Personality Inferences of the Physically Androgynous: Gendered Self-Concept and Stereotypes.

Sara Rundlett.

Minnesota State University Moorhead

Abstract. Data on the personality inferences of physically androgynous individuals are limited. This study hypothesized that the physically androgynous target will be rated more likely to be homosexual or bisexual than the gendered targets, and that the androgynous target will be rated more likely to have a masculine or androgynous personality. It was also hypothesized that participant gender-role orientation (GRO) will moderate this effect. An all-female undergraduate sample took the Bem Sex Role Inventory (1974) and rated target photos on sexual orientation and personality traits. Results show the androgynous target was perceived to have a more masculine and androgynous personality than the gendered targets. Sexual orientation ratings show that participant GRO did impact results for the androgynous target and for the feminine target. The feminine GRO group rated the androgynous target as heterosexual more often than the androgynous GRO group, and the androgynous GRO group rated the feminine target as homosexual over three times as often. These results show participant GRO does negate heteronormative gendered perceptions. Conversely, gendered targets were collectively seen as bisexual or homosexual more often than heterosexual. This study serves to further understand gendered self-concept and stereotypes, by collecting data not yet quantified within the gender binary. Further analysis will follow to collect and review statistical significance.

Research suggests that personality inferences are made about others in automatic decisions based on physical appearances and gender representation (Deaux & Lewis, 1984; Ding & Rule, 2013; Rule, Ambady, & Hallett, 2009; Tskhay, Feriozzo, & Rule, 2013). Specifically, physical features typically associated with one gender over another denote stereotypically gendered personality characteristics and behaviors. Stereotypes are often generalizations of certain characteristics to other characteristics in an attempt to make sense of the information given. Gender and sexuality are no different (Sirin, McCreary, & Mahalik, 2004). For example, there is evidence that people with child-like features are more likely to be perceived as being young at heart; attractive people are perceived to have an 'attractive' personality filled with desirable traits; and people with masculine features are thought to be confident, assertive, and intelligent (Madson, 2000).

Characteristics that are central to one's self-concept serve as a major foundational lens for judging others and are connected to gender-role orientation, in that however rigidly or fluidly we perceive our own gender-roles to be, it often dictates the degree of rigidity we employ when evaluating others (Deaux & Lewis, 1981; Tunell, 1981). How then do physically androgynous people fit into the gender constructs used to make these inferences?
While sex-roles are behaviors related to our biological functioning, gender identity is related to our socially constructed concepts of femininity or masculinity as a reflection of our identified gender (Mahalik, Cournoyer, DeFranc, Cherry, & Napolitano, 1998). Often these two match but not always. Gender-role orientation (GRO) is an independent pattern of behavior and perspective that adds to our identified gender, to diversify our responses to outside stimuli. Research shows that in response to personality inferences, the effect of a participant’s GRO is mixed. While some research shows that GRO has no or limited impact on personality inferences, patterns do exist within these data to support otherwise. Other research shows a clear and strong connection. Relatively little data is available on personality inferences of sexual orientation, in terms of GRO, which provides a clear direction for further research. This study seeks to understand how gender-role orientation impacts personality inferences, in terms of perceived personality traits and sexual orientation of others, with special attention paid to physically androgynous individuals.

Androgyny comes in more forms than just physical characteristics. Sandra Bem's (1974) groundbreaking study and subsequent development of the industry standard for gender-role orientation, the Bem Sex Role Inventory, redefined the idea that the gendered component to our personality is a continuum of masculinity and femininity by showing that they are not opposites, but in fact, separate measures that are occupied simultaneously. Most people have a mix of masculine and feminine traits, but individuals who score high in both masculine and feminine traits are categorized as having an androgynous personality or gender-role orientation. Distribution of GRO is fairly evenly distributed among the general population into the feminine, masculine, and androgynous groupings at roughly 30% each.

Although androgynous personalities have mysterious origins developmentally, they offer some advantages over other gender-role orientations (Cook, 1987). Cook’s meta-analysis of the androgynous gender-role orientation reveals that this style of gendered self-concept may develop from a particular pattern of gender-role influences due to parental impact, or from cyclical gender-role dynamics that vary according to individual challenges and adaptations over time. This study also showed that it is often considered the most adaptable, flexible, and psychologically healthy gender-role orientation, leading Cook to consider the androgynous GRO to have higher order functioning ability. While the androgynous GRO has advantages, little research has been done to examine how this dynamic may impact personality inferences of others.

A number of studies show limited support for participant GRO as a determining factor in person perception. Banikotes, Kubinski, and Pursell’s (1981) study exploring self-disclosure and perceived gendered behaviors showed no significant results, while another study using participants with varying gender-role orientations interacting with a child and opposite sex peer showed an effect for specific gender-role orientations only (Card, Jackson, Stollack, & Ialongo, 1986). Lobel’s (1994) study, which used a participant group of preadolescent boys, that were shown video of peers engaging in gender normative, gender neutral and non-stereotypic games, also showed limited results for the effect of GRO on person perception.

While these data show limited support for the effect of gender-role orientation on personality inferences, the results do show femininity as a viable dynamic of influence. Although Card et al.’s (1986) study was hypothesized to find an effect of GRO in androgynous participants in particular, the result was instead found in feminine females. Lobel’s (1994) study is similar in that the result found was also among participants with feminine GRO, only this time it was present in feminine males.
Support for the feminine gender-role orientation as a determinant for personality inferences is also found in studies with stronger overall results. A survey study showed support for GRO as a personality moderator in feminine males, as well as showing an overall effect for females, leading to the conclusion that femininity is the overarching dynamic, whether in identified gender or gender-role orientation (Goldman, Olczak, & Tripp, 1980). Tunell's (1981) study also builds on this theory by showing consistent results for not only feminine males and females, but for androgynous females as well.

Sex-typed individuals, those whose gender-role orientation matches their biological sex and gender identity, have been shown to encode and organize information about themselves and others in terms of culturally appropriate definitions of femininity and masculinity, more so than androgynous individuals (Bem, 1981). Anderson and Bem (1981) advanced this finding by showing how sex-typed individuals are more likely than androgynous individuals to seek interaction with opposite sex peers. As with previous studies, the effect was found strongest in females. Specifically, feminine females showed a stronger likelihood to interact responsively with an attractive opposite sex target than androgynous females or males, leading to the conclusion of a stronger gender schema for sex-typed individuals than those with androgynous gender-role orientations.

Inferences are also made about sexual orientation, particularly in regards to facial cues and gender normative representations. Research has shown that these inferences are most often accurate, especially when examining androgynous and female faces. Unlike other social categories such as race or sex, the cues distinguishing sexual orientation are more subtle (Rule et al., 2009). Correctly identifying a woman as heterosexual or homosexual is connected to how much of the target's face was exposed (Tskhay et al., 2013). Research shows that female sexual orientation can be inferred from viewing the eyes alone, without eyebrows, and that those who rated with snap judgments were more accurate than those that took more time in their decisions (Rule et al., 2009). In addition, a three-part study of computer-generated faces, denoting shape and texture, by Freeman, Johnson, Ambady, and Rule (2010) yielded similar results. In all three studies, the androgynous faces ranked the highest for inferences of homosexuality (Freeman et al., 2010). But in the third study, participants also rated targets who were actually homosexual but possessed gender-normative faces. These faces were inaccurately ranked the least likely to be homosexual. These data show that physically androgynous individuals are more likely than gender normative individuals to be perceived as homosexual, regardless of their sexual orientation.

This is shown to be true across various stimuli. As in Freeman et al.’s (2010) study, physically androgynous targets were rated more likely to be homosexual than gender normative targets in all sections of a three part study (Madson, 2000). These data were consistent whether the stimuli were among a series of photographs, a narrative description, or a photo of a single target. But Madson’s (2000) work built on previous research by showing that the physically androgynous targets were also more likely than their gender normative counterparts to be rated as bisexual. In Ding and Rule’s (2012) study, faces were again examined, and results showed that gay and bisexual men and women targets were rated more significantly different than straight targets. No distinction was made between the ratings of gay and bisexual inferences. These data conclude that although bisexual men and women can be differentiated from straight individuals, they are not perceived differently from gays or lesbians. Collectively, this supports the concept that there is a heterosexual non-heterosexual dichotomy at play in the gender schema.
Indeed, physically androgynous targets defy this dichotomy by simply having presentations that fall outside the gender binary. This study aims to explore this dynamic further by examining participant gender-role orientation and photographs of an androgynous target, with ratings of sexual orientation.

Since gender and gender-role expectations are used to sort information and navigate society, failing to conform to socially prescribed gender norms may be perceived and evaluated as different or unusual, leaving physically androgynous persons particularly vulnerable (Sirin et al., 2004). These data clearly show that androgynous individuals are more susceptible to these assumptions than gender normative individuals. It has also been shown that people with physically androgynous features are perceived to have personalities that match those physical characteristics, whereas a physically androgynous male is assumed to be more feminine than a typical male but more masculine than a typical female (Madson, 2000). Possibly in part to the general subscription of society to the belief that cross-gendered traits, in personality or physical appearance, are essential to a non-heterosexual identity. Conversely, it may simply be rooted in the idea that essentially, we are inside who our bodies appear to be on the outside (Freeman et al., 2010). Regardless of the person’s actual sexual orientation, perception of membership in the non-heterosexual grouping can, and often does, carry tremendous social implications (Freeman et al., 2010).

While this body of research advances a greater understanding of the implications of gender constructs, stereotypes, and differences in perception between males and females, data on the influence of gender-role orientation on physically androgynous persons is limited. This research aims to address that by cross-examining participant gender-role orientation and personality inferences of physically androgynous targets. In particular, it is hypothesized that the physically androgynous target will be rated more likely to be homosexual or bisexual than the gender normative targets, and that the physically androgynous target will be rated more likely to have a cross-typed or gender-neutral personality than the gender normative targets. Additionally, it is hypothesized that participant GRO will moderate results.

**Method**

**Design**

This study employed a 2 (participant gender-role orientation) x 3 (target gender-role presentation) mixed factorial design. The between-subjects independent variable of participant gender-role orientation is divided into feminine and androgynous categories. The within-subjects independent variable of target gender-role presentation is divided into androgynous target (AT), feminine presenting androgynous target (FT), and masculine presenting androgynous target (MT). The dependent variable of inferred personality traits was summed as feminine, masculine, or androgynous; and the dependent variable of inferred target sexual orientation was categorized into heterosexual, homosexual, or bisexual. The order of the target photos was staggered to enhance internal validity, and participants were randomly assigned to one of the three different target photo sequences.

**Participants**

All 92 participants were female Minnesota State University Moorhead undergraduates. They were predominantly Caucasian, ages 18 – 55 years old ($M = 22.27$, $SD = 5.46$). Participants were recruited via sign-up sheet, with the option for extra credit in exchange for participation. Psychology made up 41.3% of participant majors, while other majors made up 55.7%. In addition, 82.6% of participants reported knowing someone in the LGBTQ community, and of those participants, 64.1% confirmed this as a meaningful relationship.

**Materials**

Participants completed a demographic survey of race, age, gender, and whether or not the participant knows someone in the
LGBTQIA community. The demographic survey also included an additional yes or no question asking if this is a significant relationship. Participant gender-role orientation was established by completing the Bem Sex Role Inventory (BSRI) (Bem, 1974), a 60-point self-report survey which asks participants to rank themselves on gendered personality traits, using a Likert-type scale from one (never true) to seven (always true). “Eager to ease hurt feelings”, “sensitive”, and “understanding” are examples of the feminine gendered traits, while “competitive”, “dominant”, and “makes decisions easily” are examples of the masculine gendered traits. In addition, “adaptable”, “reliable”, and “tactful” are examples of the non-gendered traits used. Scoring is determined by summing the scores for each category, and assigning the gender-role orientation accordingly. Upon replication, this survey is shown to have high test-retest reliability (Femininity $r=.90$; Masculinity $r=.90$; and Androgyny $r=.93$).

The ratings for inferred personality characteristics were provided using a survey created by the researcher. The survey contained six gendered traits, which were composed of two feminine traits (feminine, sensitive to the needs of others), two masculine traits (dominant, makes decisions easily), and two gender-neutral traits (adaptable, tactful), all taken from the BSRI. The ratings were measured by using a five point Likert-type scale, where 1 = not likely, 3 = neutral, and 5 = very likely. For the inference of sexual orientation, this study utilized a simple selection of heterosexual, homosexual, or bisexual for each target photo.

Seven target photos were used in the study but data from only three of them were analyzed. The three target photos that were used for analysis were of the same androgynous target with different gendered representations. All three target photos can be seen in the Appendix. The control target photo was the androgynous target (AT) as themselves, viewed from above the shoulders: androgynous facial features, shorter clippered hair, wearing a hooded sweatshirt, and no make-up or jewelry. The other two target photos were very heteronormative representations, whereas the feminine presenting target (FT) was shown with full make-up, earrings, necklace, and hair past the shoulders; and the masculine presenting target (MT) was shown with very short clippered hair, wearing a suit (jacket, pants, bow tie), with no jewelry or make-up. The other four distracter pictures were of gender normative targets that follow similar guidelines as the gendered target photos: longer than shoulder length hair, make-up, jewelry, and feminine attire for the feminine females; and shorter hair, no make-up or jewelry, and masculine/neutral attire for the masculine males.

**Procedure**

Once entering the lab, all participants began by reading and signing the informed consent form, in accordance with NIH standards. Next, they completed the demographic survey and the BSRI, using the paper and pencil provided. Participants were categorized into their gender-role orientations accordingly, during data analysis. They were then given the paper packet of photos, which were rated for inferred personality characteristics. For each target, ratings were made in two sections. The first section had a list of gendered personality traits taken from the BSRI. The ratings were measured by using a five point Likert-type scale, where 1 = not likely, 3 = neutral, and 5 = very likely. For the inference of sexual orientation, this study utilized a simple selection of heterosexual, homosexual, or bisexual for each target photo. Upon completion of the survey, the participant was debriefed and given their documentation for extra credit.

**Results**

Before statistical analysis could be conducted, the independent variable of participant gender-role orientation needed to be established. Participant responses to the Bem Sex Role Inventory (1974) were scored
by categorizing participants into masculine, feminine, and androgynous groups. The score for the gendered groups equals the mean rating for all the endorsed items of that gender norm, whereas the masculine score is a mean of all the masculine traits that were rated in completing the survey, and the same for the feminine traits. The androgynous score is the participant’s Z score for the difference between the two gendered scores; the masculine scores are coded as negative (\(|z| \geq 2.025\)) and the feminine scores are positive (\(|z| \geq 2.025\)). Therefore, the smaller the absolute value of the androgyny score, the more androgynous the participant’s gender-role orientation, and the larger the androgyny score, the more sex-typed the participant’s GRO. There were 39 participants that were categorized as having an androgynous GRO, 37 participants with a feminine GRO, and 16 with a masculine GRO, which were subsequently omitted from the study due to the small sample size, changing the independent variable from a three level variable to a two level variable.

Next, the six personality traits for the target photos (two traits for each gendered personality style) were condensed, so that each photo had a single score for each personality style (masculine, feminine, androgynous). Then, a mixed factorial ANOVA was conducted to cross-examine participant GRO and the personality ratings of the three target photos.

First the scores for the inference of personality style were analyzed, and examined results for the AT first. Although there was no interaction with participant GRO, \(F(2, 148) = .80, p > .05\), or main effect for participant GRO, \(F(2, 74) = .55, p > .05\), there was a main effect for gendered target presentation. The AT was perceived to have a more masculine (\(M = 3.31, SD = .07\)) and a more androgynous (\(M = 3.31, SD = .09\)) personality than the other targets, \(F(2, 148) = 3.9, p < .05, \eta^2 = .05\).

Results for the masculine target (MT) and for the feminine target (FT) were not significant. Results for the MT produced no interaction between participant GRO and personality ratings, \(F(2, 148) = .92, p > .05\), or a main effect of participant GRO, \(F(2, 74) = .88, p > .05\). The main effect of gendered target presentation also did not produce supportive results, \(F(2, 148) = .64, p > .05\). The FT results did not show an interaction, \(F(2, 148) = .90, p > .05\), or a main effect of participant GRO, \(F(2, 148) = .82, p > .05\). The main effect of gendered target presentation was again, not significant, \(F(2, 74) = .87, p > .05\). Results for the main effect of the gendered target presentation of the personality ratings are also displayed in Figure 1.

For the inference of sexual orientation, we conducted a frequency analysis. Beginning with the androgynous target, frequencies show that sex-typed individuals rated the AT with heteronormativity more often than the androgynous group, which can be seen in Figure 2. Fifteen of the feminine GRO group rated the AT as heterosexual and 11 of them rated the AT as homosexual, and nearly the exact opposite was true for the androgynous GRO group. Twelve of them rated the AT as heterosexual and 15 of them rated the AT as homosexual. The bisexual rating was nearly even for both groups of participants, with a rating of 11 for the feminine GRO group, and 12 for the androgynous GRO group.

Sexual orientation ratings for the masculine target are displayed in Figure 3. The masculine target rating for heterosexual was even for both groups of participants (9), and the rating for bisexual was also similar, at 10 for the feminine GRO group, and 8 for the androgynous GRO group. The homosexual rating was the category that the MT received the highest rating in, with a frequency of 18 for the feminine GRO group and 22 for the androgynous GRO group.

The data for the sexuality inference of the feminine target were not related to participant GRO, with the exception of the feminine target and the homosexual rating. The androgynous GRO group rated the FT as homosexual over three times as often (7) as...
the feminine GRO participants (2). The heterosexual rating was again split evenly at 6 for both participant groups, but the FT received the highest score in the bisexual category. The feminine GRO group produced a bisexual score of 29, while the androgynous GRO group produced a score of 26. The sexual orientation ratings for the FT can be reviewed in Figure 4.

Discussion

As noted earlier, previous research has produced mixed results for the impact of participant gender-role orientation on person perception. Although participant gender role orientation (GRO) did not impact the personality ratings of the targets in this study, the target gender presentation did. Results show that the androgynous target (AT) was rated as having a more androgynous and more masculine personality than the gendered targets, regardless of participant GRO.

While participant GRO did not play a role in the personality ratings of the AT, this provides a window into the strength of stereotypes around gender. By presenting a singular target in various gender presentations, this study goes beyond providing a simple account of gender stereotypes, and instead explores what is similar and different among them by using the same person as all three targets. Since participants received very little information about the target, the ratings occur from physical appearance, which included gender. When target gender was removed from the presentation, in the case of the AT, inferences could not be based on gender but physical cues only. Although a false assumption, it is common belief that men employ more masculine traits and women more feminine traits (Bem, 1974). Since the AT is not particularly feminine in appearance, the high ratings of an androgynous and masculine personality support gender stereotype data regarding heteronormative constructs. Results support previous studies in that those appearing to deviate from gender norms are perceived to employ personalities that likewise deviate (Deaux & Lewis, 1984; Freeman et al., 2014; Tskhay et al., 2013). Stereotypes often carry inferences of one trait to other traits, and the linkage regarding gender stereotypes magnify the value in studying stereotypes “as a collection of components that implicate each other” (Deaux & Lewis, 1984, p. 1002).

While participant GRO did not moderate target personality inferences for the current research, it did appear to play a role for the inferences of sexual orientation. The feminine group rated the AT highest as heterosexual, while the androgynous group rated them highest as homosexual, in almost perfectly opposite proportions. These results show that sex-typed individuals operate with more heteronormativity, which data suggests may be caused by a more rigid gender schema (Anderson & Bem, 1981; Bem, 1981; Card et al., 1986). These data support previous research in suggesting that individuals with an androgynous GRO use a more fluid gender schema, and are more likely to perceive people using dynamics that are outside of the traditional gender dichotomy. This study argues that when the gender of the target was ambiguous, the sex-typed females were more likely to rely on their heteronormative gender constructs than androgynous females.

Considering that previous research shows that androgynous faces are rated as homosexual and bisexual more than heterosexual, it is interesting to contrast that with the sexual orientation results of the current study. Since all targets were, in actuality, the same androgynous person with different stereotypically gendered presentations in two of the three photos, this study adds to the current body of research by using the same face for the control and manipulated variables. It is also worth noting that aside from results already discussed, the gendered targets were rated highest as non-heterosexual, with the masculine target rated highest as homosexual by both groups, and the feminine target rated highest as bisexual by both groups. This may be simply because
they are in fact the same face, but it may also be due to other factors.

The masculine target, for example, while convincingly masculine, but may not be seen as convincingly heterosexual. We saw in Freeman’s study (2010) that the androgynous faces were rated as homosexual more than the gendered faces, although the gendered ones were actually of homosexual people. These results also align with Ding’s findings (2009) that there may be a heterosexual/non-heterosexual dichotomy, as mentioned earlier. The gendered presentation of the masculine target may not meet societal standards of heterosexual masculinity. The target appears in a closed, tailored suit jacket, a clean shave, and a bow tie. Alternatively, presenting in an overtly masculine way may serve future studies by elevating the appearance of traditional masculine heteronormativity. The feminine target may also suffer from the same drawbacks, in that the attire may not be overtly feminine enough, although traditionally feminine make-up, jewelry, and hairstyle is present in the photo.

Various dynamics of the sample may also be working as confounds. Using an undergraduate sample from a small Midwestern college may limit the exposure of the participants to diverse examples of gender representation. Stereotypes regarding gender and sexual orientation differ greatly geographically. For example, what passes for stylish attire in one setting may be seen as overtly flamboyant in another. The masculine target for example, may be seen as homosexual simply due to the choice of bowtie instead of traditional tie. It is recommended that future studies use samples that represent wider age ranges, and include those from urban settings in addition to rural ones.

While a majority of the sample stated they knew someone in the LGBTQ community, and over half of those participants rated this as a significant relationship, what they may recognize in the targets that other samples may not notice is unclear. Although this sample does represent a strong familiarity with the queer community, which may not be an accurate representation of the general population, that distinction does not provide answers to what it is that this sample is particularly sensitive to. It is clear that despite this familiarity, results show that this sample may still be greatly influenced by sexual and gender stereotypes. Further studies exploring gender role orientation and the physically androgynous are advised in order to advance these results and further explore the dynamics presented.

References


Figure 1. Although there were no significant results for the participant GRO or for an interaction of participant GRO and gendered target presentation, results show a main effect for gendered target presentation. The androgynous target is rated as having a more androgynous and more masculine personality than the gendered targets.
Figure 2. Frequency analysis for the sexuality rating of the androgynous target show an interaction with participant GRO. The feminine GRO group rated the androgynous target as heterosexual more often than homosexual. Conversely, the androgynous GRO group rated the AT as homosexual more often than heterosexual.
Figure 3. The sexuality ratings for the masculine target did not produce an interaction or main effect of participant GRO, but did produce an effect for gender target presentation, with the homosexual category receiving the highest ratings.
Figure 4. Sexuality ratings for the feminine target produced an interaction but only for the homosexual rating, as the androgynous GRO group rated the FT as homosexual at three times the rate of the feminine GRO group. There was also a main effect for gender target presentation, with bisexual receiving the highest ratings.
Appendix A
Gendered Target Presentation

Figure A1. Pictured above is the androgynous target (AT) which served as the control photo.

Figure A2. Pictured above is the target with masculine presentation (MT).
Figure A3. Pictured above is the target with feminine presentation (FT).