Gender and Adolescent Development

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This article summarizes and critiques recent trends in research and theory on the role of gender in adolescent development. First, gender differences in key areas of adolescent functioning are reviewed. Second, research on 3 constructs that are especially relevant to the investigation of within-gender individual differences in gender phenomena—gender typing, gender stereotypes, and gender identity—is discussed. Third, trends in theories of gender differentiation are identified. Throughout, issues of conceptualization and of methodology are discussed, and directions for future research are offered.

Adolescents face a number of unique developmental challenges, including coping with abrupt changes in their bodies, managing their sexual interests, forming new kinds of relationships, and planning their academic and occupational futures. Gender affects how youths manage all of these challenges.

This article summarizes and critiques recent research on the role of gender in adolescent development. We start with an overview of sex differences in adolescence. We then discuss the status of three constructs that figure prominently in theory and research on gender differentiation—gender typing, gender stereotypes, and gender identity. Finally, we summarize recent trends in theory concerning the determinants of gender differentiation. We use the terms sex and gender interchangeably.

GENDER DIFFERENCES IN ADOLESCENCE

We summarize sex differences in several key areas of adolescent functioning. Much of our summary comes from other recent reviews of this literature to which readers may refer for primary sources (Galambos, Berenbaum, & McHale, 2009; Ruble, Martin, & Berenbaum, 2006). Although our review highlights differences between males and females as groups, the differences often are quite small, undermining the view that sex differences are ubiquitous and large—that “Men are from Mars, women are from Venus.”

Summary of Gender Differences

Abilities and interests. Apart from males’ greater physical strength and females’ ability to bear children, there are few sex differences in adolescents’ abilities (Galambos et al., 2009). Girls do better on verbal tasks, and boys are better at spatial tasks and math word problems. In achievement contexts, girls choose easier tasks, avoid competition, and have lower expectations than boys, and, if cognizant of the stereotype that girls are inferior at math, are apt to experience performance-debilitating anxiety. Nonetheless, females are surpassing boys in college enrollment and are taking calculus courses at rates similar to males (National Science Foundation, Division of Science Resources Statistics, 2008).

Girls are more “people oriented” and boys more “things oriented” (Galambos et al., 2009; Su, Rounds, & Armstrong, 2009). This is seen in the greater amount of time girls spend in relationship activities (vs. boys’ greater time spent alone, playing video games, watching television, or playing ball), in girls’ preference for part time jobs that put them in contact with people, such as waitressing and babysitting (vs. boys’ preference for manual labor and working with tools), and in girls’ preferences for people-oriented occupations, such as teacher or social worker (vs. boys’ interest in object-oriented occupations, such as mechanic or engineer).

Self-concept. Sex differences are evident in several aspects of adolescents’ self-concepts. With respect to self-perceived personality traits, females report themselves to be higher on neuroticism, agreeableness, warmth, and openness to feelings, whereas males see themselves as more assertive and open to ideas (Costa, Terracciano, & McCrae, 2001). Although females report more expressive attributes than males do, they do not view themselves as any less instrumental than males do—except when it comes to financial and romantic matters (Sneed et al., 2006).

Boys’ competence beliefs are higher than girls’ for math, computers, and sports; girls’ are stronger than boys’ for reading, English, music, art, and social
studies (Harter, 2006; Hyde, 2005). These gender differences are larger than would be expected from real differences in abilities, suggesting that other factors (e.g., gender stereotypes) contribute.

Girls have poorer body image than boys. Many girls invest in a thin ideal, overestimate males’ preference for slender female bodies, view themselves as fatter than other girls, compare themselves negatively with female media models, and consequently become dissatisfied with their bodies (Harter, 2006). Body dissatisfaction is a risk factor for eating disorders (anorexia, bulimia), depression, self-mutilation, low self-esteem, appearance ruminations, and unnecessary cosmetic surgery (Ruble et al., 2006). Girls who view themselves as athletic or instrumental have fewer body-image concerns. Boys’ body-image concerns usually focus on a wish to be more muscular, but these concerns can also lead to health problems (e.g., compulsive body building, eating disorders; Ricciardelli & McCabe, 2004).

Beginning in early adolescence, girls’ self-esteem is lower than boys’. Self-esteem rests mainly on perceptions of (a) acceptance and respect from others and (b) adequacy in valued domains (e.g., academics, body image, sports). Girls’ self-esteem is especially damaged by relationship problems (e.g., rejection; Cross & Madson, 1997). Self-esteem is strongly affected by body image for both sexes (Harter, 2006).

Boys’ gender identity is stronger than girls’. Compared with girls, boys view themselves as more similar to same-sex others (i.e., as more gender typical), are more content with their gender, and place more pressure on themselves for gender conformity (Egan & Perry, 2001). Sexual identity (self-labeling as gay, lesbian, bisexual, or heterosexual) is more fluid among females (Diamond, 2008).

Social relationships. Sex differences are more evident in adolescents’ relationships with their peers than with their parents or siblings. Girls’ same-sex friendships are characterized by greater intimacy, self-disclosure, validation, caring, and relationship repair, but also by more co-rumination (sharing of woes) and jealousy; boys’ are marked by more friendly competition, agentic and risky activities, excitement, direct control efforts, and inhibition of tender feelings and intimacy (Benenson & Christakos, 2003; Parker, Low, Walker, & Gamm, 2005; Rose, Carlson, & Waller, 2007). These different styles may render girls more vulnerable to depression (especially following negative relationship events) but protect them from externalizing behavior (e.g., aggression, recklessness); the reverse may be true for boys (Rose & Rudolph, 2006).

Most adolescents’ friendships and group interactions are with same-sex others (as was true in earlier years too). However, adolescents participate increasingly in mixed-sex groups and dating relationships (Brown, 2004). The sexes differ in style of relating to friends and romantic partners. Girls’ style is more often “preoccupied” (marked by intense needs for closeness and by anxiety over possible rejection) and boys’ more often avoidant (dismissive of intimacy; Connolly, Furman, & Konarski, 2000; Doyle, Lawford, & Markiewicz, 2009). Perhaps adolescence is a time when youths consolidate a preferred style of relating in close relationships. It is important to identify the origins of these relationship styles because they predict important aspects of social and personal functioning in adulthood (e.g., avoidant men are more sexually promiscuous; preoccupied women are more angered by perceived partner lack of support).

Youths of both sexes who are named by peers as “popular” tend to be socially skilled, to wear stylish clothes, and to prefer indirect forms of aggression (e.g., gossip, social exclusion). Popular boys tend to be athletic, funny, defiant, and daring; popular girls tend to be attractive (and thin), snobby, and cliquish (Cloéson, 2009; Rose, Glick, & Smith, 2011). Adolescents nominated as popular are not necessarily rated by peers as highly likeable (Cillessen & Mayeux, 2004).

Aggression. Male youths display more direct physical and verbal aggression toward same-sex others than do girls. Also, males’ aggression is more often unprovoked, impulsive, and undeterred by danger or risk. Females appear more afraid of the consequences of aggressing directly, but when they can aggress anonymously or embed their aggression in collective action, they can rival males in aggressiveness (Hyde, 2005). In late adolescence, there is a sharp increase in serious violence by males (Archer, 2009).

Childhood aggression forecasts sustained aggression and school dropout in adolescence for both males and females. Although a history of direct, physical aggression is less common among girls, it nonetheless predicts a variety of negative outcomes for adolescent girls, including early sexuality, sexually transmitted diseases, teen motherhood, delivery complications, smoking, irresponsible parenting, and rearing aggressive offspring (Serbin & Karp, 2004).

Adolescent girls enact more indirect than direct aggression, but they are only trivially (if at all) more indirectly aggressive than boys (Card, Stucky, Sawalani, & Little, 2008). Despite the fact that enacting indirect aggression is correlated with being perceived as popular, it is associated with internalizing
problems (depression, anxiety; Card et al., 2008). Also, being a target of indirect aggression is more painful for girls than for boys (Pristine & Gillessen, 2003). Thus, either perpetrating or receiving indirect aggression may place adolescent girls—even popular ones—at risk for depression.

Adolescence is marked by an increase in peer sexual harassment (e.g., calling someone gay or lesbian, spreading sexual rumors, pulling at someone’s clothes). Male youths are more often the perpetrators. Early maturing girls and gay and lesbian youths are common targets. Overall, boys and girls are harassed to similar degrees, but girls are more hurt by it (Leaper & Brown, 2008; McMaster, Connolly, Pepler, & Craig, 2002).

Within dating relationships, females aggress physically toward their partners as often as males do, but females are more likely to be injured (Archer, 2009; Frieze, 2000; O’Leary, 2000). Perhaps there are sex differences in the motives underlying, and the circumstances eliciting, aggression toward romantic partners (Anderson, 2005).

The advent of electronic communication (Internet, cell phones) has opened the door to new forms of bullying and victimization (both direct and indirect). Males and females participate about equally in electronic aggression, as both perpetrators and victims (Hinduja & Patchin, 2008; Williams & Guerra, 2007). “Sexting” (e.g., a girl sends a nude picture of herself to a boy) and its repercussions (e.g., the boy circulates the picture among his friends, the girl is humiliated) are also growing problems.

**Depression.** A gender difference in depression emerges around age 13 and increases through age 18 (Galambos et al., 2009; Hyde, 2005). Girls surpass boys not only in depression but also in related problems, such as eating disorders and nonsuicidal self-injury (e.g., cutting). Girls are more vulnerable to several forms of depressogenic thought, including self-blaming causal attributions, poor body image, negative social comparison, hypervigilance for potential stress, and “counterfactual analysis” rumination (i.e., obsessing over the future consequences of hypothetical decisions; Andrews & Thompson, 2009; Hyde, Mezulis, & Abramson, 2008).

**Trends and Issues in Research on Gender Differences**

**Context and gender differences.** As our review suggested, sex differences often depend on context. Among the contextual variables that affect sex differences are group size, familiarity of interaction partner, public versus private setting, mixed-sex versus single-sex group, and male versus female interaction partner (Deaux & Major, 1987; Hyde, 2005). Several examples bear mention. Within all-boy groups one finds more competition and conflict than within mixed-sex or all-girl groups; all-girl groups display more nurturance and empathy than mixed-sex or all-boy groups (Ruble et al., 2006). A sex difference in assertion (favoring boys) is larger in mixed-sex than in same-sex groups (Leaper & Smith, 2004). When going on a date with an other-sex person, dating scripts often prevail (e.g., the boy asks the girl out, the boy pays, the girl defers to the boy’s plans). Sex differences in recreational choices and interaction styles are more marked when youths are with peers (especially same-sex peers) than when with family members (McHale, Kim, Whiteman, & Crouter, 2004). It is when they know they are being observed that females aggress less and smile more than males, and males are more heroic than females (Hyde, 2005).

The context dependence of a sex difference may or may not imply “flexibility” in a response. Voluntary behaviors (e.g., smiling) may be flexible in the sense that they can be produced at will by most persons in most contexts, but some context-dependent sex differences are less controllable. For example, sexual arousal ordinarily is greater among males than females in the presence of an attractive female, and is greater among females than males in the presence of an attractive male, but this does not mean that links between sexual stimuli and sexual arousal can be easily altered. Similarly, certain gender-differentiated context-specific emotional reactions (e.g., anger, jealousy, fear, shame, guilt, sadness) may not be easily learned or unlearned. Different causes may underlie easily modified versus less easily modified context-dependent sex differences.

Sex differences may also reflect differential tendencies of the sexes to place themselves in situations conducive to particular behaviors (Zakrisky, Wright, & Underwood, 2005). For example, boys may choose situations that encourage competition, whereas girls may seek opportunities for self-disclosure. More research on the factors leading male and female youths to select particular contexts is needed. Interviewing youths about how they plan to spend their next weekend (and why) might be illuminating.

**Gender as a moderator of developmental process.** Many causal variables (e.g., parental rejection, pubertal timing) affect males and females differently. Some examples are noteworthy. Being
popular tends to have negative consequences for girls (e.g., internalizing problems, being disliked, enacting indirect aggression) but to have positive outcomes for boys (Rose et al., 2011). Early puberty carries more risks for girls than for boys (Collins & Steinberg, 2006). Even though girls feel less pressure for gender conformity than boys do, such pressure leads to internalizing symptoms only for girls (Yunger, Carver, & Perry, 2004). Girls are also more likely than boys to develop depression as a result of relationship break-up, poor body image, and rumination (Andrews & Thompson, 2009; Hyde et al., 2008). The expanding list of gender-as-moderator effects indicates that researchers need to devote more attention to the biological, cognitive, and social factors responsible for the differential sensitivity of males and females to certain contexts and experiences.

**Social information processing models as promising frameworks for investigating gender differences.** One reason males and females may react differently to a given contextual cue or social experience is that they differ in how they process social information. We noted that girls are more likely than boys to compare their bodies to those of media models, to scan their environments for possible impending stressors, and to react adversely (e.g., with self-blame) to relationship setbacks. Research on aggression (Dodge, 1986) and on achievement motivation (Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006) also reveals gender differences in social–cognitive processing. Social information processing models (e.g., Crick & Dodge, 1994) might be useful frameworks for more systematic investigation of sex differences in other domains of social and personal functioning, such as close relationship functioning and coping with stress and threat. For any given domain of interest (e.g., romantic relationship functioning), the researcher might specify several key social cues that, based on prior research or theory, are likely candidates for exposing sex differences in cognitive processing (e.g., partner fails to return a phone call, partner pays attention to a romantic rival, partner tries to solicit intimacy) and investigate possible sex differences in how the cues are cognitively processed.

**The gender intensification hypothesis.** Preschool children believe strongly that people should conform to gender roles, and they strive hard to do so themselves. With the attainment of gender conservation around age 6 or 7, children start to relax their belief that rigid gender conformity is imperative (Ruble et al., 2006). However, it has been suggested that the challenges of early adolescence (e.g., physical maturation, increased heterosexual interaction, prospect of parenthood, and other adult roles) rekindle youths’ concern with gender conformity (Hill & Lynch, 1983).

As plausible as this hypothesis may be, it does not appear that adolescence intensifies in any general way youths’ pressures for gender conformity. Most evidence suggests that such pressures continue to decline across adolescence (Egan & Perry, 2001; Galambos et al., 2009). Nonetheless, there are increases in adolescence in several specific gender-typed attributes for each sex. For example, boys increase in body building and, later, violent crime; girls increase in depression, eating disorders, time spent in relationship activities, and preference for people-oriented careers; girls also decline in sports participation (Galambos et al., 2009; Signorella & Frieze, 2008). Gender differences in competency beliefs (e.g., males’ greater self-efficacy for math) generally do not increase in adolescence (Wigfield et al., 2006).

**Intersection of gender and ethnicity/race.** There is a trend to examine gender differences as a function of ethnicity/race, though the data are yet quite sparse. Black girls have higher academic outcomes (e.g., better grades) than Black boys, a result that may be linked to greater racial discrimination toward Black boys and how they cope with it (Chavous, Rivas-Drake, Small, Cogburn, & Griffin, 2008). Also, unlike the case for White youths, Black girls tend not to have lower self-esteem than Black boys (Greene & Way, 2005).

**Meta-analysis and gender differences.** A trend in research on gender differences is the use of meta-analysis—a technique that combines the results of multiple studies that have examined a sex difference in order to (a) estimate the average size of the sex difference, (b) estimate between-study variability in the size of this difference, and (c) identify moderator variables (e.g., age of participants, context, assessment strategy) that account for any between-study variability in the sex difference (e.g., Card et al., 2008; Hyde, 2005). Meta-analyses have produced valuable information. They have helped us recognize that sex differences are not absolute differences and for some behaviors are, on average, quite small. They have also illuminated sources of variability in sex differences across studies. For example, age moderates the sex difference in depression, with girls showing greater depression
beginning in early adolescence; this underscores the need to research the origins of depression (and the sex difference therein) in early adolescence.

In our view, researchers using meta-analysis have afforded insufficient attention to the implications of within-study interactions of sex with other variables. First, studies that have found sex to interact with another predictor of a behavior probably should be excluded from a meta-analysis designed to estimate an average sex difference in the behavior. When a main effect (in this case, sex) interacts with another variable, it loses meaning unless it is considered in the context of different levels of the variable with which it interacts. For example, if a study has found a strong sex difference favoring males in one context and an equally strong sex difference favoring females in another context, the main effect of sex will be zero, and entering this score into a meta-analysis will mask the large context-specific sex differences. The resulting estimated average sex difference will be of uncertain value.

Second, given the ubiquity of within-study interactions involving gender, and given that advances in gender science rest on cataloguing and understanding these interactions, the interactions themselves should serve as fodder for meta-analysis. That is, meta-analysis should be used to estimate the cross-study reliability of a theory-relevant gender interaction (and its pattern). This of course requires the availability of multiple studies testing a given interaction, but given researchers’ growing interest in such interactions, this should soon be a real possibility. In the meantime, researchers might get started by conducting old-fashioned narrative (qualitative) reviews of important gender interactions that have been investigated in at least a few studies.

THREE KEY GENDER CONSTRUCTS
Here we examine the status of three constructs that figure prominently in theory and research on gender—gender typing, gender stereotypes, and gender identity. These constructs are especially (but not exclusively) relevant to understanding within-gender individual differences in gender differentiation.

Gender Typing
An attribute is said to be “gender typed” if it is gender differentiated (i.e., either empirically observed or rated by judges to vary with gender). The preceding section summarized a number of specific gender-typed attributes. Sometimes, however, researchers wish to assess individual differences in people’s male typicality or female typicality in a broader way (i.e., people’s “masculinity” or “femininity”). Thus, they aggregate multiple measures of specific male typed (and female typed) attributes to form composite measures. Such composites are said to assess “gender typing” and can be correlated with other variables (e.g., hormones, family practices, knowledge of gender stereotypes).

A nagging question, however, is how (and even whether) to do such aggregating. It was once assumed that all male-typed attributes are positively intercorrelated, that all female-typed attributes are positively intercorrelated, and that all male-typed attributes are negatively correlated with all female-typed attributes. Thus, individual differences in gender typing were believed to be distributed along a single dimension ranging from very male typed (masculine) to very female typed (feminine). Bem (1981) challenged this view, arguing that male-typed attributes intercorrelate into one factor and female-typed attributes intercorrelate into a second, orthogonal factor. Thus, masculinity and femininity became two independent dimensions (rather than polar opposites of a single continuum). Bem based her claim on the fact that self-perception of male typed, instrumental personality traits tends to be orthogonal to self-perception of female typed, expressive traits. However, because neither male-typed attributes nor female-typed attributes are highly intercorrelated across different domains (e.g., activity preferences, personality traits, sexual orientation, relationship styles), one cannot infer a person’s overall male typicality or female typicality from the person’s gender typing in any given domain (Spence, 1985).

Today’s trend is to treat each of the sets of male-typed and female-typed attributes as multidimensional and heterogeneous. Some researchers aggregate but only across exemplars of a given domain (e.g., recreational activities or personality traits). Others investigate individual sex-typed attributes (e.g., interest in math, time spent in close relationship activities) rather than composites. The terms “masculinity” and “femininity” have fallen out of favor. Most investigators recognize that it is inappropriate to infer people’s overall masculinity or femininity from scores on any particular domain-specific set of gender-typed attributes (e.g., personality traits).

It was once popular to characterize people as “androgynous” if they possessed a balance of instrumental and expressive personality traits (Bem, 1981). However, this practice is also losing favor. For the same reason that one cannot infer people’s
overall masculinity or femininity from their gender typing in any single domain, one cannot identify people whose gender typing is generally “androgynous” from their gender typing in any single domain. Qualifying as androgynous in one domain (e.g., personality traits) does not necessarily indicate androgyny in any other domain (e.g., sexual orientation).

Although it is misleading to characterize people as generally masculine, feminine, or androgynous on the basis of any single aspect of gender typing, the assessment pendulum may have swung too far in the direction of assessing specific sex-typed attributes. Broader-based assessments of gender typing (i.e., assessments that cut across several domains of gender-typed attributes) may also be valuable. We suggest that more effort be devoted to exploring latent sources of variability underlying diverse gender-typed attributes. It is clear that different gender-typed attributes are not as entirely independent as sometimes suggested, as the following examples hint. Preferences for same-sex companions and activities predict (modestly) sexual orientation (Bailey & Zucker, 1995); girls who play with boys and engage in boy-typed activities are more likely to pursue a career as adults (Tyler, 1964); men with deep voices are more gender typed in their traits and interests (Aube, Norcliffe, & Koestner, 1995). Thus, studies are needed that assess multiple sex-typed attributes and use both variable-oriented strategies (e.g., factor analysis) and person-oriented strategies (e.g., cluster analysis) to identify dimensions and patterns. Within each sex, there likely exist several genderotyping subtypes, such as (a) youths who display marked same-gender typing across multiple domains (e.g., the “pink frilly dress” girls noted by Ruble, 2004), (b) youths who are same-gender typed in one way but not in another (e.g., among boys, athletes vs. science club members), (c) youths who exhibit a mix of male-typical and female-typical attributes, and (d) a few youths who are predominantly cross-gender-typed (e.g., youths with gender identity disorder). Once dimensions and patterns of gender typing are identified, they can be related to hypothesized antecedents and consequences.

Gender-typed attributes are traditionally identified on the basis of either observed differences between the sexes or consensus opinion. Another way to identify gender-typed attributes, however, is to exploit the unique perspective of each individual youth (Tobin et al., 2010). Different youths have different ideas as to what attributes are male typed or female typed, and their opinions do not always coincide with either real gender differences or collective opinion. Assessing gender typing using the individual youth’s opinions as the criterion entails assessing the degree to which each youth possesses the specific attributes that he or she personally views as male typed or female typed. There is debate over the relative merits of this idiographic approach to assessing gender typing versus the more traditional approach (Hegarty, 2009). It is likely that both approaches have merit, depending on a study’s purposes. For example, gender typing scores that reflect the degree to which youths are fulfilling their own conceptions of maleness or femaleness may be especially good predictors of youths’ felt gender typicality and adequacy, whereas gender typing scores that reflect adherence to collective opinion may be better predictors of youths’ evaluations by others (e.g., peer acceptance and rejection).

**Gender Stereotypes**

Gender stereotypes are people’s beliefs about how the sexes differ (descriptive stereotypes) or should differ (prescriptive stereotypes). A person’s stereotypes affect numerous aspects of psychological functioning, including attention and memory, social perception, social behavior (especially in certain contexts, such as when on a date), reactions to one’s own and to others’ behavior, and one’s interests, values, and self-perceived competencies (Ruble et al., 2006).

In the traditional approach to assessing individual differences in stereotypes, researchers first compile lists of male-typed and female-typed attributes (usually on the basis of judges’ ratings). The lists are presented to youths who are asked to tell (a) whether each attribute is male typical or female typical (the number of “correct” responses is taken as an index of stereotype “knowledge”) and (b) whether it is permissible for persons of both sexes to display each attribute (the number of affirmative answers is taken as a measure of stereotype “flexibility”). Such knowledge and flexibility scores are valuable for many purposes, but they fail to accord importance to the content of the particular stereotypes a youth knows or endorses. Two youths may know or endorse a similar number of same-gender stereotypes yet not overlap at all in which attributes these are (Tobin et al., 2010). One may believe that boys should inhibit expression of tender emotions, use aggression to attain goals, and take dangerous risks, but need not run for class president, learn chess, or excel in math and science courses; the other’s stereotypes may reflect precisely the reverse priorities. The specific content and prioritization of a youth’s
stereotypes (especially prescriptive ones) affect the impact the stereotypes will have. Thus, researchers increasingly are focusing on individual differences in the specific content of youths’ stereotypes. Three ways of achieving this focus are notable.

First, researchers may focus on youths’ stereotyping of a single attribute (e.g., math competence, indirect aggression) and relate that specific stereotype to antecedent or outcome variables (e.g., Nosek, Banaji, & Greenwald, 2002).

Second, prescriptive stereotypes sometimes cluster to form gender ideologies, or philosophies about what the sexes are like or how they should behave. Such ideologies include (a) the belief that traditional gender roles (e.g., homemaker for women, wage earner for men) should be perpetuated (Spence & Helmreich, 1972); (b) intergroup bias, or the tendency to assign more favorable traits to one’s own gender than to the other (Bigler, 1999; Powlishta, 1995); (c) ambivalent sexism, or an attitude that represents a compromise between a fundamentally disparaging attitude toward, and the need for romantic contact with, the other sex (e.g., a male youth’s protection of, but expectation of obedience from, his girlfriend; Glick & Hilt, 2000); (d) dating and sexual scripts (e.g., Krahe, Bieneck, & Scheinberger-Olwig, 2007); and (e) masculine ideology, or the belief that boys and men should be competitive, unafraid of risks, defiant of authority, self-reliant, dominant, and emotionally stoic (e.g., Shearer, Hosterman, Gillen, & Lefkowitz, 2005). These philosophies are associated with adjustment and behavior (e.g., self-esteem, aggression), but little is known about their origins.

Third, youths cognitively group peers of each sex into subgroups according to their shared attributes and form stereotypes and attitudes toward the groups (e.g., view pink frilly dress girls as nice but helpless); especially negative attitudes often are formed toward same-sex outgroups (Eckes, Trautner, & Behrendt, 2005). Youths may use these subgroup stereotypes to identify the kind of boy or girl they would like to be (Ruble & Martin, 2002).

A topic that has received little attention is how stereotypes figure in youths’ judgments about the overall male typicality (masculinity) and female typicality (femininity) of themselves and others. Within any given culture, there is likely to be some commonality in the criteria (i.e., stereotypes) people use to make such judgments (see Horowitz & Turan, 2008, for a method to explore this issue). However, because youths’ stereotypes can differ, there will also be individual differences in the calculus youths use to make these appraisals (Egan & Perry, 2001; Spence, 1985). A related issue is why some youths are accepting of what they perceive to be gender atypicality in themselves or others but other youths react harshly. Understanding the roots of such attitudes is important because self-appraisals of gender atypicality are associated with low self-esteem (see next section) and because peers perceived as gender atypical tend to be the targets of sexual harassment and aggression.

By adolescence, most youths realize that males occupy more powerful, dominant, and higher status positions than females, and they learn that discrimination contributes to these differences (Bigler & Liben, 2007; Leaper & Brown, 2008). Learning about discrimination helps girls recognize it and can also boost girls’ self-efficacy for science study (Weisgram & Bigler, 2007). How boys are affected by learning about discrimination also warrants investigation.

**Gender Identity**

Gender identity encompasses representations of self in relation to gender categories. Gender identity has been defined in several ways, including comfort with one’s gender, self-perception of adherence to gender stereotypes, and internalized social pressure for conforming to gender stereotypes. Despite this diversity of conceptualization, researchers have tended to use a single strategy for assessing gender identity. This strategy has been to take youths’ self-perceptions of instrumental and expressive traits as assessments of masculine and feminine identity, respectively. This practice originated with Bem (1981).

There are several problems with this practice. First, it involves inferring gender identity from self-perceived gender typing. This is problematic because many theories suggest that gender identity is a cause of gender typing (i.e., that gender identity affects the adoption of gender-typed attributes), and one cannot test such theories without distinguishing the two constructs conceptually and empirically. Second, because the degree to which a person is male typical (or female typical) in one domain (e.g., personality traits) is not highly correlated with how male typical (or female typical) the person is in other domains (e.g., sexual orientation), it is ill advised to infer a person’s overall gender identity from his or her self-perception of gender typing in any single domain. Third, because different youths possess different gender stereotypes, they are likely to rely on self-perception of different attributes when estimating their maleness or femaleness (Egan & Perry, 2001; Spence, 1985; Tobin et al., 2010). Many youths may pay no attention to instrumental and expressive traits but place great weight on sexual orientation, physical appearance, stylistic
qualities (e.g., deepness of voice), adherence to a gender ideology, or something else. Fourth, although gender identity can be conceptualized in several ways, this customary practice captures only one of them, namely, self-perception of conformity to gender stereotypes; the practice does not, for example, allow inferences about the degree to which individuals have internalized societal pressure for gender conformity. Finally, self-perceptions of instrumental and expressive traits do not predict other gender phenomena that should be predictable from gender identity (Spence, 1993). For these reasons, it would be wise to retire the practice of inferring gender identity from self-perceptions of instrumental and expressive traits (or from any other particular set of gender-typed attributes).

Today’s trend is to view gender identity as comprising several dimensions and to assess each dimension separately (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Egan & Perry, 2001; Tobin et al., 2010). To avoid the problems associated with the practice just discussed, Egan and Perry suggested that measures intended to tap gender identity should require youths to draw inferences about themselves in relation to gender category labels (e.g., “Do you feel similar to other girls?”; “Are you happy being a boy?”; “How important is it that you be like other girls?”). Such questions permit youths to apply their own criteria for what it means to be male or female.

Tobin et al. (2010) distinguished five dimensions of gender identity: (a) membership knowledge (knowledge of membership in a gender category); (b) gender centrality (the importance of gender relative to other identities, e.g., ethnic/racial identity); (c) gender contentedness (satisfaction with one’s gender); (d) felt pressure for gender conformity (felt pressure from self and others for adhering to gender stereotypes); and (e) felt gender typicality (perceived similarity to same-gender others). By adolescence, most youths have a firm understanding of their membership in a gender category, though a few do not (Diamond & Butterworth, 2008). However, individual differences in the other four components of gender identity remain considerable (Egan & Perry, 2001; Luhtanen & Crocker, 1992; Sanchez & Crocker, 2005).

Gender identity affects youths’ mental health. Among White youths, gender typicality and gender contentment are generally favorable influences on adjustment (e.g., self-esteem and acceptance by peers; Carver, Yunger, & Perry, 2003; Corby, Hodges, & Perry, 2007; Egan & Perry, 2001; Smith & Leaper, 2004; Yunger et al., 2004). In contrast, felt pressure for gender conformity predicts internalizing problems (e.g., low self-esteem, peer-reported sadness and anxiety), especially for girls (Egan & Perry, 2001; Yunger et al., 2004). This confirms Bem’s (1981, 1993) prediction that felt pressure is harmful because it promotes adoption of unfulfilling options, impedes exploration of possibly fulfilling options, undermines feelings of autonomy, and leads people to live in fear of shame for gender “transgressions.” Ironically, it was not possible to confirm Bem’s prediction using her own methods because her measure of felt pressure (imbalance of instrumental and expressive traits in the self-concept) failed to capture the conceptualization of gender identity that she intended (internalized societal pressure).

Some associations of gender identity with adjustment vary with ethnicity/race. For Hispanic boys, felt pressure for gender conformity is associated with fewer rather than more internalizing symptoms. For Hispanic girls, gender contentedness is associated with fewer agentic competencies and with more internalizing problems (Corby et al., 2007).

Patterns of gender identity are also important. White youths with a pattern of gender identity characterized by low gender typicality and high felt pressure tend to be the most distressed (Egan & Perry, 2001; Yunger et al., 2004). This is unsurprising, but it does not mean that socializing agents (parents, teachers) should try to make gender-atypical youths more typical; this would simply make them feel more pressure for gender conformity. A better remedy would be to alleviate the pressures youths feel for gender conformity.

THEORIES OF GENDER DIFFERENTIATION

Summaries of major theories of gender differentiation are available elsewhere (e.g., Ruble et al., 2006). Here we highlight three kinds of influences on gender differentiation (social, biological, cognitive) that figure in these theories. Most theories recognize that two or more kinds of influences work in concert to effect gender differentiation. For example, social cognitive theory specifies that youths’ experiences with their environments (e.g., exposure to male and female models, consequences received for gender-typed behavior) lead them to develop cognitions (e.g., outcome expectations, self-efficacy perceptions, standards for self-evaluation) that affect gendered conduct (Bussey & Bandura, 1999).

Social Influences

The family, peer group, and media all participate in socializing gender. Youths whose parents express traditional attitudes toward gender roles are more
likely to hold traditional attitudes themselves (Tenenbaum & Leaper, 2003). Having gay or lesbian parents, however, has little effect on youths’ romantic attractions and behaviors (Wainright, Russell, & Patterson, 2004). Girls appear to be more susceptible to certain family influences than boys. Girls whose parents cultivate a gender-differentiated division of labor in the home do more poorly in school than girls from more egalitarian homes (Galambos et al., 2009). Maternal distress and interparent conflict are associated with depression for girls (Crawford, Cohen, Midlarsky, & Brook, 2001). Girls who perceive their parents as rejecting are more dissatisfied with their bodies (Barker & Galambos, 2003). Parents who stereotype math and science as for males tend to undermine their daughters’ efforts in these areas by giving them limited support (e.g., help with homework), less encouragement, and fewer opportunities for advanced study (Wigfield et al., 2006). Culture matters too. Hispanic families are more marked by gender-typed expectations and practices than are White families (Raffaelli & Ontai, 2004).

Peers socialize gender as well. For example, the more time male youths spend interacting with peer (vs. female) peers, the more gender typed their personality traits and interests become (McHale, Kim, Dotterer, Crouter, & Booth, 2009). It is sometimes suggested that girls profit from attending all-girl schools because gender divisions and stereotypes are less likely to be a negative influence. However, the evidence does not consistently reveal advantages of single-sex education (Galambos et al., 2009). The conversations youths have with their peers matter too. The more that boys speak disparagingly about females with male peers, the more they aggress toward female (vs. female) peers, the more gender typed their personality traits and interests become (McHale, Kim, Dotterer, Crouter, & Booth, 2009). It is sometimes suggested that girls profit from attending all-girl schools because gender divisions and stereotypes are less likely to be a negative influence. However, the evidence does not consistently reveal advantages of single-sex education (Galambos et al., 2009). The conversations youths have with their peers matter too. The more that boys speak disparagingly about females with male peers, the more they aggress toward female relationship partners later (Capaldi, Dishion, Stoolmiller, & Yoerger, 2001); the more that girls discuss physical appearance with other girls, the more they internalize the thin ideal and express dissatisfaction with their own bodies (Clark & Tiggemann, 2007). For girls, romantic involvements are associated with depression and poorer academic performance, and the breakup of a romantic relationship is the most common trigger of a first episode of major depression (Brendgen, Vitaro, Doyle, Bukowski, & Markiewicz, 2002; Collins & Steinberg, 2006).

Heavy viewing of television and music videos encourages traditional gender role attitudes, poor body image (for both sexes), and sexual stereotypes (“girls want love, boys want sex”; Blakemore, Berenbaum, & Liben, 2009). Some media messages are reinforced by reality. For example, being thin actually increases girls’ chances of a romantic relationship (Halpern, King, Oslak, & Udry, 2005).

Biological Influences

Early occurring biological factors—genes and prenatal hormones—affect gender differentiation in adolescence. Several aspects of gender typing are heritable (Bailey, Dunne, & Martin, 2000). Also, adolescent girls exposed prenatally to high levels of androgens are more interested in male-typed activities and occupations, more aggressive, more skilled at spatial tasks, more likely to be bisexual or lesbian, and less interested in babies (Galambos et al., 2009).

Pubertal hormones affect gender differentiation as well, and in several ways. Hormones can encourage aggression among boys (Galambos et al., 2009), activate a gene for disordered eating (Klump, Burt, McGue, & Iacono, 2007), and encourage sexual interest and activity (especially for boys; Collins & Steinberg, 2006). Sexual orientation, however, ordinarily develops before puberty (i.e., usually by age 10; McClintock & Herdt, 1996). The timing of puberty matters too, with early puberty carrying risks for girls. Early-maturing girls have poorer body image (owing in part to added body fat), often are targeted for sexual harassment, and tend to have earlier sexual involvement with older boys; these factors, in turn, encourage depression (Stice, Presnell, & Bearman, 2001; Weichold, Silbereisen, & Schmitt-Rodermund, 2003). For boys, late rather than early puberty is more often associated with adjustment problems (e.g., depression, peer rejection). A salient feature of recent research is evidence for the interaction of biological and social-context influences, as the following examples indicate. A combination of high testosterone and poor parent–youth relationship quality is associated with risk taking (Booth, Johnson, Granger, McHale, & Crouter, 2003). Maltreatment during childhood presages depression mainly for youths who are genetically predisposed to depression (Caspi et al., 2003). Early puberty for girls is associated with depression mainly when girls also face social risks (e.g., association with older male peers, promiscuous friends, disadvantaged neighborhoods; Conley & Rudolph, 2009; Weichold et al., 2003).

Cognitive Influences

We noted that certain contextual cues (e.g., peer provocation, relationship threat) trigger different social information processing by males and females. However, biology may be an additional interacting influence. Two recent models of depression, for example, stress that biological factors (e.g., temperament, pubertal hormones, and timing) combine with
social-situational factors (e.g., relationship stress) as well as with stable cognitions (e.g., poor body image, low self-esteem, high value placed on relationship exclusivity, felt pressure for gender conformity) to yield information processing (e.g., self-blame, rumination) that fosters depression (Andrews & Thompson, 2009; Hyde et al., 2008).

Two recent theories suggest that two kinds of gender cognitions—gender identity and gender stereotypes—combine to influence gender differentiation. First, Greenwald et al. (2002) posit that people adopt an attribute they associate with a gender category (i.e., emulate a gender stereotype) mainly to the extent that they identify with that gender. For example, females who perceive math to be male typed and who identify strongly with being female should exclude math from their self-concept. Greenwald and colleagues have found support for their model mainly when the central constructs have been assessed implicitly (unconsciously) using the Implicit Association Test.

In a second model, Tobin et al. (2010) propose that each youth develops a fairly unique combination of gender identity and gender stereotype elements (e.g., a boy’s gender identity might be marked by especially low felt gender typicality and high felt pressure for gender conformity, and his stereotypes by high masculine ideology and high ambivalent sexism). These personal identity-plus-stereotype patterns, or “gender cognition signatures” (GCSs), are viewed as causal cognitive systems that influence youths’ efforts to develop and regulate the self. Higher levels of gender identity are expected to encourage youths to emulate the gender stereotypes they endorse. It is further proposed that many stereotypes are cognitively represented with contextual tags (e.g., “When arguing with her boyfriend, a girl lets the boy have his way”), and that when a youth encounters a social cue relevant to such a stereotype (e.g., a boy perceives his girlfriend is being disrespectful), the youth’s GCS influences his or her social information processing and the resulting emotion and behavior (e.g., anger, aggression). Identifying influential GCSs and their determinants is an important research agenda.

**CONCLUSION**

Research on gender in adolescence has flourished over the last decade. However, much of this work has treated adolescence as if it were a discrete entity, unconnected to earlier or later periods of development. We conclude by considering several ways in which future research on gender during adolescence might better interface with research on gender at both—earlier and later periods.

Maccoby (1998) proposed that boys and girls learn different behavioral styles during sex-segregated interactions in childhood (e.g., more dominance seeking by males, more closeness among girls) that ill equip them for amicable heterosexual relationships in later years. A decade later, we have few data bearing on this provocative hypothesis. Even patterns of adolescent social behavior that appear discontinuous with childhood behavior may grow out of earlier patterns of interaction. For example, preadolescent boys’ more extensive but less intimate same-sex friendship networks may foster an avoidant-secure relationship style that contributes to the greater male sexual promiscuity seen in adolescence and adulthood (Mikulincer & Shaver, 2007). Sexist attitudes in adolescence also may originate in childhood. Glick and Hilt (2000) hypothesized that ambivalent sexism results when adolescents fail to outgrow their immature hostility toward the other sex yet find themselves drawn sexually to that sex.

In turn, how adolescents meet the challenges of gender is likely to affect how they negotiate gender as adults. Sexual bullying by adolescent boys may be a precursor to more severe forms of sexualized violence in adulthood (e.g., date rape, intimate partner violence, gay bashing; Fredland, 2008). The romantic attachments of adolescents may determine whether they will adopt and carry forward into marital relationships a secure or insecure relationship style.

By investigating issues such as these, it should eventually be possible to develop theories concerning how gender phenomena interconnect across all three developmental periods—childhood, adolescence, and adulthood—and to test the theories with longitudinal research. It would be no surprise to find that some important linkages between gender phenomena in childhood and gender phenomena in adulthood are mediated by gender phenomena in adolescence. Such findings would confirm that adolescence is indeed the crucial bridge between childhood and adulthood it is reputed to be.

**REFERENCES**


