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Two Traditions of Research on Gender Identity

Wendy Wood[1] · **Alice H. Eagly**[2]

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Abstract Gender identity reflects people's understanding of themselves in terms of cultural definitions of female and male. In this article, we identify two traditions of research on gender identity that capture different aspects of masculine and feminine gender roles. The classic personality approach to gender identity differentiates communal from agentic traits and interests. The gender self-categorization approach comprises identification with the social category of women or men. Based on the compatibility principle, each approach should predict behaviors within the relevant content domain. Thus, personality measures likely predict communal and agentic behaviors, whereas gender self-categorization measures likely predict group-level reactions such as ingroup favoritism and outgroup derogation. Researchers have the option of using one or the other conception of gender identity, depending on their particular question of interest. Relying primarily on research conducted in the U.S., we show that both traditions provide insight into the ways that gendered self concepts link the social roles of women and men with their individual cognitions, emotions, and behaviors.

Keywords Gender identity · Masculinity · Femininity · Compatibility principle · Self-construal · Gender categorization

✉ Wendy Wood
wendy.wood@usc.edu

Alice H. Eagly
eagly@northwestern.edu

[1] Department of Psychology, University of Southern California, Los Angeles, CA 90089, USA

[2] Department of Psychology, Northwestern University, Evanston, IL 60208, USA

Introduction

Gender consists of the meanings ascribed to male and female social categories within a culture. When people incorporate these cultural meanings into their own psyches, then gender becomes part of their identities. Through these *gender identities*, individuals understand themselves in relation to the culturally feminine and masculine meanings attached to men and women, and they may think and act according to these gendered aspects of their selves (Wood and Eagly 2010, 2012). In presenting our analysis, we depart from *Sex Roles*'s editorial policy by distinguishing the cultural concepts of *gender* and gender identity from the social category of *sex*, which we define by its common-language meaning as "either of the two main categories (male and female) into which humans and many other living things are divided on the basis of their reproductive functions" ("sex," n.d.).

Psychologists have studied gender identity by following two major traditions. In this article, we review the concepts and measures in each tradition and their contribution to understanding individual differences in gender-relevant functioning. The older tradition emerged from research on individual differences in personality and interests. This approach is represented by Bem's (1974) and Spence and Helmreich's (1978) work invoking gender-stereotypic personality traits, along with other psychologists' research on gender-typed interests (e.g., Lippa 2001, 2005). The newer tradition was sparked by the social identity perspective in social psychology that highlights people's sense of belonging to the social category, or group, of women or men (Schmitt and Branscombe 2001; Wood et al. 1997). Research in both of these traditions has drawn largely on U.S. samples, and we note nationality only for studies outside the U.S.

Adding complexity to the two basic classes of gender identities that we consider, the social categories of male and female

intersect with other important social categories, including race and social class, to yield multifaceted self-definitions (Settles and Buchanan 2014). Gender identity is thus one part of a many-sided conception of the self, which is a key aspect of human psychology that situates individuals within social structures (e.g., Epstein 1973; Stets and Burke 2000). An additional complexity is that gender identities develop and change across the lifespan (Tobin et al. 2010). Although many aspects of our analysis apply across life stages, a developmental analysis is beyond the present scope, and we focus mainly on adult gender identities.

Self-definitions that represent gender identity differ from other individual-level gender constructs, such as whether people hold favorable or unfavorable attitudes toward men or women, approve of traditional or egalitarian gender relations, or hold stereotypic beliefs about the traits and abilities of women and men. As gender theorists have emphasized (Ashmore 1990; Deaux 1987; Spence 1993), these various constructs are weakly linked within a heterogeneous, lumpy domain within which gender identity can be distinguished from other gender constructs (e.g., Spence and Buckner 1995). The loose associations among individuals' various gender-relevant psychological attributes challenge researchers to build theory to identify the nature of gender identity and to understand its relation to women's and men's behavior. As an initial step in this direction, we outline the self-regulatory processes by which gender identity guides behavior, and we propose guidelines for when a given gender identity is likely to predict a particular social behavior.

Gender Identity Based on Feminine and Masculine Attributes

Research in this tradition began with Terman and Miles's (1936) test of masculinity and femininity, which reflected minimal theory about gender but a straightforward empirical method of selecting items for an instrument that represented gender identity. Their measure consisted of items chosen, not because they were gender-stereotypical, but merely because they maximally differentiated between the responses of women and men. These heterogeneous items included word associations, associations to inkblots, statements of interests, introversion-extraversion items, and self-judgments of overall masculinity and femininity. For example, as the measure was scored, femininity increased with self-reported liking of "nursing," "babies," and "charades," whereas masculinity increased with disliking of these concepts. Terman and Miles's method of selecting items and scoring them yielded a single bipolar masculinity-femininity continuum. Other psychologists then followed this approach by choosing test items that strongly differentiated between women and men and labeling the results as assessments of masculinity and femininity (see reviews by Lippa 2001, 2005).

In a landmark article, Constantinople (1973) critiqued these early measures of masculinity and femininity, especially faulting their empirically-driven selection of test items that resulted in highly diverse item content. Constantinople showed that statistical analyses of such items often revealed multiple dimensions and not a single bipolar masculine-feminine dimension. Moreover, different versions of these scales showed generally weak relationships to each other, despite their assessment of the same psychological construct of masculinity-femininity. Constantinople's critique and opinion that masculinity and femininity are "among the muddiest concepts in the psychologist's vocabulary" (p. 390) set the stage for developing a new approach for understanding gender identity.

Gender Identity Based on Gender-Stereotypical Personality Traits

Following this critique, Bem (1974) and (Spence et al. 1975; Spence and Helmreich 1978) articulated a novel framework in which masculinity and femininity comprise two separate dimensions, thus avoiding the masculinity-femininity tradeoffs inherent in a single bipolar dimension. This approach became instantly popular in the late 1970s and helped to fuel that period's rapid rise in research on gender (Eagly et al. 2012).

The measuring instruments developed to assess femininity and masculinity presented items that were not heterogeneous in content as in the earlier tradition but consisted only of personality traits drawn from cultural stereotypes of men and women. Thus, the personality traits selected for these measures were more stereotypical of one sex than the other. Bem's Sex Role Inventory (BSRI, Bem 1974) and Spence and Helmreich's Personal Attributes Questionnaire (PAQ, Spence et al. 1975) thus assess self-ascriptions of desirable personality traits that are stereotypical either of men (e.g., self-reliant, assertive, forceful) or of women (e.g., affectionate, sympathetic, warm). In this way of representing gender identity, people who endorse gender stereotypic traits as self-descriptive are assumed to incorporate them into their self-concepts and to guide their behavior in terms of this self-knowledge.

These models of gender identity built on evidence that gender stereotypes about personality traits comprise separate masculine and feminine dimensions (Broverman et al. 1972). Constructing gender identity measures based on traits is sensible given evidence that social perceivers think in terms of traits by spontaneously inferring them from observed behavior (Uleman et al. 1996). Moreover, masculine and feminine personality traits are highly accessible when social perceivers think about women and men (e.g., Broverman et al. 1972; Deaux and Lewis 1984).

Initial research in this tradition classified respondents into categories based on their scores on the masculine and

feminine dimensions, yielding four groups of individuals: (a) *masculine sex-typed*, who scored high on masculinity and low on femininity, (b) *feminine sex-typed*, who scored high on femininity and low on masculinity, (c) *androgynous*, who scored high on both masculinity and femininity, and (d) *undifferentiated*, who scored low on both masculinity and femininity. Although producing these four broad categories based on dichotomies of high or low masculinity and femininity proved to be popular in research, methodologists have argued that such personality measures should be represented by continuous scales that are then subjected to regression analyses (e.g., Hall and Taylor 1985; see also MacCallum et al. 2002).

These two-dimensional schemes wrested gender identity from its earlier bipolar framing and enabled research on *androgyny*, or the combination of masculine and feminine qualities (e.g., Bem and Lewis 1975). The concept of androgyny resonated with feminists' rejection of traditional gender roles (e.g., Weisstein 1968). The feminist movement presented the dilemma of simultaneously rejecting traditional gender roles (e.g., Friedan 1963) and promoting the importance of feminine traits and values (e.g., Gilligan 1982). Androgyny accomplished both goals by merging the two gender roles and fostering femininity as well as masculinity. Bem advocated for androgynous identities on the grounds that they yield flexibility in behavior that is not possible for persons with the more restrictive feminine or masculine identities (e.g., Bem and Lenney 1976). The approach also appealed to feminist psychologists because it presented an alternative to simple sex comparisons, a research tradition that met with early and continuing critiques (Hare-Mustin and Marecek 1988; Shields 1975; see Eagly and Riger 2014).

As work on the personality approach to gender identity developed, researchers sometimes referred to these two broad dimensions by other names and thereby highlighted certain aspects of their meaning, including Bakan's (1966) labels of *agency* for masculinity and *communion* for femininity. Also, Spence and Helmreich (1978, 1980) proposed the terms of *instrumentality* and *expressiveness* as a way of highlighting the specific aspects of personality assessed by these measures. These researchers also augmented the desirable attributes included in standard masculinity and femininity scales with new scales that assessed negative aspects of masculinity (e.g., domineering, overbearing) and femininity (e.g., whiny, passive; see Spence et al. 1979).

Assessment of Masculinity and Femininity

The principle that culturally masculine and feminine personality traits are well represented by two dimensions has held up well over the years. The BSRI and PAQ scales typically have shown the anticipated two-dimensional structure (e.g., Choi et al. 2007), although the scales are not always internally consistent (e.g., Marsh 1987). Further validating the representation of these traits by two dimensions, social psychological research examining, not only gender, but general processes of impression formation and stereotyping has often yielded two dimensions of meaning that largely reflect agentic and communal attributes (e.g., Fiske et al. 2007; Judd et al. 2005).

The BSRI and PAQ represent *direct measures* of gender identity in which participants explicitly rate themselves on various personal attributes, yielding scores on rating scales. *Indirect measures* tap more automatic and spontaneous aspects of gender identity, such as response latencies to react to the items in the gender identity scales (Kessels and Hannover 2008, German participants). Perhaps the best known indirect measure, the Implicit Association Test (IAT), assesses the strength of people's cognitive associations between themselves and gender stereotypic traits (Greenwald et al. 2009; Schnabel et al. 2008). An IAT measure assesses strength of gender identity through reaction times to differentiate self words (e.g., "me") from nonself words (e.g., "other") when each is paired with words indicative of communal (warm, tender) or agentic (competitive, aggressive) attributes (Greenwald and Farnham 2000). The resulting IAT scores were based on speed of response to categorize gender stereotypical traits with oneself compared with others. This bipolar measure related positively to the PAQ and BSRI scales when they were computed as bipolar scales. However, researchers are still developing understanding of the comparability of explicit and implicit measures, gaining insight into the psychology behind these assessments (e.g., Gawronski and Bodenhausen 2011) and producing clearer empirical evidence of the conditions under which each predicts behavior (Greenwald et al. 2009; Oswald et al. 2013).

Additional Personality Traits

Even though agentic and communal traits are especially useful for studying gender identity because of their match to stereotypes of women as communal and men as agentic (Wood and Eagly 2012), other popular dimensions of personality may also be relevant to gender. For example, on the five-dimensional organization of traits known as the Big Five (Wiggins 1996: *extraversion*, *agreeableness*, *conscientiousness*, *neuroticism*, and *openness to experience*), women typically score as more agreeable and neurotic than men, and the sexes differ as well on some of the subscales of these dimensions, such as compassion and volatility (Chapman et al. 2007; Costa et al. 2001 Weisberg et al. 2011, with a largely Canadian sample). The BSRI and PAQ scales do correlate with some components of the Big Five (Lippa 1991), and possibilities for reconfiguring these traits in terms of higher-order dimensions that may represent agency and communion deserve consideration (e.g., see Digman 1997, alpha and beta factors; see also Lippa 2001). Further research on these issues could link gender identity research more firmly to these related analyses on the structure of personality.

Gender Identity Based on Sex-Differentiated Interests

Masculine and feminine interests, in terms of occupations, hobbies, and everyday activities, provide yet another type of gender identity measure. Lippa (1991; Lippa and Connelly 1990) developed a method of *gender diagnosticity* using these interest preferences. From self-ratings, a pattern of preferences is computed that maximally discriminates between male and female raters (on a weighted combination of items that constitutes a *discriminant function*). Respondents' gender identity is then assessed by comparing their score to this male-typical versus female-typical pattern of preferences—resulting in an assessment on a bipolar masculinity-femininity scale. Although this gender diagnosticity measure, like the Terman and Miles (1936) measure, is based on items that maximally discriminate between women's and men's self-reports, it has the advantage of focusing more narrowly on interests. Furthermore, the measure is tailored to each participant group by calibrating the items that distinguish the sexes within each sample of respondents. Lippa's (1991) measure relates especially well to occupational preferences, which tend to be thing-oriented among more masculine respondents and people-oriented among more feminine respondents (Lippa 1998, 2005).

In summary, the traditional approach to studying gender identity invokes gender-typical personality traits or interests. The masculine and feminine personal identities recognized in this tradition are associated with the cognitive, affective, and behavioral styles of women and men and in addition are part of culturally-defined gender stereotypes. In the social role theory analysis (Eagly and Wood 2012; Wood and Eagly 2010), these stereotypes reflect the division of labor between women and men in society (Koenig and Eagly 2014) and in turn foster gender-typical self-concepts, which, along with gender norms, guide individuals' decision making and behavior. In this way, gender identity defined in terms of stereotypical personality traits functions as a key concept linking the social structure's division of labor with individual behavior and social interaction.

Gender Identity Based on Self-Categorization

The second tradition of gender identity research implicates the collective identity that individuals adopt when they explicitly define themselves as a member of one gender group or the other—that is, they personally acknowledge that membership in this social category is self-defining. People may categorize themselves in a *descriptive* sense of being a typical man or women or in a *prescriptive* sense of being an ideal person of each gender (Prislin and Wood 2005). We thus define gender group identification as the descriptive or prescriptive categorization of oneself as female or male, along with the importance of this categorization for one's self-definition. Additional features of collective identities, such as the emotional significance of the gender group or common fate with group members (see Ashmore et al. 2004), require the initial identification of oneself as a group member and are best interpreted as consequences of identification.

Suggesting the usefulness of self-categorization for understanding gender, the distinction between men and women and between boys and girls is fundamental to how people think about their social environments (e.g., Brewer and Lui 1989; Fiske et al. 1991). In capitalizing on this basic feature of social cognition, the self-categorization approach captures a more direct self-labeling of gender identity than provided by the personality tradition of femininity and masculinity assessment. When responding to personality measures such as the BSRI or PAQ, people may not regard the items as having masculine or feminine meaning or indicating anything about their social category membership. In contrast, self-categorization measures require that people report directly on their group membership—that is, their identification with gender groups. Thus, in the personality tradition, the gendered nature of personal identity derives from researchers' assumptions about the implications of self-reported masculine or feminine traits, whereas in the self-categorization tradition, this identity derives from respondents' labeling of themselves.

The direct labeling of the self in terms of gender groups aligns with the broader tradition of social identity theory in social psychology (Tajfel 1981), especially with elaborations of the self-categorization approach (Turner 1985). In this analysis, self-categorization as a woman or man produces *self-stereotyping*, involving the ascription of typical gender ingroup attributes to the self, along with accentuation of differences from the gender outgroup (Turner et al. 1987). Furthermore, social comparison processes flow from self-categorization, as people are assumed to show favoritism to the ingroup and rejection of the outgroup.

Some people are chronically more likely than others to identify with their gender group. For these individuals, gender self-categorization is a stable attribute that is evident in most contexts. For example, Italian women typically have a stronger identification with their gender group than do Italian men, which may be tied to the lower societal status of women (Cadinu and Galdi 2012; Cadinu et al. 2013; Latrofa et al. 2010). Yet, the tendency to define oneself as female or male also varies with the salience of gender in particular social contexts (Sinclair et al. 2006). For example, gender identity and stereotypes can become salient through being a solo representative of one's sex in a mixed-sex group (White and Gardner 2009) or working in an organizational context with a low representation of women (e.g., Ely 1995). In addition, perceived discrimination against one's sex group can increase identification, at least among women (Schmitt et al. 2002).

Categorizing oneself as a woman or man does not have uniform, unvarying meaning. Developmentally, children's understanding of gender changes as gender representations become more complex and flexible and children become more aware of the differential status of gender groups in society (Halim et al. 2011). Gender identity crystalizes along with understanding of other gender constructs, including gender stereotypical attributes and the ascription of these attributes to the self (Tobin et al. 2010). Children's gender stereotypes and self-categorizations illuminate the ways that they form social groups and attach meaning to them (Liben 2014).

As children mature into adults, variability in the content of gender identity reflects that gender is one of many important social categories, along with race and social class. To the extent that gender is embedded in these other category memberships, then self-definitions will reflect more specific category groupings, such as working-class man (Shields 2008). In addition, the content of gender categorizations may shift with societal changes in the typical social roles of women and men. In post-industrial societies in the past half century, women's identities generally include a progressive option of having careers and sharing domestic work with men as well as a traditional possibility of being a homemaker (see Wood and Eagly 2012). In evidence of the differing content associated with these roles, German women with stronger gender identities of the progressive variety more strongly rejected sexist beliefs and were more likely to engage in collective action to improve conditions for women, but these relations did not hold among women with more traditional gender identities (Becker and Wagner 2009). The content of gender identities also may vary with current motives. For example, when men's masculinity was threatened, those who were more highly identified with their gender group tended to dichotomize sex-typical traits and to exclude the feminine traits from their ingroup identity (Bosson and Michniewicz 2013).

Assessment of Gender Self-Categorization

Some self-report measures rely on how typical respondents believe that they are in their gender group or how important the group is to their self-concept (e.g., Eagan and Perry 2001; Schmitt and Branscombe 2001). Others capture prescriptive categorization and assess how important it is for respondents to be similar to the ideal man or woman and might also assess rejection of the other gender ideal (e.g., Wood et al. 1997). Perhaps the best-known measure of self-categorization is Luhtanen and Crocker's (1992) collective self-esteem scale that can be adapted to assess identification with any social group, including gender. Specifically, the four items in the *importance of identity* subscale can be phrased to capture descriptive gender self-categorization (e.g., "Being a woman is an important reflection of who I am").

Gender self-categorization can be assessed indirectly through reaction time measures, much like the masculine and feminine traits in the personality approach to gender identity. Using the IAT, Greenwald et al. (2002) assessed strength of collective gender identity through reaction times to make judgments about the self and others when each was paired with words indicative of female and male groups (e.g., "he," "female"; see also Aidman and Carroll 2003, Australian sample). In yet another measure, involving a lexical decision task, participants were primed or not with self constructs and the speed with which they recognized gender-related words was assessed (e.g., "woman," "football;" van Well et al. 2007, Dutch sample). Collective identity as assessed by this lexical decision task and by the IAT method were positively correlated (van Well et al. 2007).

Alternative measures assess more spontaneous aspects of gender self-categorization. For example, assimilation of the self into a gender group can be evaluated using Venn-like diagrams with varying degrees of overlap between a circle representing the self and a circle representing the group (Aron et al. 1991). Another spontaneous measure assesses whether people mention gender categories in response to an open-ended request to list self-descriptive attributes (e.g., McGuire and Padawer-Singer 1976). Spontaneous mention might reflect the chronic salience of gender as well as its situationally-induced salience, perhaps due to being the minority sex in a social context (McGuire and Padawer-Singer 1976).

Levels of Self-Categorization

Some psychologists have demonstrated that people can identify with groups at more than one social level, producing *relational* and *collective* selves (Brewer and Chen 2007; Brewer and Gardner 1996). Therefore, self-categorization in groups can involve close relationships, which are generally dyadic, as well as larger groups and organizations. At an even broader level, people may self-categorize in terms of collective social categories such as gender, ethnicity, religion, and nationality.

Considering levels of self-categorization by women and men, some researchers have argued that women tend to construe themselves within close relationships, whereas men more often construe themselves in terms of independence from others along with embeddedness in larger social groups such as teams and organizations. Although this analysis does not pertain to categorizing oneself in a gender group, it suggests differences in the ways that men and women think about themselves within social relationships more generally. This aspect of the gendered self was explored initially by Cross and Madson (1997; see also Baumeister and Sommer 1997) and elaborated in more recent work (Cross et al. 2011; Gardner and Gabriel 2004).

In summary, the self-categorization approach to studying gender identity involves individuals' judgments of themselves as members of gender groups. These self-definitions might be primarily descriptive, reflecting typical women and men, or

primarily prescriptive, reflecting gender ideals. Some people chronically categorize themselves by gender, and others might adopt gender categories due to contextual factors that make these identities salient. In general, self-classification as a member of female or male groups gains significance because women and men often assume different roles in the social structure. Individuals incorporate the characteristics implied by the typical roles of women and men in the division of labor into their own identities. Through this influence on the self, societal structures guide individuals' decision making and behavior (Eagly and Wood 2012; Wood and Eagly 2010). Thus, gender self-categorization, along with social expectations, provide a bridge between the division of labor in society and social behavior.

Choosing the Right Measure of Gender Identity

Given psychologists' different ways of understanding and assessing gender identity, researchers have the luxury of choosing the most relevant approach for their purposes. How can researchers make good choices? One answer, beyond maximizing the reliability and validity of measures (e.g., Marsh 1987), involves the *principle of compatibility* (Ajzen 2012; Eagly and Chaiken 1993). That is, any individual-level measure is likely to successfully predict responses that are in the same content domain as the measure. This principle, initially developed for enhancing the prediction of behaviors from attitudes (Ajzen and Fishbein 1977), is equally important for predicting behaviors from personality traits (e.g., Epstein 1980) and, we suggest, from gender identity measures. By assessing the aspect of gender identity most relevant to a behavioral domain, researchers would plausibly increase their chances of finding meaningful effects.

Based on the compatibility principle, gender identity measures assessing self-reported masculine and feminine personality traits would best predict corresponding masculine and feminine behaviors. For example, people with masculine, agentic traits should behave more assertively and be more competitive than less masculine ones. People with feminine, communal traits should be kinder and more emotionally expressive than less feminine ones. In addition, trait-based measures can successfully predict consequences of behaviors, as when a masculine gender identity fosters agentic activities that in turn affect cognitive competencies such as spatial ability.

Gender identity measures assessing self-categorization as a woman or man would best predict group-related judgments such as ingroup favoritism and derogation of outgroup members. Based on the compatibility principle, regarding oneself as a typical woman would foster specific feminine behaviors such as, for example, acting in a kind and socially sensitive manner, depending on one's construal of the typical woman. If this concept features communal qualities, then gender categorization will likely lead to performance of communal behaviors. In this manner, self-categorization measures of gender identity would under some circumstances predict culturally feminine and masculine behaviors.

When a study matches its dispositional predictor (e.g., femininity) with behavioral measures at the same level of generality (e.g., multiple types of feminine behavior), substantial correlations can emerge (Epstein 1980). However, because much gender identity research has often related very general measures of identity to only one or a few specific behaviors of interest, relatively low correlations are common (e.g., Taylor and Hall 1982). One remedy is to fashion aggregated indexes of relevant behaviors that can more readily be predicted by broad identity measures. An alternative remedy is to design more specific measures of gender identity. For example, endorsement of a narrowly defined feminine quality such as social sensitivity could be related to relatively specific responses such as the ability to infer friends' feelings. As we show in the next sections of the article, when researchers have kept compatibility in mind, measures of gender identity have successfully predicted a variety of gender-typical behaviors.

Prediction of Outcomes from Gender Identity Measures

Gender identity measures spawned a large research literature predicting individual differences in the attributes and behaviors of women and men, with the great majority of studies using the personality-based measures developed by Bem (1974) and Spence and Helmreich (1978). Research in the gender categorization tradition has more often examined the contextual factors that influence whether people use gender as a means of defining the self, and it has less frequently tested the effects of gender identification on judgments and behaviors. Nonetheless, both literatures provide sufficient empirical evidence to conduct a preliminary assessment of the usefulness of the compatibility principle—that is, the ability of gender identity measures to successfully predict responses within the same content domain as the identity measure.

Prediction from Gender-Stereotypical Dimensions of Personality

As we noted earlier, initial research on personality measures found the relationships expected by the compatibility principle. That is, masculinity successfully predicted agentic behaviors, and femininity predicted communal ones (e.g., Taylor and Hall 1982). Further supporting this pattern, subsequent reviews and studies have found that agency was linked to behavioral outcomes such as career success (e.g., Evers and Sieverding 2014, German sample). Also, femininity predicted relationship outcomes such as greater involvement in family roles (e.g., Abele 2003, German sample) and satisfaction in

close relationships (Langis et al. 1994; Steiner-Pappalardo and Gurung 2002). Furthermore, domain-specific measures of femininity and masculinity, focused on close relationships (Hagemeyer and Neyer 2012), predicted outcomes in that domain, such as relationship behaviors and satisfaction. The very broad sets of agentic and communal traits in the BSRI and the PAQ should more effectively predict aggregated tendencies to act in agentic and communal ways than any single behavior.

Given the ability of masculinity and femininity measures to predict behaviors in their respective domains, researchers of trait-defined gender identity focused attention on the implications of gender identity for behavioral flexibility. Bem (1974) argued that flexibility should be greatest among people with androgynous gender identities that incorporate positive masculine and feminine qualities. Consistent with the compatibility principle, androgynous participants were more comfortable with and preferred a broader range of masculine and feminine tasks than sex-typed participants (Bem and Lenney 1976). In other words, feminine participants reacted positively to feminine tasks, masculine participants to masculine tasks, and androgynous participants to both feminine and masculine tasks (see also Bem and Lewis 1975; Helmreich et al. 1979; Wiggins and Holzmuller 1981).

Many studies have addressed Bem's additional hypotheses about the implications of androgyny for fostering outcomes of mental health, well-being, and self-esteem. This literature has revealed reasonably consistent results in four different meta-analyses (Bassoff and Glass 1982; Taylor and Hall 1982; Whitley 1983, 1985). Typically, masculinity scales related to mental health, well-being, and self-esteem with small to moderate effect sizes, but femininity related to these outcomes only weakly, albeit usually with positive effect sizes. However, beyond additive effects of masculinity and femininity, no advantage was associated with androgyny—that is, scoring high on both masculinity and femininity.

From our compatibility perspective, masculinity might successfully predict mental health, well-being, and self-esteem because the scale measures of these constructs heavily weight culturally masculine qualities of self-confidence and achievement. Some support comes from Marsh and Byrne's (1991) demonstration with Canadian and Australian participants that femininity predicted the favorability of stereotypically female aspects of the self-concept (e.g., family relations, religiosity), whereas masculinity predicted the favorability of its stereotypically male aspects (e.g., physical abilities, problem solving; see also Lau 1989, Chinese participants). Suggesting in addition that many everyday contexts reward agency over communion and thus give masculinity a predictive advantage, Marsh and Byrne (1991) also reported that masculinity was more predictive than femininity of an aggregated score representing favorability in multiple self domains (see also Burnett et al. 1995). In general, masculine, agentic qualities seem more relevant and desirable when people are evaluating themselves, whereas feminine, communal qualities are more relevant and desirable when evaluating others (Abele and Wojciszke 2014). The desirability of agentic qualities for oneself is broadly reflective of the abundance of contexts in which these qualities foster goal attainment.

Research also has examined the relation between personality measures of identity and cognitive abilities, given the logic that math and spatial tasks are associated with masculine activities and interests, whereas verbal tasks are associated with feminine ones. Signorella and Jamison's (1986) early meta-analysis of this literature identified some small-sized effects in the predicted directions on math and spatial tests but no consistent relations for verbal tests. Specifically, higher masculinity was associated with slightly better performance on mathematical and spatial tasks, especially for mental rotation tests. A subsequent meta-analysis based on 12 more recent studies found larger positive relationships between masculinity and performance on mental rotation tests of spatial ability and no relationships for femininity (Reilly and Neumann 2013). It is unclear whether masculine identity has direct impact on spatial ability, fosters culturally masculine activities that improve spatial ability, or reflects a shared socialization or biological grounding of both masculinity and spatial ability.

Prediction from Gender Self-Categorization

Given the compatibility logic that dispositional measures best predict behaviors within the same content domain, self-categorization measures of gender identity should predict group-related behaviors. Indirect support for this idea comes from research reporting that experimentally activating gender self-categorization accentuates responding as a group member. Thus, the conditions promoting self-categorization as a woman or man among British samples also tended to promote describing the self in terms of gender stereotypes (Abrams et al. 1990; Hogg and Turner 1987). Also, research experimentally activating collective identity as a woman or man augmented group-level emotions such as guilt among men for their privileged outcomes, along with explanations of those outcomes in group-level instead of individual terms (Branscombe 1998).

More direct support for the compatibility principle comes from studies that assessed gender self-definitions and evaluated their implications for group-level responses. For example, the more strongly Italian women identified with their gender, the more they ascribed gender-stereotypic attributes to themselves (Cadinu and Galdi 2012). Furthermore, these trait self-ascriptions were limited to attributes relevant to the gender group stereotype and did not occur with group-irrelevant attributes (Latrofa et al. 2010). In additional support, women who identified with their gender group were especially likely to experience *stereotype threat* and perform poorly on a math test (Schmader 2002), and these deleterious effects were strongest among the highly identified women who believed that

poor math performance was a group attribute (Kiefer and Sekaquaptewa 2007). Men who were highly identified with their gender group also were more likely to censure homosexuality as a violation of male ingroup norms (Hall and LaFrance 2012). An additional implication of the compatibility principle is that gender self-categorization within a particular context should predict behaviors only within that context. Supporting this principle, participants who defined themselves as typical men or women within romantic relationships acted in especially gender-typical ways during interactions with peers (i.e., relevant to romance), but did not engage in more communal or agentic behaviors more generally (Witt and Wood 2010).

In our analysis, measures of prescriptive self-identification ordinarily predict responses pertaining to the value of group membership. Thus, men and women who believed that they were similar to the societal ideal for their sex showed heightened self-esteem and smaller discrepancies between their actual and ideal self-concepts when they acted in gender-stereotypic ways (Witt and Wood 2010; Wood et al. 1997). Yet, as we explain below, identifying with gender ideals does not have these positive effects when people feel pressured to live up to ideal gender norms (Good and Sanchez 2010).

Gender Identity Guides Responding

What are the mechanisms by which the two traditions of gender identity we have considered influence people's responses? In essence, gender identity, as a component of the self-concept, provides prescriptive and descriptive standards by which individuals can regulate their behavior (Wood and Eagly 2010, 2012). When people self-regulate, they guide their behavior to bring it in line with gender standards, whether these standards reflect gender-stereotypical personal attributes or the normative standards associated with gender categories.

The two traditions of research specify different types of standards for gender identity. In the personality tradition, these standards reflect the agentic and communal personality traits that comprise masculinity and femininity. In the self-categorization tradition, standards reflect the collective meaning of the social categories of women and men and, through self-stereotyping, the associated stereotypic attributes. In the categorization view, then, the content of gender standards varies depending on the salience of the category itself or the attributes ascribed to category members. For example, self-categorization as an ideal man might provide a group-level standard against which to draw unfavorable comparisons of deviant group members. Also, self-categorization might provide standards for specific personal attributes, depending on people's beliefs about category members. As we noted above, this variation was captured by Kiefer and Sekaquaptewa's (2007) study of highly identified women whose math performance was hindered by stereotype threat only if they believed women were poor at math and thereby had this standard to apply to their own behavior. In general, self-categorization offers a flexible depiction of group-and attribute-based standards that facilitates understanding the multi-faceted nature of gender identities and the ways that they shift with influences such as current motives (e.g., Bosson and Michniewicz 2013).

Self-regulation by gender identity proceeds in stages, beginning with a comparison between valued gender standards and one's current behavior and its outcomes (e.g., Carver and Scheier 2012). As part of regulation, people are especially likely to attend to, process, and recall information relevant to their standards. These information processing consequences of gender identity were a cornerstone of Bem (1981) gender schema theory in which people were assumed to have a "generalized readiness to process information on the basis of the sex-linked associations" held in long-term memory (p. 355). Bem (1993) argued that gender identity provides a kind of lens for processing information relevant to the self and gender. However, based on the compatibility principle, the BSRI is not a general-purpose predictor of all sex-biased processing. Instead, evidence for such processing should emerge mainly when the measures of identity are in the same domain as the measures of information processing. In support of this principle, respondents with a masculine or feminine identity on the BSRI were more likely to attend to and remember masculine or feminine attributes, respectively, and they recalled more instances in which they had acted according to these identities (Markus et al. 1982).

Success or failure at regulating behavior is then registered in people's emotions and self-esteem. Positive emotions and increased self-esteem arise from acting in ways that successfully match gender identity, whereas negative emotions and decreased esteem result from acting in ways that deviate from this identity (Diekman and Eagly 2008; Witt and Wood 2010). Emotion is important in self-regulation because it serves as a signal to guide future responding. Negative affect can prompt people to shift their future behavior to bring it more in line with their gender identity (Josephs et al. 1992). However, holding strong gender standards and acting accordingly do not always enhance well-being. People may sometimes feel that gender standards are imposed by others so that they are pressured to act in gender-typical ways (Sanchez and Crocker 2005). Such external pressures are associated with lowered self-esteem and well-being (Good and Sanchez 2010).

In summary, gender identity influences responding through self-regulatory mechanisms that involve heightened attention, processing, and affective reactions. Through these mechanisms, people guide their behavior in line with their sex-typed attributes or collective identities. The overall result of these regulatory processes is both gender conforming and nonconforming behaviors. Although gender identities, on

average, foster behavior in line with gender roles (e.g., Taylor and Hall 1982), they also promote variability in sex differences because these identities differ across individuals and situations. The unique experiences that people undergo during development, along with individual differences in inherent dispositions, yield variation in the gender identities they adopt (Wood and Eagly 2009). Furthermore, new identities are continually arising with changes in social roles in a society, as illustrated in recent research on transgendered self-identities in postindustrial societies (Kozee et al. 2012).

Conclusion

In this article, we have outlined two distinctive traditions to understanding gender identity that arose from different traditions of psychological theory and research: personality and individual differences as opposed to social identity and self-categorization. By far the most popular approach to date is Bem's (1974) and Spence and Helmreich's (1978) gender identity theory and related measures, and we argued that an appreciation of the historical context in which this research was conducted sheds light on this popularity. These measures of individual differences reflected feminist thinking of the 1970s concerning the advantages of androgyny for mental health and behavioral flexibility. This framework also fit into the prevailing tendency of many feminists to regard sex differences in behavior as stemming not from causes intrinsic to women and men but from learned identity differences between the sexes. Yet, one contemporary complexity in accounting for observed sex differences in terms of trait-defined masculinity and femininity is that the traditional tendency of men to report themselves as higher in agency than women do has diminished over time, although the tendency of women to report greater communion has remained intact (Twenge 1997). Temporal shifts deserve more attention, not only in gender identity but also in sex differences and similarities in agentic and communal behaviors (see Wood and Eagly 2012).

In contemporary psychological science, the idea that some aspects of sex-related behaviors are influenced by factors intrinsic to women has gained credibility. Moreover, many psychologists accept that biological, cognitive, and social factors interact to produce individual differences in gender identity (Eagly and Wood 2013). In Wood and Eagly's (2002, 2012) biosocial model, the psychological attributes of women and men emerge flexibly from a dynamic interaction among biological and social factors. These include developmental experiences, situated activities in a society, and evolved characteristics of the sexes, especially the physical attributes and related behaviors involved in women's childbearing and nursing of infants and men's greater size, speed, and upper body strength. Consequently, variations in gender identity and other sex-typed attributes emerge across cultures, age cohorts, and social roles as local conditions interact with the universal framework provided by men's and women's evolved characteristics.

Biological influences on gender identity could emerge during development, and prenatal exposure to hormones was related in some studies to adult gender identity. Thus, adult men had lower masculinity scores on the BSRI gender identity measure to the extent that their mothers manifested circulating hormones that likely inhibited androgenization of the fetal brain (Davis and Risman 2015; see also Udry 2000). Additional developmental evidence comes from studies of girls with congenital adrenal hyperplasia (CAH), who were exposed to high levels of prenatal androgens and who usually showed some physical signs of masculinity (e.g., virilization). In a box score review across 14 samples, nine showed a heightened tendency for CAH girls to say that they identified with boys (Pasterski et al. 2015). Yet, the relation between hormones and gender identity in adulthood is likely to be complex and to involve the influence of role performances on circulating hormonal levels. Specifically, socially challenging situations such as the anticipation of athletic and other competitive behavior increase the circulating levels of testosterone in both men and women, presumably to enable assertive, dominant behavior (see review in Wood and Eagly 2012). In like manner, performing nurturing and caretaking roles, as associated with being a parent or a close relationship partner, reduces circulating testosterone in men and women (see van Anders et al. 2011). Throughout development, hormones are thus implicated in various ways in gender identification and the performance of gender role behaviors.

The influence of biological factors and societal structures on gender identity is experienced by individuals in terms of the perceived costs and benefits of behaviors for each sex (Wood and Eagly 2012). Women on average perceive that communal behaviors, people-centered interests and vocations, and a collective identity as a woman are especially rewarding. Men on average perceive that agentic behaviors, thing-centered interests and vocations, and a collective identity as a man are especially rewarding. Gender identity reflects these average perceived utilities of men and women, along with the unique perceptions that each individual may develop through personal experience.

The Future of Gender Identity Research

Although interest in androgyny as part of gender identity has waned in recent years, understanding individual differences within gender groups has remained important, and gender identity continues to be a viable approach. Despite the merits of the BSRI and PAQ as measures of gender identity, many researchers have approached their research in this area far too narrowly. When they think about explaining individual differences among women and men, their first (and often only)

thought is to turn to these personality-trait based measures of gender identity. Depending on researchers' purposes, this choice can be a mistake. Because the BSRI and PAQ scales were focused on agentic and communal personality traits, they do not predict the broad range of psychological phenomena that can flow from gender identity. Disappointing results thus can follow, not from flaws in the measures themselves, but from researchers' applications of them. Measures can address various aspects of gender identity, and they will be most successful at predicting responses that are compatible with the focus of the gender identity scale. We argued that, based on the compatibility principle, classic measures of gender identity in terms of communal and agentic personality typically predict the specific domains of communal and agentic responding, but self-categorization measures are more likely to predict responses implicating gender groups, such as ingroup favoritism.

As we explained in this article, researchers can think about gender identity in terms of the personality trait-based measures, and they can reach beyond such measures. By bringing the social identity approach to researchers' attention along with the traditional trait-based measures, we hope to strengthen this important area of inquiry and facilitate the prediction of female and male behavior in a wide range of domains. The two traditions we identified encompass a range of individual differences, and the associated measuring instruments are broadly useful to psychologists, sociologists, and other researchers interested in understanding gender identity and its relations to cognitions, emotions, and behaviors.

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