

The Relationship Between Gender-Role Orientation and Creative Activity

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ABSTRACT

This study assessed the relationship between gender-role orientation and self-perceived creativity. An online survey of 233 participants included the Bem Sex Role Inventory, a creativity dossier and a self-report of creativity. Contrary to our hypothesis, we found that feminine individuals rated themselves as more creative than their masculine or androgynous peers. In a follow-up study, an independent sample of students rated the categories of creative behaviors generated from the first study on their overall masculinity and/or femininity allowing for an analysis of the relationship between gender-role orientation and “gendered” creative accomplishments. Feminine individuals were significantly more likely to report feminine labeled activities; whereas, masculine individuals were not more likely to report masculine activities. There was some evidence of androgynous individuals partaking in more balanced activities, but more research is needed in this area.

INTRODUCTION

Psychological research has two major foci in regard to creativity. First, research has explored what kinds of experiences and attributes are related to developing creativity. Creative ability has been found to be affected by identity formation processes (Dollinger, et. al., 2005), the incorporation of dreams into daily life (Pagel & Kwiatkowski, 2003), and sexual orientation (Konik & Crawford, 2004). Secondly, research has explored the extent to which creativity is related to other traits such as IQ (Kim, 2005), mental illness (Ludwig, 1998), and insomnia (Healey, 2006). Regardless of the motivation for the research, psychologists have struggled with establishing reliable and valid measures of creativity. The current study explored the relationship between gender role orientation and creativity.

Measuring creativity

Creativity is a complex aspect of human thinking and expression. Much debate has ensued whether creativity can be accurately measured and under what circumstances. Several types of measures have been used to examine creativity and each has its own benefits and drawbacks. Martin and Rubin’s (1995) Cognitive Flexibility Scale is an example of a self-report measure aimed at assessing mental flexibility in handling everyday situations. Participants respond to items such as “I can find solutions to seemingly unworkable problems.” Another approach to measuring creativity examines participants’ self-reports in regard to their past creative accomplishments. Dollinger, et. al. (2005) had participants rate their past achievements in areas such as visual and performing arts. They also gave a creativity dossier in which participants were free to describe their creative accomplishments. These accomplishments were then rated by four judges on a scale of one to seven, one being not creative compared to others in the sample and seven being very creative compared to others in the sample. These measures rely on participants’ self report and hindsight; however, other measures focus more on the actual generation of a creative product. These often use either drawing or storytelling as a measure, with criteria for creativity used in scoring (Dollinger et al, 2005; Hennessey, 1998). Norlander, et. al.’s (2000), Adam and Eve test involved a picture of Adam and Eve in a paradise setting. Participants were asked to manipulate the pictures through their own drawing. Creativity was judged on the extent to which the participants graffitied the image. The type of creativity measure a researcher chooses is based on a combination of practical application and the type of creativity in which they are interested. The current study expanded research on creativity by exploring the perceptions of creative acts as masculine or feminine.

Gender-role orientation

Gender roles refer to the culturally defined “attitudes, feelings, behaviors, and motives” associated with being male or female (Perry & Bussey, 1979, p. 69). In early research, gender roles were defined along a single continuum of masculine or feminine, where being high on one trait implied being low on the other. However, for over 25 years, researchers have conceived of gender roles in terms of two separate dimensions. Bem (1974) categorized individuals using the two separate dimensions of masculinity and femininity. Bem devised the Bem Sex Role Inventory (BSRI) which has been a commonly used measure of gender role orientation. The inventory includes a list of personality characteristics that have been classified as masculine or feminine. Participants rate characteristics on a scale of one to seven as to how applicable they are to themselves. These scores are used to determine an individual’s level of masculinity or femininity. An example of someone who scored high on masculinity is someone who ranked themselves highly as aggressive, independent, or athletic and an example of someone who scored high of femininity is someone who ranked themselves highly as cheerful, warm, or affectionate. These scores are independent of biological sex. Bem’s theory also advanced the idea of a category known as androgyny where individuals score highly for both masculinity and femininity. This category of gender roles has been widely researched and associated with many positive attributes (Bem, 1974; Hogan, 1982; Perry & Bussey, 1979).

One of the positive attributes associated with androgyny is creativity (Dollinger et. al., 2005; Jonsson & Carlsson, 2000; Norlander & Erixon, 2000). The link is thought to occur because people who identify as androgynous are generally more open to divergent thinking and display characteristics stereotypically associated with both masculine and feminine type personalities (Bem, 1974).

The current study aimed to further examine the relationship between gender role orientation and creativity. We expected to find that 1) Androgynous individuals would rate themselves as more creative than stereotypically masculine or feminine individuals; 2) Individuals who were categorized as masculine would be more likely to report pursuing “masculine” creative acts; whereas individuals categorized as feminine would be more likely to report pursuing “feminine” creative acts.

METHOD

We solicited 233 college students enrolled in the introduction to psychology course at the University of Wisconsin-La Crosse to participate in our study for extra credit. Participants were primarily European American (90.7%) and between the ages of 18 and 28 ($M = 19.29$, $SD = 1.33$). Participants were mostly female (70.2%). Sixty-four percent of our population was first year students, and a majority represented majors in the College of Science and Health (55.3%). Participants completed a questionnaire online with demographic questions and two primary measures.

The BSRI – Bem Sex Role Inventory. The inventory is made up of 60 questions which ask a person to indicate how well the characteristic listed describes him or herself on a scale of one (“never or almost never true”) to seven (“always or almost always true”) (Bem, 1981). The characteristics have been pre-determined to be viewed by outside raters as masculine (e.g. assertive, competitive, self-reliant), feminine (e.g., cheerful, loyal, yielding), and neutral (e.g., happy, truthful, helpful). Consequently, scores on the BSRI reflect the extent to which an individual identifies with socially-derived gender roles. BSRI scores are used to categorize individuals into one of four groups – feminine, masculine, androgynous (high on masculine and feminine) and undifferentiated. BSRI has a strong internal consistency and test-retest reliability of 0.80 (Bem, 1981). We solicited a large participant pool in order to ensure at least 20 participants in each of the gender-role orientation categories.

Creativity Dossier (Dollinger et al., 2005). After completing the BSRI, participants were instructed to imagine they had been nominated for a creativity award for outstanding acts of creativity in the last five years. They were to list any activities they had done during the last five years that could make them eligible for the award. After listing creative accomplishments, participants responded to the item “Overall, compared to your peers, how would you describe your level of creativity?” by selecting a number between one representing “not at all creative” and seven representing “Highly creative”. Self-reported creativity correlated .39 with number of creative acts listed. Range of creative acts 0-18; median = 3.

The list of activities generated by the participants was judged by a separate group of undergraduates in terms of the extent to which they are viewed as masculine or feminine on a 7 point scale. Activities that had at least 50% of responses falling under 1 or 2 for masculine received a rating of 3, meaning “highly masculine”. Activities with 50% of responses falling under 2 and 3 received a rating of 2, meaning “moderately masculine”. Activities with 50% of responses falling under 3 and 4 received of 1, meaning “slightly masculine”. We calculated the feminine scores the same way, using the items that had at least 50% of the rating in numbers 4 through 7. The four most feminine creative acts indicating over 75% of the sample rating the activity as feminine were: scrapbooking, fashion, dance,

and jewelry making. The four most masculine creative acts indicating over 75% of the sample rating the activity as masculine were: tattoo design, robotics, woodworking and extreme sports. We computed a weighted average of both feminine and masculine creativity scores for each participant in the first part of our study.

RESULTS

In this study, we expected to find that androgynous individuals would rate themselves as more creative than masculine or feminine individuals. We also expected to find that individuals who were categorized as masculine would be more likely to report pursuing “masculine” creative acts; whereas individuals categorized as feminine would be more likely to report pursuing “feminine” creative acts. An ANOVA was used to determine any statistical difference across the three categories of BSRI (masculine, feminine, or androgynous) and gender on overall creativity and creative acts. Contrary to our first hypothesis, androgynous individuals did not report significantly higher levels of creativity than masculine or feminine individuals (see Table 1). Higher numbers represent higher creativity. Self-reported creativity correlated .39 with number of creative acts listed. Range of creative acts 0-18; median = 3. We did find that female participants reported a higher number of creative acts than male participants ($F[1,156] = 6.58, p = .011$). We also found an interesting trend in both sexes where feminine individuals reported a higher number of creative acts than either masculine or androgynous individuals. Overall, feminine females reported the highest creativity rating and the highest number of creative acts, however, this finding was not statistically significant.

Table 1. Creativity rating and number of creative acts reported by Gender and BSRI category

	Male (n = 45)				Female (n = 112)			
BSRI →	Fem (n = 16)	Masc (n = 14)	Andro (n = 15)	Total Male	Fem (n = 39)	Masc (n = 31)	Andro (n = 42)	Total Female
Self Reported Creativity Rating	<i>M</i> = 3.94 <i>SD</i> (1.34)	<i>M</i> = 3.93 <i>SD</i> (1.27)	<i>M</i> = 3.94 <i>SD</i> (1.53)	<i>M</i> = 3.93 <i>SD</i> (1.36)	<i>M</i> = 4.46 <i>SD</i> (1.32)	<i>M</i> = 3.87 <i>SD</i> (1.71)	<i>M</i> = 3.93 <i>SD</i> (1.58)	<i>M</i> = 4.10 <i>SD</i> (1.54)
Number of Creative Acts	<i>M</i> = 2.88 <i>SD</i> (2.55)	<i>M</i> = 2.21 <i>SD</i> (1.85)	<i>M</i> = 2.00 <i>SD</i> (2.17)	<i>M</i> = 2.38 <i>SD</i> (2.21)	<i>M</i> = 4.33 <i>SD</i> (3.30)	<i>M</i> = 3.35 <i>SD</i> (2.42)	<i>M</i> = 3.38 <i>SD</i> (3.46)	<i>M</i> = 3.71 <i>SD</i> (3.15)
BSRI →					Total Sample (n = 157)			
					Fem (n = 55)	Masc (n = 45)	Andro (n = 47)	Total Sample
Self Reported Creativity Rating					<i>M</i> = 4.31 <i>SD</i> (1.33)	<i>M</i> = 3.89 <i>SD</i> (1.57)	<i>M</i> = 3.93 <i>SD</i> (1.56)	<i>M</i> = 4.05 <i>SD</i> (1.49)
Number of Creative Acts					<i>M</i> = 3.91 <i>SD</i> (3.15)	<i>M</i> = 3.00 <i>SD</i> (3.00)	<i>M</i> = 3.02 <i>SD</i> (3.21)	<i>M</i> = 3.32 <i>SD</i> (2.97)

As described in the method section, an independent sample rated the extent to which the categories of creative behaviors were seen as masculine, feminine, or neutral. Each respondent in the original study was then assigned a score for feminine creative acts and masculine creative acts (if applicable). In order to explore the relationship between gender-role orientation and gendered creative acts, we ran a between-subjects ANOVA (excluding undifferentiated individuals and individuals who reported no creative acts). The dependent variables were gendered creativity and the independent variables were participants' gender and BSRI classification. There were no interaction effects, but there were main effects of gender and BSRI score on the feminine creativity average score. Women were more likely to report feminine activities ($M = 1.67; SD = .74$) than men ($M = .95; SD = .69$), and not more likely to report masculine activities, $F(1,127) = 25.52, p = .000$. Men were not significantly more likely to report masculine activities. Feminine individuals were significantly more likely to report activities that were labeled as being feminine ($M = 1.68; SD = .61$) than were androgynous ($M = 1.33; SD = .89$) or masculine individuals ($M = 1.45; SD = .84$), $F(1, 127) = 5.20; p = .007$. Masculine individuals; however, were not significantly more likely to report activities that were labeled as being masculine. In terms of androgyny, there was some evidence of more neutral or a balance of masculine and feminine activities, but more research is needed in this area.

DISCUSSION

Our data did not support our hypothesis that androgynous individuals would rate themselves as more highly creative than masculine or feminine individuals. The trend that we found regarding feminine individuals of both sexes reporting a higher number of creative acts could be explained, in part, by the creativity measures we used. A common trait associated with femininity is higher levels of verbal communication; consequently, feminine individuals were perhaps more adequately able to express their creative acts in words than masculine or androgynous individuals. This tendency may have translated to feminine individuals listing more creative acts. The higher number of creative acts listed by feminine individuals could have caused the data to appear as though feminine individuals were more creative, because they had higher average creativity scores. The activities that were classified as feminine were more likely to have a classification of “highly feminine”, whereas only a few masculine activities had a classification of “highly masculine”. Our hypothesis regarding androgynous individuals having a balance of masculine and feminine activities may not have been supported because it was difficult to consider which activities were truly neutral. Because of this, we did not give individuals a score for any activities they listed that were classified as neutral. We were also unable to give scores for activities that did not fall under one of the selected categories of activities. It would be helpful to have participants select creative activities that correspond to their interests from a predetermined list and/or indicate the amount of time they pursue these activities. Overall, the current study provides evidence that a large number of creativity acts appear to be gendered and also moderately related to gender-role orientation.

REFERENCES

- Bem, S. (1974). The measurement of psychological androgyny [Electronic version]. *Journal of Consulting and Clinical Psychology*, 42 (2), 155-162.
- Dollinger, S. J., Dollinger, S. M. C., & Centeno, I. (2005). Identity and creativity [Electronic version]. *Identity: An International Journal of Theory and Research*, 5 (4), 315-339.
- Healey, D. & Runco, M. A. (2006). Could creativity be associated with insomnia? [Electronic version]. *Creativity Research Journal*, 18(1), 39-43.
- Hogan, H. W. (1977). The measurement of psychological androgyny: An extended Replication [Electronic version]. *Journal of Clinical Psychology*, 33 (4), 1009-1013.
- Jonsson, P. & Carlsson, I. (2000). Androgyny and creativity: A study of the relationship between a balanced sex-role and creative functioning [Electronic version]. *Scandinavian Journal of Psychology*, 41, 269-274.
- Kim, K. H. (2005). Can only intelligent people be creative? A meta-analysis [Electronic version]. *The Journal of Secondary Gifted Education*, XVI, 55-66.
- Konik, J., & Crawford, M. (2004). Exploring normative creativity: Testing the relationship between cognitive flexibility and sexual identity [Electronic version]. *Sex Roles*, 51 (3/4), 249-253.
- Ludwig, A. M. (1998). Method and madness in the arts and sciences [Electronic version]. *Creativity Research Journal*, 11(2), 93-101.
- Norlander, T., Erixon, A., & Archer, T. (2000). Psychological androgyny and creativity: Dynamics of gender-role and personality trait [Electronic version]. *Social Behavior and Personality*, 28 (5), 423-436.
- Pagel, J. F. & Kwiatkowski, C. F. (2003). Creativity and dreaming: Correlation of reported dream incorporation into waking behavior with level and type of creative interest [Electronic version]. *Creativity Research Journal*, 15 (2/3), 199-205.
- Perry, D. G. & Bussey, K. (1979). The social learning theory of sex differences: Imitation is alive and well [Electronic version]. *Journal of Personality and Social Psychology*, 37 (10), 1699-1712.
- Rammstedt, B., & Rammsayer, T. H. (2002). Gender differences in self-estimated intelligence and their relation to gender-role orientation [Electronic version]. *European Journal of Personality*, 16, 369-382.