

Abstract

The Bem Sex-Role Inventory (BSRI) is a tool created by Sandra Bem in the 1970's aimed at measuring individual's androgyny. Critiques concerning the theoretical and methodological framework suggest that it may be in need of an update. The purpose of my research was to determine if and what adjustments were needed for the BSRI. An adjusted version of the short form of the BSRI was distributed to undergraduate students on a small Christian university campus in the Midwest. Respondents rated traits from the BSRI in regards to social desirability, personal desirability, and gendered connotation. The results exhibited that three traits, *forceful*, *dominant*, and *aggressive* are no longer viewed as either socially or personally desirable, indicating that they may need to be removed and replaced on the BSRI. In addition, male respondents rated traditionally feminine traits such as *affectionate*, *warm*, *compassionate*, *gentle*, *sympathetic*, *sensitive to the needs of others*, *soothes hurt feelings*, *understanding*, and, *loves children* to be less desirable than their female counterparts, although still viewed them as generally desirable. Several masculine traits including *willing to take a stand*, *defends own beliefs*, *independent*, and *strong personality* also received more androgynous classifications indicating that the hard lines between what is viewed as masculine and feminine may be slowly thinning.

Evaluation and Revision of BSRI Trait Selection

Gender is a complex aspect of society and becomes a topic of discussion in many different areas. Anselmi and Law (1998) assert that the categorizing of individuals- black versus white, male versus female, poor versus rich- promotes false dichotomies that reduce complex identities to superficial characteristics. Although there is no concrete way to measure gender, the Bem Sex-Role inventory is a widely accepted and utilized tool that attempts to analyze androgyny among individuals in regards

to their perceptions. However; the BSRI was developed in 1974, and may be in need of an update or adjustment. The selection of traits was based on the assumption that the polarity between masculinity and femininity, may no longer be as prevalent in society, or might be more or less prevalent in certain sub-populations. If the same traits were tested today, the ratings would be expected to be less gendered than in 1974 when the inventory was developed. Therefore, the purpose of this project is to test the hypothesis that outcomes from the administration of this inventory today may differ, in a statistically significant sense, than those obtained when distributed in earlier decades. In addition, this project attempts to utilize the short form of the BSRI to measure desirability ratings of the traits in society and for oneself as well as a scale to indicate how inherently gendered each trait is.

Review of Literature

The Bem Sex-Role Inventory

Purpose. While there is no single definitive way to measure exactly how individuals define, behave, and feel concerning gender, in 1974 Sandra Bem developed an inventory that aimed to measure individual endorsement of masculine and feminine traits in themselves and in men and women as a whole. Bem argues that in society at large, masculinity and femininity have been conceptualized as bipolar ends of a single continuum, meaning that a person has had to be either masculine or feminine, but not both (Bem, 1974). The purpose of her development of the Bem Sex-Role Inventory (BSRI) was to test her hypotheses that “many individuals might be ‘androgynous’; that is, they might be *both* masculine and feminine” (Bem, 1974 p. 155). Bem suggests that an androgynous self-concept might allow individuals to engage in behaviors that are both masculine and feminine by societal standards.

Development and methodology. In her preliminary item selection for the Masculinity and Femininity scales, a list was compiled of 200 personality characteristics that seemed to be both positive in value and either masculine or feminine in tone. The list served as a pool for the characteristics that were ultimately chosen (Bem, 1974). Bem defines a “sex-typed person” as someone who has internalized society’s standards of desirable behavior for herself or himself based on whether they are a man or a woman. Her process of trait selection was developed based on ideologies concerning what society as a whole deemed valuable, rather than individuals.

Because the BSRI was founded on a conception of the sex-typed person as someone who has internalized society’s sex-typed standards of desirable behavior for men and women, these personality characteristics were selected as masculine or feminine on the basis of social desirability and not on the basis of differential endorsement by males and females (Bem, 1974, p.155).

If a trait was judged as more desirable in American society for a man or a women,, it qualified as a masculine or feminine trait respectively. According to Bem, because the BSRI was designed to determine how much an individual exhibits characteristics that are generally more traditional for their own gender, the items included were chosen if they were deemed to be more desirable in American Society. Additionally, Bem compiled a separate list of 200 characteristics that appeared neither masculine nor feminine in tone, half positive and half negative. An item was considered neutral if the difference between the desirability ratings for men and women was not statistically significant. Figure 1, pictured below, lists the final 60 items chosen for the inventory (Bem, 1974).

The results were determined by computing the mean ratings for masculine and feminine items, and taking the difference of the two in order to conclude whether or not the item was masculine or feminine.

After selecting the traits utilized for the BSRI, Bem tested her subjects on the social desirability ratings for each trait in reference to their own sex by asking each individual how well each of the 60 characteristics describe himself or herself. A scale from 1 to 7 was utilized: 1 being “Never or almost never true” and 7 being “Always or almost always true” (Bem, 1974).

Figure 1		
<i>Final list of traits included on BSRI</i>		
Masculine items	Feminine Items	Neutral Items
49. Acts as a leader	11. Affectionate	51. Adaptable
46. Aggressive	5. Cheerful	36. Conceited
58. Ambitious	50. Childlike	9. Conscientious
22. Analytical	32. Compassionate	60. Conventional
13. Assertive	53. Does not use harsh language	45. Friendly
10. Athletic	35. Soothes hurt feelings	15. Happy
55. Competitive	20. Feminine	3. Helpful
4. Defends own beliefs	14. Flatterable	48. Inefficient
37. Dominant	59. Gentle	24. Jealous
19. Forceful	47. Gullible	39. Likeable
25. Has leadership abilities	56. Loves children	6. Moody
7. Independent	17. Loyal	21. Reliable
52. Individualistic	26. Sensitive to the needs of others	30. Secretive
31. Makes decisions easily	8. Shy	33. Sincere
40. Masculine	38. Soft spoken	42. Solemn
1. Self-reliant	23. Sympathetic	57. Tactful
34. Self-sufficient	44. Tender	12. Theatrical
16. Strong personality	29. Understanding	27. Truthful
43. Willing to take a stand	41. Warm	18. Unpredictable
28. Willing to take risks	2. Yielding	54. Unsystematic
Note: The number preceding each item reflects the position of each adjective as it appears on the inventory		

Each individual received a masculinity, femininity, and androgyny score. Bem also emphasized that the greater the absolute value of the Androgyny score, the more the person is sex typed or

sex reversed. In contrast the closer the Androgyny score is to zero, the more the person is androgynous. (Bem, 1974).

Critiques

Cultural. In 1997 Twenge conducted a study that examines the changes in BSRI scores over time utilizing data reported in 59 samples of undergraduate students collected since 1973. Twenge (1997) analyzed studies with undergraduate students because the majority of those utilizing the BSRI include college students as participants. In her results she found that both men's and women's scores for the masculine scale displayed a positive linear increase over time. However, the results from women had a stronger linear relationship than the men's. In the androgyny scores Twenge's (1997) results indicate that women show a stronger increase over time than men. These findings indicate two important conclusions: Women have increasingly reported masculine-stereotyped personality traits as characteristics of themselves, and that men and women have become increasingly similar in their responses for masculine personality traits. (Twenge, 1997). Twenge argues that cultural change, and decreasing sex differences contribute to these results.

In 2000 Auster and Ohm evaluated the impact of changes in attitudes and behaviors concerning traditional gender roles. They hoped to accomplish three objectives in their research:

1) determine whether the desirability ratings of the masculine and feminine traits which comprise the BSRI are still valid; (2) assess the extent to which the mean desirability ratings of the masculine and feminine traits may have changed from 1972 to 1999; and (3) evaluate the importance of masculine and feminine traits to the respondents as they think of traits they ideally wish to have. (p. 500)

Their distribution of the BSRI was comprised of three sections including a demographic questionnaire, ratings concerning how desirable a trait would be for oneself, how much they display a trait, and how desirable they believe a trait would be in society. Auster and Ohm (2000) were

careful to express that the second section of the inventory was not intended to measure self-ratings as that has been a widely criticized usage of the BSRI. In addition the instructions for the third section expressed that the participants were not to answer based on their own opinions of desirability, but how they believe society would perceive the trait. Their inventory was distributed at a small liberal arts university that had a predominantly white, middle to upper middle class student body. (Auster & Ohm, 2000) Concerning the validity of the inventory they found that 18 out of 20 feminine traits still qualified as feminine, but only 8 out of 20 masculine traits still qualified as masculine. Auster and Ohm (2000) also analyzed the changes in desirability ratings from 1972 to 1999. In their findings they qualify that any conclusions drawn from the results must be done while keeping in mind the difference in their sample in relation to Bem's original. They found that there was a much greater change in the respondent's assessment of desirability traits for a woman. "and many of them pointed in the direction of higher mean desirability ratings in 1999 than 1972 for masculine items and lower mean desirability ratings in 1999 than 1972 for feminine items" (Auster & Ohm, 2000). While the results for desirability ratings generally displayed the reinforcement of traditional gender expectations, the mean ratings for the desirability of traits for themselves portrayed the opposite. Auster and Ohm (2000) suggest that both male and female respondents' mean ratings of traits for themselves indicate that they have ideally wished to have relatively similar traits and those traits have included a mix of both masculine and feminine characteristics as defined by the BSRI. The authors suggest that if this contradiction in society about gender expectations continue then individuals will also continue to feel that contradiction and tension in their personal lives. The authors conclude: "When that societal contradiction disappears, only then will individuals, male or female, feel truly comfortable cultivating the wide repertoire of behavioral traits they need to be better coworkers, parents, partners, and friends" (Auster & Ohm, 2000 p.526).

In 2016 Donnelly and Twenge expressed concern about the societal relevance of the gendered classification of the characteristics due to the length of time that had passed since the introduction of the BSRI. “Gender roles provide fixed, pre-determined schemas to which men and women were expected to adhere, and such roles in the United States in the 1970’s were particularly differentiated” (Donnelly & Twenge, 2016 p.1). Donnelly and Twenge (2016) argue that restrictions in outlier behavior for men and women was also accompanied by a widespread belief of polarized gender differences in personality, which often forced men and women to engage in traditional lifestyle related to his or her respective gender (Donnelly & Twenge, 2016). According to Donnelly and Twenge in recent years femininity scores for both genders have decreased. However; these observations are based on the assumption that the BSRI is still in correspondence with societal changes, which Donnelly and Twenge assert is not the case.

Donnelly and Twenge gathered studies from authors who conducted research utilizing the BSRI in order to analyze the changes in data based on the BSRI from 1974-2012. The results were split into two categories: Changes from 1974-2012 and changes from 1993-2012. Between 1993 and 2012 women’s feminine traits declined significantly which suggests that women today are less likely to endorse traditionally feminine characteristics as representatives of themselves (Donnelly & Twenge, 2016). In addition Donnelly and Twenge found increases in women’s masculine traits from 1974 to 1994, but remained relatively constant for the following years. Donnelly and Twenge propose that this is due to the varying changes in attitudes towards women’s roles between 1974 and 1994. Donnelly found that during the 1990’s support for both working mothers and traditional roles for women in marriage increased, although the latter did not return to the levels of the 1970’s. The general pattern was toward increases in both M and F traits for both men and women between the 1970s and the 1990s, and then declines from the 1990s to the 2010s (Donnelly & Twenge, 2016).

They were surprised at these results because previous studies indicated a general increased endorsement of agentic traits after 1990. However; they also suggested that the trends could indicate a movement towards a post-gender culture. Donnelly and Twenge theorized that if individuals perceive the BSRI traits as gendered, they may choose not to endorse them if they wish to disassociate themselves from characteristics linked to traditional conceptions of masculinity and femininity. Based on their findings Donnelly and Twenge believe it is possible that the items on the BSRI scale do not match modern gender stereotypes, and that the BSRI may need to be updated in order to reflect current conceptions of gender.

It is also possible that our findings are constrained by the distant cultural past—the BSRI may no longer adequately serve to capture the constructs of interest. Independent of changes in the respondents, conceptions of masculinity and femininity themselves may have changed in ways that cannot be addressed by the current study. Future research may need to update the BSRI to better reflect current gender stereotypes. (p. 9)

Methodological. In 1979 Pedhazur and Tetenbaum conducted two studies in order to analyze the accuracy and relevance of the BSRI. Their findings indicated that: (a) Bem's classification of the BSRI traits into masculine, feminine, and neutral is not tenable; (b.) the dimensions that underlie desirability ratings differ from those that underlie self-ratings; and (c) the dimensions of self-ratings of males differ from those of females.

Their reasoning for choosing to critique the BSRI included its widespread popularity and acceptance without much critical questioning. In addition, they have concerns about treating masculinity and femininity as antithetical. Pedhazur and Tetenbaum discuss assumptions of unidimensionality and bipolarity that seem to underlie the construction and use of masculinity-femininity measures and concluded that masculinity and femininity are neither bipolar nor

unidimensional. In addition Pedhazur and Tetenbaum suggest that though it is clear Bem was studying the desirability of characteristics for males and females, she did not clearly define “desirability” for participants which may have skewed response data due to differing interpretations. Bem (1974) suggests that “because the BSRI was founded on the conception of the sex-typed person as someone who has internalized society’s sex typed standards of desirable *behavior* for men and women, these *personality characteristics* were selected as masculine or feminine on the basis of sex-typed social desirability (Bem, 1974 p155.) Pedhazur and Tetenbaum argue that the distinction between traits and behaviors is occasionally blurred. Maintaining a clear definition of the variable under analysis is critical, especially when pertaining to subject matter that already is easily blurred. Pedhazur and Tetenbaum (1979) note the importance of establishing a distinction between statistically significant and meaningful results. Although Bem’s statistics offer valuable information concerning the measurement of androgyny, the numbers may not reflect data that is necessarily meaningful.

Another critique specifically related to Bem’s method of trait selection is that she assumes that traits used to describe one sex are not, or should not be, used to characterize the other sex without justification (Pedhazur & Tetenbaum, 1979). Bem’s claim to have based the separation of traits into masculine and feminine traits on generally positive characteristics falls short in Pedhazur and Tetenbaum’s study duplicating Bem’s.

More important, however, is the finding that some of the “feminine” items are perceived as relatively undesirable, or negative. See, for example, the means for the traits shy, gullible, and childlike. Not only are these traits rated low in desirability when they are applied to a man or an adult, but their desirability is also low even when the referent is a woman. (p. 999)

The same year Bem replied to the critiques of Pedhazur and Tetenbaum. Bem responds to the critiques of the BSRI from Pedhazur and Tetenbaum by explaining the theoretical frameworks that she had previously not laid out in her introduction of the inventory in 1974. Although Bem discussed that the purpose of the BSRI was to measure psychological androgyny, she did not initially offer any theoretical basis for the inventory. She responds that in regards to sex-roles there are two groups of individuals brought into focus: sex-typed and androgynous. Bem (1979) explains those 'sex-typed' individuals are those who restrict their behavior in accordance with cultural definitions of sex-appropriate behavior, and "androgynous" individuals do not. Bem states that the development of the BSRI was based upon two primary ideas: Society has clustered certain attributes related to the sexes into two mutually exclusive categories well known by individuals within that culture, and that each individual differs from one another in the extent to which they adhere to these idealized standards of masculinity and femininity. In addition Bem specifies that the inventory is intended to be utilized for ratings of cultural desirability for each trait rather than self-description as previous inventories had attempted. In order to address the concern that a number of traits were not deemed desirable and therefore poor representative traits for desirable masculinity or femininity Bem explains the development of a short form of the BSRI. The short form of the BSRI contains exactly half of the original items, and two groups from both masculine and feminine traits were removed: (a) The few items, including 'feminine' and 'masculine,' that defined the factor correlated with gender, as noted above, and (b) a group of feminine items with relatively low social desirability (Bem, 1979).

In 1997 Campbell, Gillaspy, and Thomas continued this analysis of these shortcomings. They utilized confirmatory factor analysis in order to test methods' test models, in this case the BSRI, which are potentially falsifiable. They tested both the long and short form of the inventories in order to analyze the validity of the structures underlying both. As a part of their research they surveyed

791 graduate and undergraduate students enrolled at a large university. (Campbell, Gillaspay, & Thompson, 1997) They acknowledge that in the case of discovering or defining abstract personal concepts that exploratory factor analysis is not, on its own, sufficient without theoretical framework supporting it. They emphasize that it is the responsibility of the researcher to discover meaningful results within data and analysis, and that it is foolish to assume that numerical analysis alone would provide knowledge about what intelligence or personality is. Their findings indicate, in agreement with Bem, masculinity and femininity are not bipolar ends of a single spectrum. In addition their findings question the validity of scores from the long form of the measure, while also suggest that the scores found from the short form of the inventory are more reliable. (Campbell et al., 1997)

In 2008 Choi and Fuqua expand Pedhazur and Tetenbaum's critique that the BSRI was developed on solely empirical methods. They point out that since the BSRI's conception, though it was conceived on the basis of desirability of sex-role personality traits, it has been exclusively used as a self-report measure of masculinity and femininity. (Choi & Fuqua, 2008) In an attempt to further analyze the inventory Choi and Fuqua duplicated the study done by Pedhazur and Tetenbaum in 1979, while excluding the twenty neutral traits and only utilizing the twenty masculine and twenty feminine traits. In their findings the ratings for individuals varied from the inventory that Pedhazur and Tetenbaum distributed. According to Choi and Fuqua the results relating to self-ratings reflected the hypothesis of Pedhazur and Tetenbaum that the two sets of ratings, desirability and self-ratings, have different underlying structures. Choi and Fuqua (2008) suggest that their findings raise further serious questions regarding the appropriateness of the BSRI as a measure of self-perceived sex role traits when it was developed on the basis of desirability. It is possible that because the traits on the BSRI are already classified as masculine or feminine the results may be skewed. Choi and Fuqua distributed the inventory twice, once including masculine and feminine as traits, and once without.

They report that with the same calculations there was a noticeable decrease in the differences between males and females when these two traits were removed. (Choi & Fuqua, 2008) In 2009 Choi and Fuqua distributed the short form of the BSRI to two groups, college students and accountants. They claim that this study has demonstrated better reliability and validity. In a previous study conducted by Choi and Fuqua they found that there was a more complex structure underlying the BSRI-M traits than the BSRI-F items. (Choi & Fuqua, 2009)

In addition to the unjustified polarization and potentially outdated societal context of the BSRI, masculinity and femininity are generally ill defined. From their results Fernandez and Coello (2010) concluded that masculinity/instrumentality and femininity/expressiveness are not even minimally well defined. The scales were created during the first half of the 20th century and were founded on solely empirical reasoning and no theory. Fernandez and Coello argue that it is imperative to continue research and allow new theories and instruments to emerge in regards to gender and sexuality.

The primary theme in all the critiques of the BSRI is that there is an outdated polarization of the gendered traits, and that its characteristic need to be updated.

Methods

Utilizing the BSRI short form, I distributed a survey examining individual responses in three categories of analysis of each trait: Social desirability, personal desirability, and perception of whether or not the trait was considered to be gendered. The inventory was distributed through Google Forms during the spring of 2017 at a small Christian university in the Midwest. For the first two sections a scale from 1-7 was utilized, 7 being the most desirable and 1 being the least. The determination of an item as desirable in society at all will determine whether or not the trait should be included in the inventory, as Bem attempted to utilize desirable traits. A trait was

deemed desirable if it received a mean rating of 4 or above. The section determining how masculine or feminine a trait also utilizes scale from 1-7, 7 being completely masculine and 1 being completely feminine. Participants for the survey included 198 undergraduate students from Olivet Nazarene University. Of respondents 62% were female and 38% were male. The responses represented from each class were spread fairly evenly 21% freshman, 28% sophomores, 25% juniors, and 26% seniors. The largest group of respondents from one department came from business majors (42%).

Results

Data was analyzed in respect to three variables within each section of the survey: gender, class standing, and major. In the section of analysis by major the data was coded for business and non-business majors due to the significantly higher volume of respondents from business majors compared to any other department. I utilized SPSS in order to determine whether or not a statistically significant difference existed between how individuals answered the questions in respect to gender, class standing, and major.

Social Desirability

The first area of analysis was whether or not the traits included in the BSRI short form are still generally viewed as positive. The first section asked respondents to answer how desirable they believed a trait is for society in general. A table listing all responses for this section is listed in Appendix A. The majority of traits' mean rating was greater than or equal to 5 indicating that respondents believe that these traits are indeed desirable. However, there were three traits whose mean ratings were below 4, the cutoff for traits to be considered desirable: forceful, dominant, and aggressive. These results are included below in Table 1.

<i>Trait</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>
Forceful	3.39	1.570
Dominant	3.54	1.557
Aggressive	2.69	1.532

Table 1: Mean ratings of traits deemed undesirable in society

The second area of analysis was whether or not there would be a statistically significant difference in how individuals responded to each question based on gender. A table with all of the data for each response is included in Appendix B. In regards to gender, there were five traits that yielded statistically significant results: compassionate, loves children, willing to take a stand, has leadership abilities, and aggressive. These results are portrayed below in Table 2.

<i>Trait</i>	<i>Constant</i>	<i>Beta coefficient</i>
Compassionate	5.991	-0.043*
Loves children	5.506	-0.0469**
Willing to take a stand	5.927	-0.0376**
Has leadership abilities	5.969	-0.0335**
Aggressive	2.696	0.491**

Table 2: Coefficients of traits with statistically significant results related to gender
**indicates statistically significant at 1%, **indicates statistically significant at 5%*

The results indicated that for the traits *compassionate*, *loves children*, *willing to take a stand*, and *has leadership abilities* men's mean responses were lower than women's. However, the constant was still well above 4 indicating they still believe them to be positive traits albeit somewhat less so. For the trait *aggressive*, men's responses were more positive, but still well below 4 indicating that they still view it as socially undesirable. My third area of analysis was whether or not there would be a statistically significant difference in how individuals responded based on class standing. These results in full are included in Appendix B. The only trait that yielded statistically significant results was *soothes hurt feelings*. It was indicated that upperclassmen viewed this as a less positive trait than underclassmen, but still generally positive.

Finally, I analyzed whether or not there was a statistically significant difference in how individuals responded based on major. The full results are included in Appendix B. There were

two traits that yielded statistically significant results: *warm* and *sensitive to the needs of others*. Pictured below in Table 3 their responses indicated that they believe both of these traits to be generally positive. However, it is also indicated that they believe warm to be less positive and sensitive to the needs of others to be more positive in relation to their non-business major counterparts.

<i>Trait</i>	<i>Constant</i>	<i>Beta Coefficient</i>
Warm	5.33	-0.306***
Sensitive to the needs of others	5.442	0.331***

Table 3: Coefficients of traits with statistically significant results related to major
***** indicates statistically significant at 10%**

Personal Desirability

In addition to analyzing the desirability of traits in society, I asked respondents to rate the desirability of traits for themselves. The mean ratings for this section are all included in Appendix A. The majority of mean ratings for traits were above 5 and deemed personally desirable. The same three traits deemed undesirable in society: *forceful*, *dominant*, and *aggressive* were also rated as personally undesirable and are included below in Table 4.

<i>Trait</i>	<i>Mean Rating</i>	<i>Standard Deviation</i>
Forceful	2.88	1.497
Dominant	3.03	1.509
Aggressive	2.45	1.540

Table 4: Mean ratings of traits deemed personally undesirable

A table including all of the results for this section will be pictured in Appendix B There were far more traits that yielded statistically significant results and all minus the responses to two traits: *forceful* and *aggressive*, indicated that men viewed the traits as less positive than women, but still generally desirable. In regards to the two outliers, male respondents rated them more positively than women, but still generally undesirable in society. The traits with statistically results are pictured below in Table 5.

<i>Trait</i>	<i>Constant</i>	<i>Beta Coefficient</i>
Affectionate	5.842	-0.360**
Warm	5.793	-.0657*
Compassionate	6.545	-0.561*
Gentle	5.735	-.0431**
Sympathetic	6.210	-0.536*
Sensitive to the needs of others	6.528	-0.690*
Soothes hurt feelings	5.781	-0.589*
Understanding	6.486	-0.360*
Loves Children	5.608	-0.418***
Forceful	2.482	0.542*
Aggressive	1.975	0.813*

Table 5: Coefficients of traits with statistically significant results related to gender

**indicates statistically significant at 1%, **indicates statistically significant at 5%,*

****indicates statistically significant at 10%*

My analysis based on class standing only had one trait that yielded statistically significant results: independent. A table with all of the results is pictured in Appendix B. The results indicated that upperclassmen view independent as more personally desirable than underclassmen.

Major. Two traits from the survey had statistically significant results: has leadership abilities and assertive. All of the results are included in Appendix B. As pictured in Table 6 below, business majors view these traits as more personally desirable than non-business majors.

<i>Trait</i>	<i>Constant</i>	<i>Beta Coefficient</i>
Has leadership abilities	5.737	0.288***
Assertive	4.278	0.490

Table 6: Coefficients of traits with statistically significant results related to major

***indicates statistically significant at 5%, *** indicates statistically significant at 10%*

Gendered Connotation

In this section my primary goal was to test whether or not respondents would rate each trait in a way that corresponds with their classification of masculine or feminine. A table with the data from all traits are included in Appendix A. The majority of the mean ratings for the traits corresponded with their classification as masculine or feminine; however, four traits' mean

ratings were right around 4 indicating that the strength of the gendered connotation of these traits is less than when Bem developed the original inventory in 1974. In Table 7 below the mean ratings for these traits are pictured.

<i>Trait</i>	<i>Mean</i>	<i>Standard Deviation</i>
Willing to take a stand	4.62	0.074
Defends own beliefs	4.54	0.061
Independent	4.56	0.081
Strong personality	4.57	0.079

Table 7: Mean ratings of traits with androgynous ratings

The first area of analysis for this section is whether or not there is a statistically significant difference in how individuals rated the traits in relation to gender. Table XXX includes all of the data in Appendix B. Eight traits had statistically significant results and are pictured below in Table 8.

<i>Trait</i>	<i>Constant</i>	<i>Beta Coefficient</i>
Warm	2.874	0.674*
Compassionate	2.967	0.333**
Gentle	2.308	0.488*
Sensitive to the needs of others	3.09	0.468*
Understanding	4.005	0.284**
Has leadership abilities	4.884	0.241***
Forceful	5.449	-0.272***
Dominant	5.610	-0.391*

Table 8: Traits that yielded statistically significant results in relation to gender.

*** indicates statistically significant at 1%, ** indicates statistically significant at 5%,**

*****indicates statistically significant at 10%**

For all of the traits excluding *forceful* and *dominant*, male respondents rated them as more masculine than female respondents, but still generally feminine or neutral. For the traits *forceful* and *dominant* male respondents viewed these as less masculine than female respondents but still generally masculine.

Class standing. In the analysis of whether or not there was a statistically significant difference in how individuals responded based on class standing two traits yielded statistically significant results. All responses are included in Appendix B. Pictured below in Table 9, the results

indicated that upperclassmen view *soothes hurt feelings* and *understanding* as more feminine traits than underclassmen.

<i>Trait</i>	<i>Constant</i>	<i>Beta Coefficient</i>
Soothes hurt feelings	3.18	-0.170**
Understanding	4.005	-0.138**

Table 9: Traits yielding statistically significant results based on class standing

**** indicate statistically significant at 5%**

In the final analysis of whether there was a statistically significant difference in how individuals responded based on major, one trait: *defends own beliefs*, yielded statistically significant results.

All of the results are included in Appendix B. The results for this trait indicate that business majors view defending one's own beliefs as more masculine than non-business majors, but still somewhat neutral at a rating near 4.

Discussion

The primary objective of this project was to determine whether or not the traits part of the short form of the BSRI are still considered desirable in 2017 as they were when it was conceived in 1974. The mean ratings of desirability for most of the traits in terms of in society and individually were overwhelmingly positive aside from three traits. The mean ratings for the traits *forceful*, *dominant*, and *aggressive* all were below four in terms of social and personal desirability. This suggests that these traits no longer meet the criteria of desirability established by Sandra Bem in the 1970's. While this does not necessarily mean that the entire inventory is invalid, it suggests that there needs to be an adjustment in terms of which traits are included in the inventory. The results suggest that these three traits should be removed from the BSRI and replaced. The process of replacing the terms needs to include both empirical and theoretical research in order to ensure the integrity and reliability of the BSRI as a resource.

Social Desirability: Gender

Although there were five traits that had statistically significant results related to gender, = the three masculine traits were the most noteworthy. The two masculine traits that received high mean ratings of social desirability, *willing to take a stand* and *has leadership abilities*, possess results that indicate male respondents view them as less socially desirable, but still generally desirable. In contrast, the results for trait that was deemed socially undesirable, *aggressive*, indicate that male respondents view it as more desirable than female respondents, although still generally undesirable. These results are quite puzzling, and although the difference in ratings are somewhat minimal at less than .5, one must wonder what factors in society may contribute to male respondents' more desirable classification of aggressive in comparison to that of female respondents'.

Social Desirability: Class Standing

The trait *soothes hurt feelings* yielded statistically significant results in relation to class standing. Individuals who were upperclassmen viewed it as a slightly less positive trait in society than underclassmen. This may be an indication that as students get older and gain more experience they could be more likely to speak their mind less apologetically and not worry as much about offending others. If the upperclassmen's rating was significantly lower it may be more concerning about them potentially developing higher levels of cynicism and lacking in compassion.

Personal Desirability: Gender

In terms of personal desirability, there were eleven traits that yielded statistically significant results, nine of which were feminine. Nine out of the ten feminine traits included in the inventory were deemed by male respondents less desirable for themselves. In comparison, only two of

these traits were viewed as less desirable in terms of social desirability by male respondents. There is a clear disconnect between what male respondents considered socially and personally desirable; however, it is equally clear that the disparity between the two is somewhat small as none of the ratings were rated less positive by a full point on the scale.

In contrast, two out of the three masculine traits deemed undesirable both personally and in society possess statistically significant results that indicate men rated them as more personally desirable. The trait *forceful* received a more positive rating by male respondents by half a point, *aggressive* almost a full point. *Aggressive* received a higher social desirability rating of half a point. This indicates that although male respondents still view *aggressive* as a generally undesirable trait in both society and for themselves, that specifically in terms of personal desirability it is still viewed as more positive when compared with female respondents. Again, the difference is somewhat small, but still indicates that perhaps there are factors and influences that suggest to men that *aggressive* might be a trait they need to exhibit.

Personal Desirability: Class Standing and Major

Upperclassmen viewed *independent* as a more personally desirable trait than underclassmen. It was not surprising that this trait in particular yielded statistically significant results. It is somewhat expected at a university in the United States that as students gain knowledge and maturity they would view being independent as a positive trait. In addition, underclassmen still viewed this trait as desirable which indicates that among the university's undergraduate population that independence as a personal characteristic is very important.

Business majors rated *leadership abilities* and *assertive* as more positive than non-business majors. Among business majors it is unsurprising that these are the two traits that yielded statistically significant responses. Many careers within the realm of business search for

individuals who are not afraid to assert themselves and their views, albeit without being viewed as aggressive, as well as those who possess strong leadership abilities. Non-business majors also viewed these traits as desirable, indicating that they are also important in different fields.

However; for business majors, these traits are especially important according to the data.

Masculine and feminine classifications

In addition to evaluating the desirability of traits, this project also aimed to determine whether or not the traits' classification as *masculine* or *feminine* are still relevant and accurate in today's society. Although the primary research conducted for this project was executed on a university campus with a generally more conservative mindset, the sample population is still composed of young people influenced by modern culture. The mean ratings for most of the traits indicated that their masculine or feminine classification is still relevant in 2017. However; there were four traits whose mean ratings were nearer to the middle indicating that they may be viewed as increasingly androgynous qualities. It is interesting to note that the traits receiving more androgynous ratings were all originally classified as masculine. In addition, as pictured below in Table 10, only one trait yielded statistically significant results in how respondents rated the desirability of the traits in society based on gender. There were no statistically significant results that differentiated how male and female respondents rated the traits in terms of personal desirability. This indicates that perhaps society views these traditionally masculine qualities as increasingly desirable for everyone.

<i>Trait</i>	<i>Mean</i>	<i>Social Desirability Beta Coefficient</i>	<i>Personal Desirability Beta Coefficient</i>
Willing to take a stand	4.62	-0.376**	-0.027
Defends own beliefs	4.54	-0.281	0.056
Independent	4.56	-0.027	-0.101
Strong personality	4.57	-0.252	0.266

Table 10: Traits with androgynous ratings along with coefficients

**** indicates statistically significant at 5%**

Appendix A

Figure 1 – Social desirability mean ratings

	Mean		Std. Deviation	Variance
	Statistic	Std. Error	Statistic	Statistic
Affectionate	5.18	.073	1.029	1.058
Warm	5.20	.087	1.215	1.476
Compassionate	5.94	.076	1.068	1.140
Gentle	4.56	.096	1.344	1.806
Tender	4.10	.094	1.319	1.741
Sympathetic	5.43	.081	1.134	1.287
Sensitive to the needs of others	5.59	.090	1.265	1.600
Soothes hurt feelings	4.96	.097	1.355	1.835
Understanding	5.98	.082	1.143	1.307
Loves children	5.04	.100	1.408	1.983
Willing to take a stand	5.84	.086	1.208	1.460
Defends own beliefs	5.84	.087	1.226	1.504
Independent	5.85	.084	1.172	1.375
Has leadership abilities	5.86	.079	1.111	1.235
Strong personality	5.16	.100	1.404	1.970
Forceful	3.39	.112	1.570	2.464
Dominant	3.54	.111	1.557	2.423
Aggressive	2.69	.110	1.532	2.348
Assertive	4.55	.101	1.419	2.014
Willing to take risks	5.34	.079	1.111	1.234

Figure 2 – Personal desirability mean ratings

	Mean		Std. Deviation	Variance
	Statistic	Std. Error	Statistic	Statistic
Affectionate	5.50	.083	1.161	1.349
Warm	5.53	.086	1.209	1.461
Compassionate	6.23	.071	1.002	1.004
Gentle	5.27	.092	1.295	1.677
Tender	4.64	.104	1.466	2.150
Sympathetic	5.77	.084	1.171	1.370
Sensitive to needs of others	6.11	.070	.987	.973
Soothes hurt feelings	5.24	.099	1.385	1.919
Understanding	6.32	.064	.891	.794
Loves children	5.44	.108	1.523	2.319
Willing to take a stand	5.99	.078	1.088	1.184
Defends own beliefs	6.13	.070	.987	.973
Independent	5.77	.084	1.176	1.384
Has leadership abilities	5.86	.086	1.198	1.436
Strong personality	4.93	.107	1.497	2.240
Forceful	2.88	.107	1.497	2.240
Dominant	3.03	.108	1.509	2.276
Aggressive	2.45	.110	1.540	2.371
Assertive	4.48	.114	1.605	2.577
Willing to take risks	5.28	.088	1.241	1.539

Figure 3 – Masculine and feminine mean ratings

	Mean		Std. Deviation	Variance
	Statistic	Std. Error	Statistic	Statistic
Affectionate	2.58	.079	1.111	1.234
Warm	2.78	.085	1.190	1.416
Compassionate	3.04	.083	1.167	1.361
Gentle	2.41	.086	1.203	1.447
Tender	2.42	.090	1.261	1.591
Sympathetic	3.12	.083	1.158	1.342
Sensitive to the needs of others	2.96	.084	1.180	1.392
Soothes hurt feelings	2.83	.087	1.217	1.480
Understanding	3.76	.072	1.013	1.027
Loves children	2.89	.091	1.281	1.641
Willing to take a stand	4.62	.074	1.040	1.082
Defends own beliefs	4.54	.061	.854	.729
Independent	4.56	They .081	1.135	1.289
Has leadership abilities	4.82	.072	1.007	1.014
Strong personality	4.57	.079	1.107	1.226
Forceful	5.55	.075	1.047	1.096
Dominant	5.73	.076	1.061	1.126
Aggressive	5.69	.082	1.153	1.329
Assertive	5.04	.081	1.138	1.294
Willing to take risks	4.98	.075	1.047	1.097

Appendix B

Figure 4 – Data analysis in relation to gender

Variable	Social Desirability		Personal Desirability		Masculine/Feminine	
	Constant	Gender	Constant	Gender	Constant	Gender
Affectionate	5.211	-0.022	5.842	-0.360**	2.534	0.225
Warm	5.350	-0.231	5.793	-0.657*	2.874	0.674*
Compassionate	5.991	-0.430*	6.545	-0.561*	2.967	0.333**
Gentle	4.659	-0.153	5.735	-0.431**	2.308	0.488*
Tender	3.960	0.127	4.822	-0.289	2.810	0.263
Sympathetic	5.464	-0.099	6.210	-0.536*	3.059	0.206
Sensitive to the needs of others	5.713	-0.337	6.528	-0.690*	3.090	0.468*
Soothes hurt feelings	5.486	-0.282	5.781	-0.589*	3.180	0.232
Understanding	6.047	-0.260	6.486	-0.360*	4.005	0.284**
-						
Loves Children	5.506	-0.469**	5.608	0.418***	3.094	0.114
Willing to take a stand	5.927	-0.376**	5.728	-0.027	4.657	-0.173
Defends own beliefs	5.981	-0.281	5.978	0.056	4.490	0.004
Independent	5.877	0.027	5.346	-0.101	4.421	0.101
Has leadership abilities	5.969	-0.335**	5.563	0.036	4.884	0.241***
Strong personality	5.164	-0.252	4.512	0.266	4.483	-0.239
-						
Forceful	3.302	0.175	2.482	0.542*	5.449	0.272***
Dominant	3.615	0.090	2.791	0.233	5.610	-0.391*
Aggressive	2.696	0.491**	1.975	0.813*	5.434	-0.145
Assertive	4.425	0.031	3.911	0.246	5.093	0.000
Willing to take risks	5.399	0.026	4.879	0.289	5.017	-0.142

* indicates statistically significant at 1%, ** indicates statistically significant at 5%, *** indicates statistically significant at 10%

Figure 5 – Data analysis in relation to class standing

Variable	Social Desirability		Personal Desirability		Masculine/Feminine	
	Constant	Class Standing	Constant	Class Standing	Constant	Class Standing
Affectionate	5.211	0.075	5.842	-0.080	2.534	-0.018
Warm	5.350	-0.025	5.793	-0.006	2.874	-0.134
Compassionate	5.991	0.045	6.545	-0.041	2.967	-0.022
Gentle	4.659	-0.016	5.735	-0.118	2.308	-0.031
Tender	3.960	0.035	4.822	-0.029	2.810	-0.191
Sympathetic	5.464	0.000	6.210	-0.093	3.059	-0.007
Sensitive to the needs of others	5.713	0.001	6.528	-0.063	3.090	-0.117
Soothes hurt feelings	5.486	-0.163***	5.781	-0.122	3.180	-0.170**
Understanding	6.047	0.013	6.486	-0.021	4.005	-0.138**
Loves Children	5.506	-0.114	5.608	-0.006	3.094	-0.096
Willing to take a stand	5.927	0.022	5.728	0.105	4.657	0.011
Defends own beliefs	5.981	-0.015	5.978	0.050	4.490	0.018
Independent	5.877	-0.015	5.346	0.178**	4.421	0.038
Has leadership abilities	5.969	0.006	5.563	0.108	4.884	-0.059
Strong personality	5.164	0.034	4.512	0.123	4.483	0.068
Forceful	3.302	0.009	2.482	0.074	5.449	0.078
Dominant	3.615	-0.043	2.791	0.059	5.610	0.104
Aggressive	2.696	-0.072	1.975	0.066	5.434	0.118
Assertive	4.425	0.043	3.911	0.185	5.093	-0.020
Willing to take risks	5.399	-0.028	4.879	0.113	5.017	0.006

* indicates statistically significant at 1%, ** indicates statistically significant at 5%, *** indicates statistically significant at 10%

Figure 6 – Data analysis in relation to major

Variable	Social Desirability		Personal Desirability		Masculine/Feminine	
	Constant	Major	Constant	Major	Constant	Major
Affectionate	5.209	-0.052	5.465	0.084	2.643	-0.143
Warm	5.33	0.306***	5.588	-0.136	2.896	-0.274
Compassionate	5.93	0.034	6.287	-0.141	3.104	-0.165
Gentle	4.696	-0.305	5.243	0.061	2.409	0.006
Tender	4.148	-0.112	4.53	0.262	2.443	-0.065
Sympathetic	5.374	0.132	5.843	-0.189	3.167	-0.117
Sensitive to the needs of others	5.452	0.331***	6.139	-0.078	2.957	0.019
Soothes hurt feelings	4.904	0.114	5.307	-0.148	2.878	-0.122
Understanding	5.912	0.172	6.33	-0.022	3.789	-0.082
Loves Children	5.122	-0.182	5.565	-0.309	2.861	0.066
Willing to take a stand	5.887	-0.092	5.974	0.038	4.673	-0.124
Defends own beliefs	5.887	-0.104	6.096	0.074	4.426	0.269**
Independent	5.878	-0.071	5.765	0.003	4.478	0.192
Has leadership abilities	5.861	0.007	5.737	0.288***	4.73	0.221
Strong personality	5.235	-0.162	4.974	-0.108	4.557	0.029
Forceful	3.461	-0.172	2.913	-0.084	5.539	0.022
Dominant	3.583	-0.113	2.982	0.115	5.765	-0.082
Aggressive	2.602	0.205	2.357	0.229	5.678	0.017
Assertive	4.596	0.095	4.278	0.49**	4.948	0.223
Willing to take risks	5.348	-0.047	5.27	0.023	4.948	0.077

* indicates statistically significant at 1%, ** indicates statistically significant at 5%, *** indicates statistically significant at 10%