

## CHAPTER 8



# Gender Identity

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What individual differences in gender are important to study? Because gender refers to the cultural meanings ascribed to male and female social categories in societies, psychologists have focused on whether individuals define themselves in terms of these cultural meanings. We use the term *gender identity* to refer to these masculine and feminine self-definitions. Individuals differ in gender identity within each sex, and men and women differ on the average. Gender identity is only one of many possible social identities, with each identity representing one's psychological relationship to a particular social category in which one has membership (e.g., race, social class, religion; see Frable, 1997; Sherif, 1982).

Psychologists' conviction that gender identity is important has given rise to a wide range of constructs that represent culturally based masculine and feminine self-definitions. In this chapter, we organize these constructs in terms of three facets of masculinity and femininity: representations of oneself as (1) possessing gender-typed personality traits and interests, (2) having male-typical versus female-typical relationships to others, and (3) being a member of the category of women or men, as that category is defined within a given society.

From a social-role perspective, gender identity reflects the different placement of men and women into societal roles (Diekman

& Eagly, 2008; Eagly, Wood, & Diekman, 2000; Eagly, Wood, & Johannesen-Schmidt, 2004). These typical role occupancies produce gender roles, which are defined as socially shared expectations for men's and women's behavior. As gender roles are accepted by individuals, they are internalized into their self-concepts. People differ in the extent to which they accept these normative expectations about men and women as personally self-defining and thereby differ in the extent to which they incorporate cultural gender into their personal identities.

The content of gender roles reflects the characteristics that facilitate sex-typical tasks in a given society. To the extent that women more than men occupy roles that involve domestic activities and communal behavior (e.g., nurturing children, providing service to others), the psychological attributes that facilitate these role behaviors form the basis for shared gender-role expectations for women and for feminine gender identity. To the extent that men more than women occupy roles that involve economically productive activities and directive behavior (e.g., resource acquisition, managing large organizations), the psychological attributes that facilitate these role behaviors form the basis for shared gender-role expectations for men and for masculine gender identity. Yet, gender roles have origins in multiple biological and cultural factors (see Wood & Eagly,

2002, in press), and, as we explain toward the end of this chapter, gender identity arises from a similar complex of causes.

Gender identity, like gender roles, encompasses qualities that are regarded as typical or ideal of each sex in a society. Gender identity can thus refer to *descriptive* gender norms, defined as what is culturally usual for women or men in a society. In the descriptive sense, gender identity is the construal of oneself in terms of the culturally typical man or woman. Gender identity can also refer to *injunctive* (or prescriptive) gender norms, defined as what is culturally ideal for women and men. In the injunctive sense, gender identity is the construal of oneself in terms of the best of male or female qualities.

Gender identity, in referring to feminine and masculine self-definition, differs from other gender-related constructs, such as whether people hold favorable or unfavorable attitudes toward men or women or endorse gender stereotypes by believing that men have masculine attributes and women have feminine attributes. The conceptual differences between gender identity and other gender-relevant constructs are important because all of these constructs are only weakly linked within a heterogeneous, lumpy domain. Theorists of gender have repeatedly asserted this weak-link idea. Most notably, Spence (1993) proposed a *multifactorial theory* of gender constructs, and Ashmore (1990) proposed that culturally masculine and feminine traits and behaviors are held together only by *loose glue*. Other theorists borrowed the *fuzzy concept* notion from cognitive psychology, which implies not merely the multiattribute character of gender constructs but also their loose and shifting boundaries (e.g., Deaux, 1987; Helgeson, 1994b).

This multiattribute notion of gender is consistent with the weak empirical relationships generally found across separate gender constructs. For example, self-definitions on masculine and feminine traits are not consistently related to gender attitudes, masculine or feminine appearance, or sex-typed behaviors such as athletics (Spence, 1993; Spence & Buckner, 1995). Similarly, the strength of a collective identity as a man or woman is unrelated to endorsement of gender stereotypes of male superiority at math (Kiefer

& Sekaquaptewa, 2007). In general, then, facets of individuals' gender identities do not necessarily constrain their endorsement or behavioral confirmation of other gender-related distinctions.

The loose confederation among gender-related constructs should not discourage researchers from studying masculine and feminine gender identity. We urge researchers to ignore Spence and Buckner's (1995) surprising advice to abandon the concepts of masculinity and femininity. Instead, we believe that there is empirical and conceptual payoff in following the commonsense, lay persons' approach of defining masculinity and femininity as multifactorial constructs with heterogeneous content that includes interests, personality, occupations, personal appearance, sexuality, and social roles (Deaux & Lewis, 1984; Helgeson, 1994a; Myers & Gonda, 1982). As we show in this chapter, when its complexity is adequately represented conceptually and empirically, gender identity is a useful predictor of behavior.

### Relating Gender Identity to Behavior

In this chapter, we consider three different types of gender identity. We first consider individual differences in self-descriptions on the personal attributes commonly associated with gender. These personal attributes include (1) personality traits, with femininity typified by communal traits and masculinity by agentic traits (Bem, 1974; Spence & Helmreich, 1978) and (2) vocational and interest self-descriptions (Lippa, 2001, 2005). We next consider gender identity as it emerges in styles of construing the self in relation to others. A feminine construal entails greater interdependence involving close relationships with significant other individuals versus a more masculine construal that might include greater independence from others (Cross & Madson, 1997) or a greater collective focus on large groupings (Gardner & Gabriel, 2004). Finally, we consider individual differences in the importance people place on defining themselves as a member of the social category of men or women (Wood, Christensen, Hebl, & Rothgerber, 1997). Given these three distinct types of gender identity constructs, a researcher's first goal should be to identify the aspect of

gender identity that is relevant to the behavior under investigation.

This issue of matching gender identity constructs to relevant behaviors is crucial, above and beyond the more mundane issue faced in all individual-difference research of choosing measures to maximize reliability and validity (e.g., Marsh, 1987). To appropriately link gender identity to behavior, it is necessary to understand some elementary principles of the prediction of behavior from psychological dispositions.

### *The Principle of Compatibility*

The choice of measures of gender identity should be guided by the *principle of compatibility* (Ajzen, 2005; Eagly & Chaiken, 1993), which stipulates that identity measures are more likely to predict responses if they are in the same content domain as the measure. This principle, initially developed for enhancing the prediction of behaviors from attitudes (Ajzen & Fishbein, 1977), also is important for predicting behaviors from personality traits (e.g., Epstein, 1980). The key insight for successful prediction of behavior from attitudes, personality, or any other disposition is that prediction is enhanced by matching the content of the behavioral measure to the content of the dispositional measure. Therefore, measures of gender identity would successfully predict behaviors in the domain of the disposition.

Based on the compatibility principle, gender identity measures that assess self-reported masculine and feminine personality traits would best predict corresponding behaviors, such as communal behaviors of taking care of others or agentic behaviors of assertiveness. Identity measures that assess gender-typed vocations and interests would best predict related behaviors, such as gender-typed hobbies and occupations. Identity measures that assess sex-typical social relational preferences would best predict the kinds of relationships that women and men form with others, including their embeddedness in dyadic pairs or larger hierarchical structures in which they relate to multiple others. Identity measures that assess membership in the socially defined categories of men and women would best predict group-related judgments such as preference for one's own sex and prejudice against the other sex.

By tailoring measures of gender identity to the domain of interest, researchers increase their chances of finding meaningful effects of gender identification.

Beyond the recommendation to match content domains across identity measures and predicted behaviors, the compatibility principle implies that good prediction follows from assessing the identity measure and the behavioral measure at the same level of generality. For example, if self-assessments on the culturally masculine trait of assertiveness were used to predict behavior, the behavioral measure ideally would include not merely a single assertive behavior such as speaking up at meetings but rather a wide range of assertive behaviors selected from a wide range of settings. A single behavior such as speaking up at a meeting is an imperfect representation of assertiveness because there are many reasons why an otherwise assertive person might not engage in this behavior, especially at a particular meeting. Because individual behaviors are multiply determined, correlations between measures of assertiveness in general and any single behavior are generally low.

When research matches dispositional and behavioral measures at the same level of generality, substantial correlations can emerge between the two measures (Epstein, 1980). However, because most research on gender identity has used general measures of identity and related these to only one or a few specific behaviors of interest, most correlations in the literature we review are relatively low. Correlations would be higher if researchers had related general identity measures to aggregated indexes of relevant behaviors. Alternatively, researchers could improve prediction by designing more specific measures of identity. For example, a narrowly defined feminine quality such as belief in one's social sensitivity could be related to relatively specific responses, such as the ability to infer others' feelings in a variety of settings.

### *Direct and Indirect Measures*

Although most measures of gender identity involve direct self-ratings on relevant response scales, identity can be tapped through measures that are much less direct. Dual-process theories in social psychology provide a way to understand differences be-

tween these measurement approaches (see Chaiken & Trope, 1999; Smith & DeCoster, 2000). *Direct* rating scales tap propositional knowledge about oneself through verbalized judgments of gendered identity: "I am warm" or "I identify with women." Such measures require that people have some conscious awareness of their gender identity and are able and willing to report on it using the given scale format. In contrast, *indirect* measures tap spontaneous aspects of gender identity that may or may not be accessible to conscious, verbal description (see Smith & DeCoster, 2000). Furthermore, indirect measures may rely on associative processing systems that reflect the cumulation of experiences over time.

Indirect measures of gender identity often assess respondents' reaction times in making identity-relevant judgments. Such reaction times can reflect the strength of associative connections between oneself and culturally feminine and masculine traits or between oneself and male and female groups. Stronger identity, represented by closer associations between oneself and gender concepts, should produce faster reactions. For example, in a gender *priming* task, exposure to the prime of *me* or *they* is followed by the participant classifying a gendered word (e.g., *lady*, *fishing rod*; van Well, Kolk, & Oei, 2007) into categories of person versus object. People with a strong gender identity presumably have gender primed by the word *me* and therefore are relatively fast in making such categorizations. Another indirect measure, the Implicit Association Test (IAT), assesses the strength of association between self and aspects of gender identity through the speed of responding when categorizing the self (vs. others) as masculine or feminine (Greenwald & Banaji, 1995). The resulting IAT scores can form a bipolar dimension, reflecting the ease of associating masculine versus feminine traits with the self compared with others. IAT scores can also form unipolar scales. According to meta-analytic estimates, if direct self-ratings and IAT indirect measures are assessed in compatible ways so that both, for example, compare masculine and feminine gender identity, then correlations of around .30 consistently emerge (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). Additional indirect measures include open-ended self-descriptions

(e.g., McGuire & Padawer-Singer, 1976) and content analyses of self-descriptive photographs (e.g., Clancy & Dollinger, 1993). These and other indirect measures are designed to estimate gender identity without a direct verbal report and often without participants' awareness that this identity is being assessed.

There are several reasons to expect some divergence between direct and indirect measures of gender identity. One is that direct ratings are farther *downstream* in the processes of judgment and thus subject to more deliberation than the more spontaneous, automatic associations tapped by indirect measures (Fazio & Olson, 2003). As a result, responses to direct measures can be more influenced by pressures to appear socially desirable than are responses to indirect measures (Greenwald, Poehlman, Uhlmann, & Banaji, in press). Another reason for divergence is that indirect and direct measures may not represent the same content. This occurs when researchers use different bases to select direct and indirect measures by, for example, deriving one measure but not the other from gender stereotypes. In the following sections, we consider these and other issues in analyzing the merits of direct and indirect measures of our three facets of gender identity.

### Individual Differences in Self-Described Personal Traits and Attributes

#### *Gender Identity as Bipolar Masculinity– Femininity in Heterogeneous Domains*

Modern measures of gender identity originated in Terman and Miles's (1936) test of masculinity and femininity. This measure is composed of items that elicited maximally different responses from women and men. The resulting collection of items is a heterogeneous lot that includes word associations, associations to inkblots, interest items, introversion–extraversion items, and self-judgments of overall masculinity and femininity. For example, femininity scores increased with liking "nursing," "babies," and "charades," whereas masculinity increased with disliking these. This method of item selection and scoring placed masculinity and femininity as two ends of a single bi-

polar continuum. Other psychologists then followed this approach of selecting test items that strongly differentiated between women and men and labeling the resulting scales as measures of masculinity and femininity (see reviews by Lippa, 2001, 2005).

This tradition has been continued more recently in measures of identification that tap female-typical or male-typical interests. Favoring this approach, Lippa (1991; Lippa & Connelly, 1990) developed a method of *gender diagnosticity* in which women and men rate their preferences for occupations, hobbies, and everyday activities. These ratings then allow the computation of the pattern of preferences that maximally discriminates between the male and female raters (in terms of a weighted combination of items that constitutes a *discriminant function*). Respondents' gender identities are then determined by comparing their scores with this male-typical versus female-typical pattern of preferences.

Lippa's gender diagnosticity measure of gender identity, like the Terman and Miles (1936) measure, is based on items that maximally discriminate between women's and men's self-reports. However, it differs in its narrower focus on interests and in its calibration of what distinguishes the sexes within each sample of respondents. This method of computing a gender discriminant function has been applied to other types of items as well (e.g., Burke & Tully, 1977). As would be expected from the compatibility principle, Lippa's (1991) measure relates especially well to occupational preferences, with more masculine respondents preferring occupations that deal mainly with things and more feminine respondents preferring occupations that deal mainly with people (Lippa, 1998, 2005).

Constantinople (1973) provided an early critique of these kinds of measures of masculinity and femininity. She complained about the empirically derived selection of items, especially the motley types of content in Terman and Miles's (1936) measure and similar broad-spectrum measures. She demonstrated that statistical analyses of such items often revealed multiple dimensions, not a single bipolar dimension. Another criticism was that different versions of masculinity-femininity scales, which presumably assessed the same psychological

construct, were not very strongly related to one another. Constantinople's critique and her accusation that masculinity and femininity are "among the muddiest concepts in the psychologist's vocabulary" (p. 390) catalyzed development of a different framework for assessing gender identity.

#### *Gender Identity as Separate Masculine and Feminine Dimensions of Personality Traits*

In the new framework spurred by Constantinople's (1973) and others' critiques, masculinity and femininity appear as two separate dimensions. Drawing scale items from the cultural stereotypes of the personality traits of women and men, Bem (1974) proposed the Bem Sex Role Inventory (BSRI), which represents masculinity and femininity as separate, orthogonal dimensions. These items were selected because the personality traits they represented were more stereotypical of one sex than the other and more favorably evaluated in that sex. The measure thus assesses self-defined personality traits that are either masculine (e.g., self-reliance, assertiveness, forcefulness) or feminine (e.g., affection, sympathy, warmth). Among the four quadrants that resulted, two defined respondents considered *sex typed* by Bem: (1) those high on masculinity and low on femininity, labeled *masculine*, and (2) those high on femininity and low on masculinity, labeled *feminine*. The two remaining quadrants defined respondents considered not sex typed: (1) those high on both masculinity and femininity, labeled *androgynous*, and (2) those low on both masculinity and femininity, labeled *undifferentiated*. This two-dimensional scheme decoupled gender identity from its earlier bipolar framing and thereby represented identities in all combinations of high and low masculinity and femininity.

In a related project, Spence and Helmreich (Spence & Helmreich, 1978; Spence, Helmreich, & Stapp, 1974) developed the Personal Attributes Questionnaire (PAQ), which also defined gender identity in terms of two separate dimensions of personality attributes that are stereotypical of women or of men. Spence argued that the PAQ and the BSRI are measures not of culturally defined masculinity and femininity but of constellations of socially desirable personality

traits defined by either *instrumentality* (e.g., decisiveness, competitiveness, activity) or *expressiveness* (e.g., kindness, helpfulness, understanding). Alternatively, in the terminology introduced by Bakan (1966) and favored by many gender researchers, the two dimensions of the BSRI and PAQ gained the labels of *agency* and *communion*. Although some researchers have found that the items that make up the BSRI and the PAQ scales are not necessarily internally consistent (e.g., Marsh, 1987), these two-dimensional gender identity measures have remained very popular in research.

Subsequent elaborations of the PAQ included scales designed to capture negative aspects of instrumentality (e.g., being domineering, overbearing) and expressiveness (e.g., being whiny, passive) (Helmreich, Spence, & Wilhelm, 1981). Additionally, Athenstaedt (2003) extended the two dimensions to include items assessing their behavioral expressions.

These two-dimensional personality-based measures of gender identity may seem anomalous in view of modern personality theory, which has converged on a five-dimensional organization of traits known as the Big Five (Wiggins, 1996): *Extraversion*, *Agreeableness*, *Conscientiousness*, *Neuroticism*, and *Openness to experience*. Although the BSRI and PAQ scales correlate with some of the Big Five traits, more fine-grained analyses have revealed that each Big Five trait is made up of separate components, and sex differences are not always consistent in magnitude or direction across the components that make up the broader traits (Costa, Terracciano, & McCrae, 2001). Given such complexities, agency and communion are not readily reconfigured in terms of the Big Five. Instead, the agency–communion scheme provides an alternative organization of personality traits to the Big Five, and this two-dimensional organization is particularly useful in studying gender because of its match to gender stereotypes and roles. Attesting to the value of this two-dimensional scheme, social-psychological researchers on impression formation and stereotyping have often favored two dimensions that are construed in terms of some version of these agentic and communal families of traits (e.g., Judd, James-Hawkins, Yzerbyt, & Kashima, 2005).

Based on the compatibility principle, what behaviors are likely to be predicted by mea-

asures such as the BSRI and PAQ that represent agentic and communal traits? These measures assess only one aspect of the gender-related qualities that form the basis of people's sense of maleness or femaleness and therefore should relate to behaviors only within the relevant domain. Empirical support comes from a meta-analysis by Taylor and Hall (1982), in which people who were high on the masculine dimension of the BSRI or PAQ engaged in more agentic behaviors than those who were low, and people who were high on the feminine dimension engaged in more communal behaviors than those who were low. Furthermore, prediction from the BSRI or PAQ to behaviors in domains other than communion and agency were generally weak and inconsistent (Spence & Buckner, 1995). Despite widespread use of these measures in psychological research, investigators have only occasionally recognized that their predictive power is circumscribed to communal and agentic behaviors. Following the principle of compatibility, we expect in addition that these identity measures will have maximum impact when a study's behavioral measures are at the same level of generality. Thus identity measures defined in terms of broadly formulated personality traits, such as the BSRI and the PAQ, will more effectively predict aggregated indexes of multiple agentic and communal behaviors than any single behavior.

#### *Indirect Measures of Personal Traits and Attributes*

Indirect measures of gender identity assess more automatic and spontaneous self-descriptions. The IAT is the most popular indirect measure of traits and attributes. For example, Greenwald and Farnham's (2000) respondents categorized self-related pronouns (*me*, *I*) or other-related pronouns (*them*, *it*) with communal (*warm*, *tender*) or agentic (*competitive*, *aggressive*) attributes. The resulting IAT scores were formed into a bipolar dimension of masculinity versus femininity, reflecting the ease of associating masculine versus feminine traits with oneself compared with others. As would be expected from the compatibility principle, this bipolar measure of gender identity was positively related to the PAQ and BSRI scales when they were computed as bipolar scales. Nonetheless, the IAT also can potentially

be scored to reflect separate unipolar masculinity and femininity dimensions, and in this form it should be associated with direct measures of the compatible masculinity or femininity subscale. It is unknown whether the indirect and direct forms of such masculinity and femininity measures predict behaviors differently.

### Individual Differences in Interdependent Self-Construal

Gender identity also includes beliefs about oneself in social relationships, often labeled *self-construal*. This aspect of gender identity reflects the social contexts within which men and women carry out sex-typical activities in a society. To the extent that women more than men occupy roles that encourage close, interdependent relations with others, feminine gender roles are likely to include self-construals that emphasize connections to intimate others. Comparably, to the extent that men more than women in a society occupy roles that encourage independent action and/or action within larger collectives, masculine gender roles are likely to include self-construals of autonomy from others and/or positions within larger collectives. The interdependent aspects of gender identity focus not on individuals' possession of personality attributes such as communion or agency but on the ways that men and women define themselves in relationships with intimate others and with social groups.

Initial work on this aspect of gender identity focused on the degree to which men and women regard themselves as separate from or connected to other people. That is, women were thought to have a relatively *interdependent* self-definition, in which valued and important others are included in self-representations, and men to have a more *independent* self-definition, in which the self is autonomous and distinct from others (Cross & Madson, 1997; Josephs, Markus, & Tatarodi, 1992; see Cross, Hardin, & Gerecht Swing, Chapter 35, this volume). Sex differences would thereby align with cross-cultural differences in self-construals in the form of East Asian cultures' promotion of an interdependent sense of self that highlights relationships, group memberships, and harmony with others, as opposed to Westernized cultures' promotion of an independent

sense of self that highlights individuals' unique abilities and attributes (Markus & Kitayama, 1991; but see Oyserman, Coon, & Kemmelmeier, 2002).

In a landmark article summarizing research indicating that men and women differ in such self-construals, Cross and Madson (1997) argued that women describe themselves more in terms of relationships with others, whereas men describe themselves more in terms of separateness from others. For example, women's greater interdependence is evident in their sensitivity to others' nonverbal cues, emotional empathy, and capacity to adopt others' cognitive perspectives. Furthermore, women's self-esteem tends to depend on their ability to maintain relationships with others, whereas men's depends more on maintaining independence from others. In addition, women attend more to close relationships and like to discuss them with others, whereas men prefer to discuss less personal topics such as sports and politics. Cross and Madson interpreted these (and other) findings as evidence for women's greater interdependence and men's greater independence (see also review of work on self-construals by Cross et al., Chapter 35, this volume).

Subsequent work challenged this characterization of men as less dependent on social relations than women. Reasoning that all people have a need to belong, Baumeister and Sommer (1997) argued that the sexes express this dependency differently, with women more likely to form close relationships with intimate others and men more likely to form relationships within larger collectives and groups in which they can assert power and dominance (see also Baumeister & Leary, 1995). Thus women's sense of their interdependence with others is *relational*, or oriented to committed, close relations with others, whereas men's sense of interdependence is *collective*, or oriented toward larger social groups (Gabriel & Gardner, 1999; Gardner & Gabriel, 2004).

Relational and collective gender identities align with Brewer and Gardner's (1996) analysis of the forms of interdependent selves. According to these researchers, whether people construe themselves in terms of their interpersonal relationships or in terms of larger, more interpersonal collectives determines various aspects of self-functioning (e.g., salient components of self, primary social mo-

tives). In addition, relational and collective interdependence represent not only characteristic ways of interpreting the self in relation to others but also temporarily activated states in which circumstances prime the appropriate identities and lead to perceptions of self as interlinked in relationships with intimate others or in larger groups.

Evidence that men and women differ in their chronic levels of interdependent self-construal comes from research that has compared relational and collective forms of dependence. Arguing that Cross and Madson's (1997) review had focused primarily on the relational aspect of interdependence, Gabriel and Gardner (1999) provided a variety of evidence that men are more collectively interdependent than women. For example, when asked to give spontaneous self-descriptions, men were more likely than women to list group memberships (e.g., fraternity member, black man), whereas women were more likely than men to list specific close relationships (e.g., friend, happily married; Gabriel & Gardner, 1999, Study 1). In addition, when asked to recall and describe a happy or sad emotional event, men were more likely than women to report an experience in the context of a collective (e.g., with a fraternity or sorority), whereas women were more likely than men to report an experience with a close other (e.g., friend, family member; Gabriel & Gardner, 1999, Study 3).

#### *Direct Measures of Interdependent Self-Construal*

Direct tests of the independent, relational, and collective self-concepts of women and men usually elicit self-reports on scales assessing the importance or descriptiveness of each of these self aspects. The research published thus far suggests that the sexes differ primarily in the extent to which they construe the self in relations with close others. Accordingly, relational interdependence holds most promise as a facet of gender identity.

Our review of the literature suggested that men and women do not differ consistently in their overall levels of independence. Thus few sex differences have been reported on measures assessing self-descriptions as independent as opposed to interdependent. For example, Kashima and colleagues' (1995)

investigation across five cultures revealed no sex differences in self-reported individualism as reflected in assertiveness and acting independently in group contexts. Similarly, Nario-Redmond, Biernat, Eidelman, and Palenskie (2004) found an absence of sex differences in U.S. college students' ratings of the importance of personal identity items pertaining to independence (e.g., rebelliousness, creativity). Also, Kashima and Hardie's (2000) relational, individual, and collective self-aspects scale revealed no sex differences among Australian college students in the prominence of individual aspects of the self.

In line with sex differences in the form of interdependence, women typically report higher relational dependence than men. For example, across U.S. college student samples, women consistently scored higher than men on a scale designed to assess Relationally Interdependent Self-Construal (RISC scale) with items such as, "My close relationships are an important reflection of who I am" (Cross, Bacon, & Morris, 2000; Gabriel & Gardner, 1999; Gore, Cross, & Morris, 2006). Also, across five cultures, Kashima and colleagues (1995) found that women scored consistently higher than men on measures of closeness in emotional relations with others.

Direct measures have provided less conclusive evidence of sex differences in collective interdependence. Gabriel and Gardner (1999, Study 2) found college men more collectively dependent than women on a version of the RISC designed to tap collective identity (e.g., "The groups I belong to are an important reflection of who I am"). However, other research has not obtained analogous findings (e.g., Kashima & Hardie, 2000), including studies in which respondents rated the importance of various group identities to their own self-definitions (Luhtanen & Crocker, 1992; Nario-Redmond et al., 2004). This apparent inconsistency in findings might be resolved through a comprehensive meta-analytic review of the relevant research findings.

#### *Indirect Measures of Interdependence*

Indirect measures that assess whether people spontaneously mention individual others or collectives when describing themselves also attest to women's greater relational



interdependence. The best known of these measures is Kuhn and McPartland's (1954) Twenty Statements Test, which elicits open-ended self-descriptions that researchers code for self-construals. Women tend to respond with more descriptions of personal relationships and family than do men (e.g., Gabriel & Gardner, 1999, Study 1; Grace & Cramer, 2003; Kashima & Hardie, 2000; McCrae & Costa, 1988, although see Bresnahan et al., 2005). A similar spontaneous measure is the free-response assessment of "tell us about yourself" (e.g., McCrae & Costa, 1988; McGuire & Padawer-Singer, 1976).

Other researchers have invoked autophotography, or taking photos, to tell who one is. Women spontaneously included more pictures of self with others, of people touching, of groups of people, and of family, whereas men included more photos of the self alone, of physical activities, and of vehicles (Clancy & Dollinger, 1993).

#### ***Intrdependent Self-Construals Predict Behavior***

Based on the compatibility principle, measures of relational self-construal should predict behaviors relevant to this aspect of interdependence. In support, a growing body of evidence suggests that, for example, people who scored higher in relational interdependence on the RISC were more likely to attend to and remember information about others' relationships (Cross, Morris, & Gore, 2002). Also, more relationally interdependent individuals showed greater accuracy at judging a new roommate's values and beliefs (Cross & Morris, 2003), greater optimism about close relationships (Cross & Morris, 2003), and greater self-disclosure to others concerning emotional events and helpfulness in responding to others' needs (Cross et al., 2000; Gore et al., 2006). Furthermore, following priming of relational interdependence, people tended to treat close others' success on a task as similar to their own and did not show the classic social comparison effect of gaining esteem when outperforming others and losing esteem when outperformed by them (Gardner, Gabriel, & Hochschild, 2002).

Given the limited evidence for men's independence and collective interdependence, these attributes may have minimal utility as

indicators of gender identity. Nonetheless, it may be that men adopt these identities in certain circumstances, as suggested by Maddux and Brewer's (2005) finding that, after priming with interdependence, men apparently relied on collective identity in deciding whether to trust others to allocate money in an online game, and they showed trust for ingroup but not outgroup members.

#### **Individual Differences in Gender-Group Identification**

Gender also represents a collective identity that individuals adopt when they define themselves as a member of one sex group as opposed to the other. Collective gender identity is the subjective judgment that "I identify with women" or "I identify with men." Group identity can, in addition, be defined to include the emotional significance of a group, attributes of group members, or common fate with group members (see Ashmore, Deaux, & McLaughlin-Volpe, 2004). Because such features require the initial identification of oneself as a group member, we treated these as consequences of identification and define gender-group identification as the categorization of oneself as female or male and the importance of this categorization for one's self-definition.

A central issue for social identity researchers is understanding the conditions under which people invoke one identity, such as gender, over others, such as ethnic group or musical taste. Self-categorization is flexible, and people have a repertoire of social category memberships that vary in relative importance to the self-concept (Stewart & McDermott, 2004; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Some individuals are chronically more likely than others to identify with their gender group, as assessed by measures of collective gender identity. In addition, the tendency to define oneself as female or male varies with the salience of gender in particular social contexts (see Turner et al.'s [1987] metacontrast principle).

#### ***Measuring Collective Identity***

Measures of collective gender identity can refer to typical men and women and thereby assess identification with descriptive gender

categories. Alternatively, such measures can refer to ideal men and women and thereby reflect identification with injunctive categories. In addition, although some measures separately assess identification with each gender, measures often assess identification with a gender ingroup in opposition to the gender outgroup (Turner et al., 1987).

#### *Direct Measures of Collective Gender Identity*

A popular measure of identification with descriptive group categories is the *importance of identity* subscale of Luhtanen and Crocker's (1992) collective self-esteem scale. When adapted to gender groups, this measure consists of four items that assess the importance of being a woman or a man to one's self-image. Other measures elicit self-reports of how typical respondents are in their gender group (e.g., Eagan & Perry, 2001).

To capture the injunctive nature of gender categories—that is, people's beliefs about what is desirable for the sexes—measures can specify ideal or desired gender categories. For example, to assess gender ideals, Wood and colleagues (1997) assessed how important it was for respondents to be similar to the ideal man or woman and to reject the other sex ideal.

#### *Indirect Measures of Collective Gender Identity*

Reaction-time measures assess gender identity indirectly through the speed with which participants associate self (vs. others) with gender categories. The IAT assesses strength of gender identity through reaction times to differentiate self words (e.g., *me*) from non-self words (e.g., *other*) when each is paired with words indicative of gender groups (e.g., *he, female*) (Aidman & Carroll, 2003; Greenwald et al., in press). With lexical-decision measures, participants are primed or not primed with self-constructs, and then their reaction times for recognizing gender-related words are assessed (e.g., *woman, football*; van Well et al., 2007). As expected based on the principle of compatibility, the IAT and lexical-decision measures of collective gender identity are positively correlated,  $r(43) = .48$  (van Well et al., 2007).

A graphic measure of spontaneous gender identity assesses the extent to which people include others in the self (Aron, Aron,

Tudor, & Nelson, 1991). It consists of a set of Venn-like diagrams with varying degrees of overlap between two circles. When it is used to assess strength of collective gender identity, respondents pick the diagram that best depicts the extent of overlap between themselves and their gender group.

Another spontaneous measure is whether people mention gender in response to an open-ended request to list self-descriptive attributes (e.g., McCrae & Costa, 1988; McGuire & Padawer-Singer, 1976). The spontaneous mention of gender categories might reflect the chronic salience of gender, as well as situationally induced salience, as indicated by the finding that children in the minority sex in a classroom mentioned their sex more often in describing their physical selves (McGuire & Padawer-Singer, 1976).

#### *Collective Gender Identification Predicts Behavior*

Given the logic of the compatibility principle, collective gender identity should predict behavior as a group member, such as valuing one's group over other groups (Tajfel, 1982). In particular, evaluative forms of group identity—that is, identification with what is good about one's gender group compatible with ingroup bias. Illustrating this effect, Wood and colleagues' (1997) participants rated their similarity to the societal ideal for their sex (e.g., the ideal woman) and their dissimilarity to the ideal for the other sex. To the extent that participants had a stronger identification with their own (vs. other) gender ideal, they experienced a boost in self-esteem when imagining themselves acting in gendered ways. Evidence for ingroup bias also has been found on measures that minimize the social desirability concerns that can limit demonstrations of outgroup prejudice, as shown by meta-analytic evidence that collective identity predicted ingroup bias better with indirect, IAT measures than with direct measures (Greenwald et al., in press).

Another group behavior associated with collective identity is *self-stereotyping*, or the ascription of group characteristics to the self (Turner et al., 1987). Given the logic of the compatibility principle, broad measures of identification with a gender group would not necessarily relate to specific behaviors such as ascription of particular gender-typed at-

tributes to oneself. In illustration, Kiefer and Sekaquaptewa (2007) found that women with a strong gender identification were no more likely than those with a weak one to ascribe the stereotypic attribute of poor math performance to themselves. However, the predicted self-stereotyping was obtained among women with a strong gender-group identity who also believed that math is masculine and not feminine. Thus gender self-stereotyping on specific attributes can be detected in studies that assess the specific attributes that people ascribe to gender categories.

Gender self-stereotyping also is found when measures of gender identity are tailored to the specific domain of interest. For example, Witt and Wood (2008) assessed gender identity by asking respondents how important it was that they acted like a typical man or a typical woman with respect to romantic relations (e.g., dating, flirting). Experience-sampling methods revealed that highly identified students interacted with peers of the other sex in typically feminine (or masculine) ways. In general, collective gender identity relates to self-stereotyping on specific attributes primarily when the attributes are ones that respondents believe characterize their gender group or when gender identity is assessed with respect to the specific domain of interest.

### Gender Identity Guides Responding

What are the mechanisms by which the three types of gender identity we have considered influence people's responses? Gender identity guides behavior through a set of biological and psychological mechanisms (see Wood & Eagly, in press). Biological processes include hormonal fluctuations that act as chemical signals that promote actions in line with gender identity. Social processes also are implicated, given that people use gender identities as self-standards against which to regulate their behavior.

Biological processes work to promote gender identities as people selectively recruit hormones and other neurochemical processes to facilitate performance of relevant behaviors. Higher levels of testosterone are associated with dominance behaviors, especially those involved in competition, risk-

taking, and aggression that may injure others (Booth, Granger, Mazur, & Kivlighan, 2006). For example, testosterone levels rise in anticipation of athletic and other competition and in response to insults. Higher levels of oxytocin are associated with behaviors that produce parental bonding, nurturance, and intimacy, especially in women (Campbell, 2008). For example, oxytocin levels rise in women during childbirth and in response to massage and sexual contact. These hormonal processes do not work in isolation but instead combine with gender identities to facilitate performance of relevant behaviors. Thus, testosterone is especially relevant for people with masculine gender identities that lead them to experience social interactions as dominance contests. Oxytocin and other neurochemical processes involved in bonding are especially relevant for people with feminine identities that lead them to define social interactions as involving bonding and affiliation with close others.

Gender identity, as a component of the self-concept, also informs self-regulation. When people self-regulate, they exercise control over their behavior to bring the self into line with valued standards. Gender identities serve as self-regulatory standards when they descriptively specify how a person of one's gender is expected to act or injunctively specify how a person of one's gender ideally would act.

According to self-regulatory theories, people guide their actions toward valued standards and goals by a matching process often likened to a cybernetic feedback loop (e.g., Carver & Scheier, 2008). With this feedback loop, the regulatory system monitors the extent to which current behavior matches self-standards. When people's behavior successfully matches their gender identity, they experience positive emotion and increased self-esteem; when their behavior deviates from their gender identity, they experience negative emotion and decreased esteem. Therefore, people with a stronger gender identity—of whatever type—would use this identity as a standard for their own behavior and experience more of a boost in positive affect and self-esteem when vicariously imagining themselves or actually behaving in ways that are consistent with this identity (Diekmann & Eagly, 2008; Wood et al., 1997). Wood and her colleagues have

demonstrated this mechanism with respect to collective gender identity (e.g., Witt & Wood, 2008).

Self-regulatory control proceeds not only through motivational signals of affect and self-esteem but also through enhanced attention to, processing of, and recall of information relevant to gender standards. The information processing consequences of gender identity were a cornerstone of Bem's (1981) theory that sex-typed people have a "generalized readiness to process information on the basis of the sex-linked associations" held in long-term memory (p. 355). Bem argued that gender identity provides a kind of lens for processing information relevant to the self and gender. However, only inconsistent evidence suggests that the agentic and communal forms of gender identity assessed by Bem's favored measure (i.e., BSRI) guide gender-related processing across a range of stimuli (see Kite & Deaux, 1986). Based on the compatibility principle, evidence for such processing should emerge mainly when measures of identity are in the same domain as the measures of information processing. In support, people who score higher on relational forms of gender identity are more likely to attend to and remember information about others' relationships (e.g., Cross et al., 2002).

The capacity to engage in regulatory control of gender-linked behavior appears to emerge with maturity (Bussey & Bandura, 1992). Consistent with such a developmental effect, 3-year-old children did not anticipate feeling differently about themselves after playing with same-sex or other-sex toys, whereas older children expressed more positive feelings toward playing with same-sex toys than other-sex ones. Furthermore, suggesting the developmental trajectory of regulatory mechanisms, the older but not the younger children's anticipatory affective reactions predicted their subsequent actual toy preferences.

In summary, the three facets of gender identity we address in this chapter all plausibly influence responding through a common set of biosocial mechanisms. Through self-regulatory mechanisms, people carry out behaviors that are consistent with gender identities based on gender-stereotypic traits and interests, relational closeness to others, or collective male and female groups. Hor-

monal processes include the recruitment of testosterone and oxytocin to facilitate performance in line with these identities. In support of this analysis, women high in masculinity on the BSRI, who perceived themselves as self-directed, action-oriented, and resourceful, were likely to have higher circulating testosterone (Baucom, Besch, & Callahan, 1985). Given the evidence that testosterone is recruited in the service of role performance, this pattern is consistent with the idea that agentic women are sensitive to dominance issues in daily life and recruit this hormone as they assert dominance.

### Origins of Gender Identity

Gender identity is one of a variety of gender-related constructs that children develop as they mature within their society. Gender identity emerges through the interaction over time of social-cognitive learning and biological processes (see Bussey & Bandura, 1999, 2004; Ruble & Martin, 1998). These include learning to label oneself as a boy or girl and to understand gender constancy (Kohlberg, 1966). More complex learning is involved in the development of cognitive structures that link the self with gendered activities, interests, and personality traits (Martin & Ruble, 2004). Furthermore, for identity to be expressed in behavior, females and males must develop the belief that they can engage in such behavior (Bussey & Bandura, 1999).

Gender identity develops within a broader societal context in which women and men cooperate in a division of labor and thereby fill different social roles (Eagly et al., 2000). The different placement of men and women in society organizes the processes by which boys and girls come to possess a gender identity and thereby are suited to participate in sex-typical social roles. Individual differences in gender identity also reflect the unique experiences that people may have within their society.

The division of labor within a society influences gender identity because it influences the perceived costs and benefits of behaviors for each sex. Women on average perceive that communal behaviors, people-centered interests and vocations, dyadic relational styles, and a collective identity as a woman are

especially rewarding. Men on average perceive that agentic behaviors, thing-centered interests and vocations, independent and/or hierarchical relational styles, 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.

Men's and women's understanding of the costs and benefits related to gender identities develops in part through the expectations held by other people. Others tend to reward behaviors consistent with gender roles because such actions validate shared beliefs about women and men and promote social interaction that is easy to follow and understand (see Wood & Eagly, in press). Others may respond with rejection to deviating behaviors that challenge gender role expectations. Through the process of responding to gender expectations, people may develop gender identities. Because people often underestimate the influence of others (Vorauer & Miller, 1997), they might observe their own expectation-consistent behavior and infer that they possess a corresponding disposition—a gender identity. Supporting this reasoning, research on gender-stereotypical expectations has yielded some of the strongest evidence of such behavioral confirmation of others' expectations (Leander, Chartrand, & Wood, 2009; see overview by Deaux & LaFrance, 1998). Further evidence that children are rewarded for acting in ways that confirm gender-role expectations comes from observations of socialization practices in nonindustrial societies (Barry, Bacon, & Child, 1957). Socialization research in industrialized nations has provided less evidence of parents' differential delivery of rewards and punishments, with the exception of certain sex-typed activities and preferences (see Lytton & Romney, 1991). Nonetheless, sex-typed expectancies also are communicated through other social channels, such as modeling of conventional family and occupational roles (Bussey & Bandura, 1999).

Biological mechanisms, especially hormonal processes, also influence the development of gender identity. The prenatal hormone environment is known to influence the development of some human behaviors that show sex differences. Perhaps best

documented are the consequences of the high levels of prenatal androgen exposure of children with congenital adrenal hyperplasia (CAH) disorder. Such exposure yields increased male-typical toy, playmate, and activity preferences among girls, although it has little systematic effect for boys. Nonetheless, such exposure does not appear to have consistent effects on broader measures of gender identity (Meyer-Bahlburg et al., 2004; although see Hines, Brook, & Conway, 2004).

The general idea that biological, cognitive, and social factors interact to produce individual differences in gender identity has been embraced by evolutionary models of gender. However, evolutionary models differ in how they envision such interactions. In evolutionary psychology, contemporary gender differences are thought to originate from the successful ancestral adaptation to the different reproductive demands faced by men and women. For example, men developed attributes of aggressiveness and dominance because these facilitated mating success in competition with other men (see Buss, 2005). In such models, environmental influences reflect the contingent expression of sex-typed evolved dispositions that depends on the features of current environments that match evolutionary environments. Nonetheless, these mechanistic interactions take only limited forms given that gender identity and other psychological dispositions are thought to be preexisting in men's and women's biology and merely selected by current environments.

Proposing a more dynamic form of interaction, Wood and Eagly's (2002, 2007) bio-social model treats the psychological attributes of women and men as emergent given the evolved characteristics of the sexes, their developmental experiences, and their situated activity in society. These evolved characteristics include the physical attributes of the sexes and related behaviors, especially women's childbearing and nursing of infants and men's greater size, speed, and upper-body strength. The dispositions that characterize men and women in a given society thus are flexibly defined by the biosocial interaction. 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.

### Conclusion

This chapter is in part a historical piece, given that the best known developments in gender identity research took place in the 1970s. Researchers' enthusiasm in that period was ignited by Bem's (1974) gender identity scale, which reflected feminist thinking at the time about the advantages of androgyny for mental health and behavioral flexibility. Bem's scale and related individual-difference measures 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.

Although interest in androgyny has waned, understanding of individual differences within gender groups has remained an important scientific agenda, and gender identity remains a viable approach. Because identities represent individuals' psychological relationships to the social categories in which they have membership, the study of identities is crucial to understanding how society infiltrates the psychology of the person. Gender identity is surely one of the most important of social identities and thus warrants psychologists' continuing attention.

Research on gender identity since the 1970s mainly has been a single-note tune, with the majority of research carried forward with Bem's (1974) BSRI scale and the related PAQ scale developed by Spence and Helmreich (1978). For example, in 2008, a search of PsycINFO turned up 1,748 total citations for the BSRI, with 266 of these during the past 5 years. The comparable figures for the PAQ are 885 overall and 218 during the past 5 years. These statistics far outpace citations to any other gender-related measure of individual differences. This continuing popularity of the PAQ and BSRI suggests that, when researchers 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.

What are the consequences of the continuing popularity of the BSRI and PAQ? When

researchers' main goal is not predicting agentic or communal behaviors, these measures have commonly yielded disappointing results. Because Bem's and Spence and Helmreich's scales were narrowly focused on agentic and communal personality traits, they do not predict the broad range of psychological phenomena that can flow from gender identity. The cause of the disappointing results is not in the scales themselves but in researchers' applications of them. Measures can address a variety of facets of identity, and they will be most successful at predicting responses that are compatible with the facet assessed by the gender identity scale. The classic measures of gender identity in terms of communal and agentic personality effectively predict the specific domains of communal and agentic responding, but other measures predict more satisfactorily outside of these domains.

As we have presented in this chapter, researchers can think about gender identity in ways that reach beyond traits. With these other treatments of gender identity, researchers have available to them a rich variety of measures. By bringing these other measures to researchers' attention, we hope to reinvigorate this important area of inquiry and facilitate prediction of gender-typed behavior in a wide range of domains. As we have illustrated, measures of gender identity in terms of interests predict vocations and related leisure activities. Measures of gender identity in terms of construal of oneself in intimate relationships predict reactions of men and women to close others. Finally, measures of collective gender identity predict ingroup favorability and self-ascription of gender-group attributes. The available approaches encompass a range of individual differences, and the associated measuring instruments are broadly useful to psychologists, sociologists, and other researchers interested in assessing individual differences in gender identity.

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