introductory psychology class at a large Midwestern university participated in the study.

Procedure. Subjects were instructed to describe themselves by indicating the extent to which they possess various characteristics using the BSRI and the alternate form consisting of parallel behavioral phrases. The order of the forms was randomly assigned such that one half of the subjects received the BSRI adjectives first and one half received the phrase form

first. Both forms yielded a feminine and a masculine score. Subjects were classified for each form using both the difference score and the median split scoring methods. The difference score allows five possible classifications: masculine, near masculine, androgynous, near feminine and feminine. The median split yielded four possible classifications: masculine, feminine, androgynous and undifferentiated. Item correlations for the phrase form were found using Pearson Product-moment correlation coefficients.

### Results

The t-score scoring method was used to score BSRI and phrase forms. T-scores were analyzed as a function of sex of respondent, form, and order in a three-way ANOVA. Results of the ANOVA yielded significant form x sex ( $F(1,267) = 6.38$   $p < .01$ ) and form x sex x order ( $F(1,267) = 7.32$   $p < .007$ ) interactions. T-scores for male subjects were closer to the masculine classification for phrases than for adjectives. T-scores for female subjects were closer to the feminine classification for phrases than for adjectives. When phrases were presented first, mean phrase scores were closer to masculine and feminine classifications than mean BSRI scores. Figure 1 presents the ranges of t-scores for both male and female subjects on the BSRI and phrase forms. The phrase form t-scores yielded higher absolute values than the adjective t-scores. This resulted in a distribution of scores which was more evenly dispersed and covered a broader range.

The raw BSRI data were subsequently reanalyzed using the updated median split scoring method now recommended by Bem

(Spence et al., 1975; Bem, 1978). Table 1 presents percentages in each category for Bem's 1978 Stanford normative sample classified on the basis of the median split scoring method. Table 1 also includes the present sample of the adjective form classified on the basis of the median split and the t-score methods. Table 2 presents percentages of the present sample scores on the BSRI and phrase form using the median split scoring method.

The behavioral phrase form used in this study is presented in Table 3. Pearson Product-moment correlation coefficients were calculated for the adjective and corresponding phrases. As indicated by column three of Table 3 the correlations were modest with a range of  $r=.14$  to  $r=.94$  and mean  $r=.43$ . All of the correlations were significant ( $p < .02$ ).

---

Insert Figures and Tables about here

---

### Discussion

To repeat, the purpose of this study was to devise a behavioral phrase form of the BSRI which would clarify definitions and create concrete and consistent referents. Two important findings emerged from these investigations: the first in regard to the development of the phrase form and the second in regard to scoring method. The development of the phrase form will be addressed first.

It was predicted that the phrase form would create more concrete referents and would clarify item definitions. Thus, the phrase form was expected to improve discrimination of sex

role orientation and yield a higher frequency of sex-typed classifications. The ANOVA produced two interactions; form x sex and form x sex x order. The first interaction is to be expected due to the nature of the inventory, that is, females will score more highly feminine and males will score more highly masculine, on the average, on a measure of sex role. In addition to this general finding, the female and male group means were more strongly sex typed for the phrase form than for the adjective form. The order effect, indicated by the second interaction, could be a function of the phrase form having a restricting effect on the adjective form. The specific concrete nature of the phrase form may have the effect of causing the adjectives to appear general and ambiguous. This type of effect would tend to cause more conservative endorsement of adjective items and to restrict the range of scores obtained. The frequency distribution of adjective and phrase form scores suggests this may be the case. Adjective scores tend to cluster around the androgyny classification while phrase scores tend to be more evenly dispersed and to cover a larger range of scores. As Table 2 suggests, the scores obtained using the median split scoring method, however, are more ambiguous and do not follow this trend. This may be a function of the inconsistency in the two scoring methods which will be addressed later. Finally, the item correlations were modest at best yielding a wide range of correlations from very high to very low.

The implications of the present findings suggest that the phrase form may be more efficient in detecting sex typing than the adjective form. For example, an actual sex-typed individual

may fall into the androgyny category using the BSRI as a measurement device but may be sex typed using the phrase form. The implications of these findings suggest that the phrase form has promise as a more accurate measurement device by clarifying definitions and creating more concrete referents. Further refinement, especially of items with low correlations, and reliability and validity testing, however, need to be done before such a conclusion can be made with confidence. The tentative findings obtained in this study appear sufficient to warrant further investigation of development of a form to be used with children. A form of this type would facilitate research into the early development of sex role orientation. As suggested by Stericker and Kurdek (1982), studies that measure children's sex role orientation have been few, probably as a result of a lack of an appropriate measurement device.

A second purpose of this study was to look at a comparison of scoring method. Because of criticisms of the t-score method we reanalyzed the data using the median split. This data yields two comparisons; the present sample vs. Bem's normalized sample, and the t-score vs. median split for the present sample. The comparison to Bem's standardized sample will be considered first. Table 1 indicates that for the adjective form the female group of the present sample conforms to the results obtained in Bem's normalized sample indicating that Bem's results are not sample specific but generalizable to other samples. For the male group, however, the scores do not conform to Bem's sample which could suggest sample specific covariation. We view this discrepancy as a function of small sample size.

The second comparison yields an important finding concerning scoring method. The original purpose of the median split was to divide the androgynous group into two groups: one which contains those who score high on both masculine and feminine scales (high-high) and one which contains those who score low on both scales (low-low). The first group was labeled androgynous and the second group was labeled undifferentiated by Bem. In the present sample, a distinction between these groups does seem to be warranted due to the large proportion classified as undifferentiated. The median split method, however, does not merely separate the androgynous group into high-high and low-low scorers but it yields an entirely different classification set across categories. The median split method does not consider the difference between masculine and feminine scores as a criteria for classification. For example, an individual may score just above the median on the masculine scale and just below the median on the feminine scale. The t-score would classify this individual as androgynous while the median split would classify this individual masculine even though the scores indicate a nearly equal endorsement on both scales. We suggest inclusion of the difference score element in the scoring method used in order to assess the individual's balance of characteristics possessed. A hybrid scoring method includes the difference score and divides androgynous scorers into high-high and low-low groups. This method classifies subjects in a two step process. First, subjects are classified on the basis of a t-score in which the difference score is utilized. The potentially androgynous

group is then reanalyzed into androgynous and undifferentiated groups using the median split. This method addresses the criticisms of Spence et al. (1975) while at the same time more fully takes into consideration differential endorsement of each scale and the balance of characteristics possessed. In this method, the androgynous group is divided into the true androgynous group and the undifferentiated group without altering the sex-typed groups. We conclude, therefore, that the hybrid method is the most desirable and suggest it be used in all cases even though it is more complicated and time consuming.

Figure 1

## Ranges of T-scores on BSRI and Phrase Forms

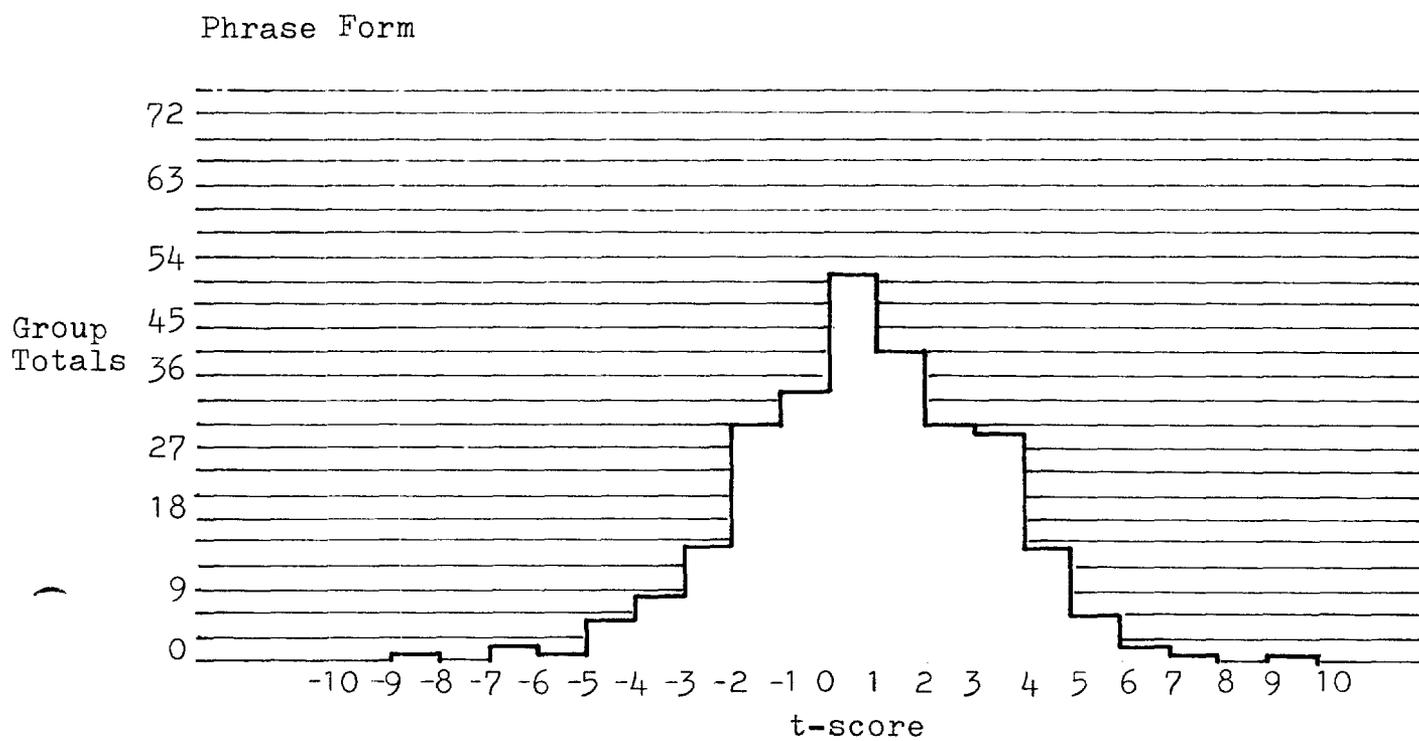
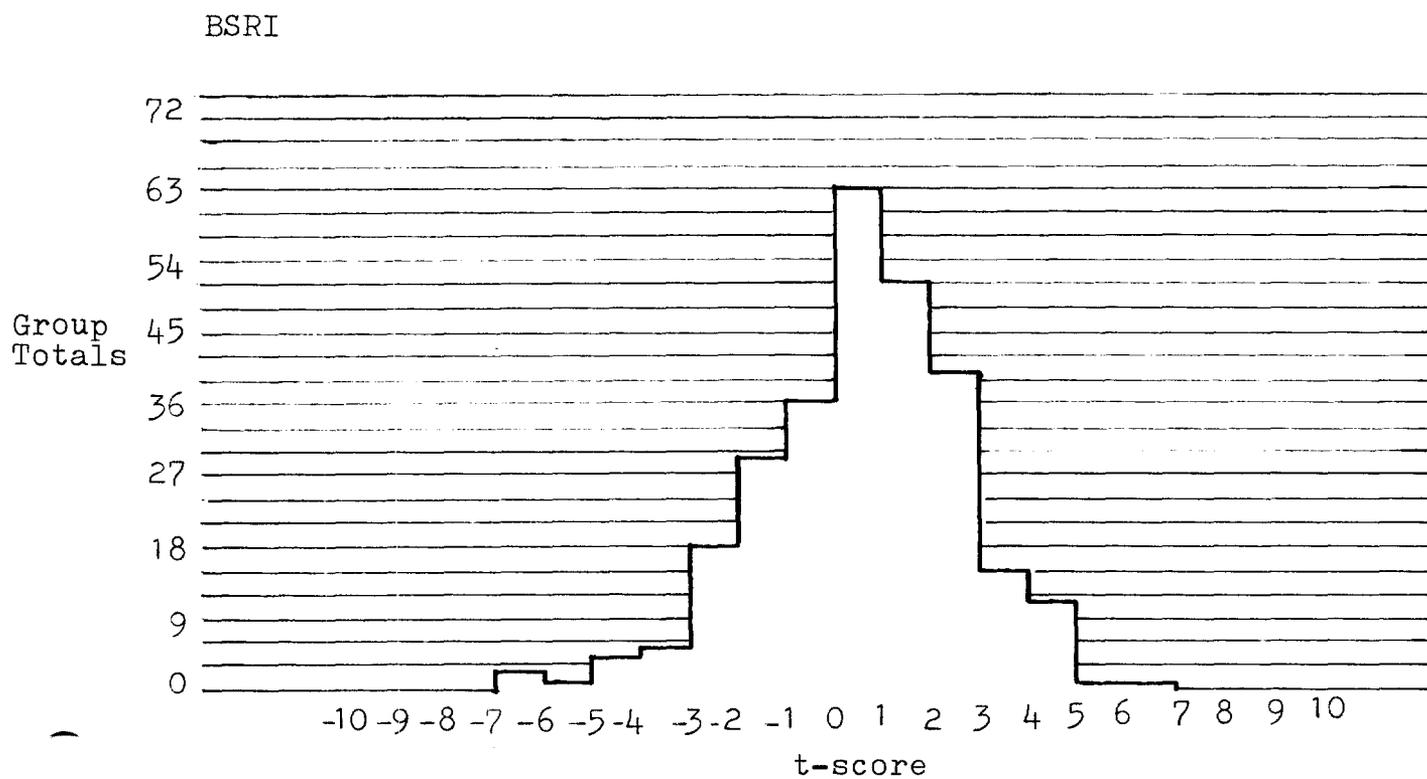


Table 1

The Percentages of Subjects in Bem's 1978 Normative Sample and the Present Sample Classified as Masculine, Feminine, Androgynous and Undifferentiated Using the Median Split Method, and the Present Sample Classified as Masculine Near Masculine, Androgynous, Near Feminine, and Feminine Using the T-score Method.\*

Respondant	Classification					
	M	NM	A	NF	F	U
Female						
Bem's sample median split	12.4%		30.3%		39.4%	17.9%
Present BSRI median split	17%		30%		32%	20%
Present BSRI t-score	5%	8%	36%	21%	31%	
Male						
Bem's sample median split	42%		19.5%		11.6%	26.9%
Present BSRI median split	52%		9%		3%	36%
Present BSRI t-score	28%	14%	36%	12%	5%	

\* Empty spaces in Table are due to different scoring categorizations across scoring method.

Table 2

The Percentages of Subjects in the Present Sample Classified as Masculine, Feminine, Androgynous and Undifferentiated Using the Median Split Method.

Form	Classification			
	M	A	F	U
Female				
Adjective	17%	30%	32%	20%
Phrase	16%	24%	25%	34%
Male				
Adjective	52%	9%	3%	36%
Phrase	40%	41%	5%	14%

Table 3

Original Bem Items, Revised Phrase Items, Pearson Correlations Between Ratings Given by Undergraduates to Both Original and Phrase Form Items.

BSRI item	Phrase item	r
Self-reliant	Am able to find solutions to problems on my own	.35
Yielding	Conform to the standards of my friends even when I disagree with them	.14
Helpful	Will make an effort to help when help is needed	.42
Defend own beliefs	Would speak out in favor of my ideas	.49
Cheerful	Am cheerful	.79
Moody	Have "highs" and "lows" quite often	.59
Independent	Would attend a social function by myself	.23
Shy	Am uncomfortable meeting new people	.38
Conscientious	Always take care of my responsibilities	.30
Athletic	Spend recreation time participating in sports	.84
Affectionate	Hug friends and relatives	.38
Theatrical	Over-react to get attention	.21
Assertive	Am firm about my requests without interfering with the rights of others	.20
Flatterable	Will grant favors if flattered	.33
Happy	Am usually happy	.76
Strong Personality	Draw attention in a crowd	.40
Loyal	Stick with my friends in a rough situation	.14
Unpredictable	Never know what I will do next	.53
Forceful	Push hard to accomplish a tough task	.16
Feminine	Show feminine characteristics	.86
Reliable	Can be counted on	.61
Analytical	Think through problems logically	.34
Sympathetic	Feel sorry for someone in trouble	.37
Jealous	Become angry when another person a lot of attention to my date	.64

Table 3 continued

BSRI item	Phrase item	r
Has leadership abilities	Take charge in a group	.75
Sensitive to the needs of others	Realize the needs of others	.51
Truthful	Can be expected to tell the truth	.68
Willing to take risks	Will try a new activity even if it is somewhat frightening	.57
Understanding	Am able to grasp the thoughts and feelings of others	.35
Secretive	Often keep secrets from others	.53
Make decisions easily	Make decisions easily	.73
Compassionate	Forgive and forget	.18
Sincere	Really mean what I say	.35
Self sufficient	Accomplish tasks by myself	.48
Eager	Am eager to soothe hurt feelings	.67
Conceited	Have a high opinion of myself	.24
Dominant	Want to have power over others	.45
Soft spoken	Am a quiet person	.49
Likable	Am someone other people really like	.59
Masculine	Show masculine characteristics	.94
Warm	Make others feel comfortable	.37
Solemn	Am usually serious about everything	.24
Willing to take a stand	Willing to take a stand	.74
Tender	Act kindly toward others	.36
Friendly	Make friends easily	.58
Aggressive	Fight rather than discuss	.17
Gullible	Will believe anything which is told to me	.66
Inefficient	Often have to work much harder and longer to complete a task than I should	.36
Acts as a leader	Organize activities for a group	.60
Childlike	Act like a child in different situations	.47

Table 3 continued

BSRI item	Phrase item	r
Adaptable	Show flexibility in a variety of situations	.45
Individualistic	Am my own man/woman	.41
Does not use harsh language	Does not use harsh language	.81
Unsystematic	Often jump from one thing to another rather than taking things in order	.34
Competitive	Want to win all the time	.49
Loves children	Like to be around children	.88
Tactful	Am able to say the right thing at the right time	.23
Ambitious	Am eager to get ahead	.55
Gentle	Am mild-mannered with others	.23
Conventional	Do things in the "usual" manner	.35

## References

- Bem, S.L. The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 1974, 42, 155-162.
- Bem, S.L. Probing the promise of androgyny. In A.G. Kaplan & J.P. Bean (Eds.), Beyond sex-role stereotypes. Boston: Little, Brown, 1976.
- Bem, S.L. On the utility of alternative procedures for assessing psychological androgyny. Journal of Consulting and Clinical Psychology, 1978, 45, 196-205.
- Berzins, J., Welling, M. & Wetter, R. A new measure of psychological androgyny. Journal of Consulting and Clinical Psychology, 1978, 46, 126-138.
- Block, J.H. Conceptions of sex-roles: Some cross cultural and longitudinal perspectives. American Psychologist, 1973, 23, 512-521.
- Carlson, R. Understanding women: Implications for personality theory and research. Journal of Social Issues, 1972, 28, 17-32.
- Constantinople, A. Masculinity-femininity: An explanation to a famous dictum. Psychological Bulletin, 1973, 80, 389-407.
- English, H.O., & English, A.B. A comprehensive dictionary of psychological and psychoanalytical terms. New York: Longmans, Green, 1958.
- Gough, H.G. Identifying psychological femininity. Educational and Psychological Measurement, 1952, 12, 427-439.
- Hathaway, S.R. & McKinley, J.C. The Minnesota Multiphasic Personality Inventory. New York: Psychological Corporation, 1943.

- Hyde, J.S., Rosenberg, B.G. Half the Human Experience. Lexington: D.C. Heath and Company, 1980.
- Kuhn, D., Nash, S.C. & Brucken, L. Sex-role concepts of two and three year olds. Child Development, 1978, 49, 445-451.
- Masters, J.C. & Wilkinson, A. Consensual and discriminative stereotyping of sex-typed judgements by parents and children. Child Development, 1976, 47, 208-217.
- Mead, M. Sex and Temperament in Three Primitive Societies. New York: William Morrow, 1935.
- Mead, M. Cultural determinants of sexual behavior. In W.C. Young, Ed., Sex and Internal Secretions, Vol II.
- Pleck, J.H. Masculinity-femininity: Current alternative paradigms. Sex Roles, 1975, 1, 161-178.
- Spence, J.T., Helmreich, R., & Strapp, J. Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity-femininity. Journal of Personality and Social Psychology, 1975, 32, 29-39.
- Stericker, A.B., Kurdek, L.A. Dimensions and correlates of third through eighth graders sex-role self-concepts. Sex Roles, 1982, 8, 915-929.
- Terman, L. & Miles, C.C. Sex and Personality. New York: McGraw Hill, 1936.
- Urberg, K.A. The development of the concepts of masculinity and femininity in young children. Sex Roles, 1982, 8, 659-668.
- Williams, J., Bennett, S., & Best, D. Awareness and expression of sex stereotypes in young children. Developmental Psychology, 1975, 11, 635-642.