

Chapter 24

Gender Identity and Stereotyping in Early and Middle Childhood

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Without much effort, one can easily imagine a young girl, at age 3 or 4, happily wearing a pink, frilly dress. She twirls, she dances, she skips in her dress, reveling in its femininity and flounce. In the same vein, with great ease one can imagine a small boy, a towel draped around his neck, his bony arms outstretched in fists. He imagines his muscles bulging and his strength abounding, running here and there in an attempt to fly off to combat unseen evil forces.

What can explain these gender differences in behavior? There are many different possible explanations. Some might say girls and boys come into the world this way, that DNA causes a preference for pink or an adoration of superheroes. Others may say these children simply learn from examples around them, seeking to imitate their mothers or fathers, for example. Many forces may interact, but in this chapter, we consider these behaviors through the lens of cognitive-developmental theory. Cognitive-developmental theory emphasizes a few central tenets. It emphasizes close links between gender development and children's basic cognitive development (Martin, Ruble, & Szkrybalo, 2002). It also views children as internally, self-initiated "gender detectives"—agents who actively construct the meaning of gender categories, rather than as passive recipients of external gender socialization agents. In addition, cognitive-developmental theory posits that a motivational drive to master these gender categories causes children to seek out information about their sex and to behave in accordance to what they deem appropriate gendered ways (Stangor & Ruble, 1987).

Hence, in the present chapter, we focus on the development of gender identity and gender stereotyping, two constructs that involve cognition. We first broadly define gender identity and stereotyping. Next we discuss their possible antecedents. Finally we connect gender identity and stereotyping with gender-typed behavior and preferences, adjustment, and intergroup relations in early childhood. Throughout we incorporate recent research and classic literature, and also provide examples from our own laboratory.

Gender Identity

Definition

We define gender identity as a person's sense of self as a female or male (Zucker & Bradley, 1995). In this way, gender identity serves as a social identity. Social identity theory posits that when one

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identifies with a social category, such as with girls or boys, one can relate to others in that social category. That is, even without direct contact with others in that social category, people can identify with the group (Tajfel & Turner, 1986).

Theorists have also posited that gender identities can function on two different levels, depending on what the context makes salient. Gender identity can function on an individual level, or as “me girl” or “me boy.” At other times, gender identity can function on a collective level, when children think of themselves as members of a gender group, or as “we girls” or “we boys” (Maccoby, 1998; Ruble et al., 2004). Indeed, Thoits and Virshup (1997) called this level of social identity the “we.” Most of the literature in the field has focused on the individual level of gender identity.

Understanding social categories, and that one belongs to one or more of these categories, is a major transition in children’s lives (Ruble, 1994). Moreover, categorizing others and the self in terms of gender starts early and quickly. Converging evidence suggests that gender identity may emerge between 18 and 24 months based on tacit preverbal measures of gender knowledge (see Martin et al., 2002), such as gender-typed visual preferences, recognition of labels associated with faces, and metaphoric associations with gender. Between ages 27 and 30 months, most children can accurately label their sex and place a picture of themselves among those of other same-sex children, but many children attain basic gender identity even earlier (Campbell, Shirley, & Caygill, 2002; Zosuls, Ruble, Tamis-LeMonda, Shrout, Bornstein, & Greulich, 2009). By age 5, children spontaneously categorize people by gender (Bennett, Sani, Hopkins, Agostini, & Mallucchi, 2000).

Given the early importance of forming a gender identity, one might ask what the key developmental steps entail. Kohlberg (1966) proposed that forming a gender identity necessitates understanding gender constancy. Gender constancy is related to children’s cognitive-developmental task of learning constancy and conservation in general (Piaget, 1965). In order to attain gender constancy, children must move through three stages (Slaby & Frey, 1975). First, children must accurately identify themselves and others as boys/men or girls/women. Second, children must grasp gender stability, the understanding that one’s sex remains stable over time. That is, understanding that a baby girl will become an adult woman, and a baby boy will become an adult man. Third, children must understand gender consistency, a more sophisticated level of constancy than gender stability. Gender consistency refers to the understanding that despite superficial changes, a boy will remain a boy and a girl will remain a girl. For instance, even if a boy wears a dress, he will still remain a boy. His sex remains the same.

Research has shown that, on average, children achieve full understanding of constancy at 6–7 years of age (Szkrybalo & Ruble, 1999). Other studies (e.g., Slaby & Frey, 1975) have shown that children achieve full constancy a little earlier, but methodological details may cause this difference. When interviewers use a forced-choice method to assess constancy, allowing only yes or no answers to constancy questions, children often answer correctly. But only older children can explain their answer in a way that proves genuine understanding of constancy (e.g., “You can’t change” versus “I don’t know”; Szkrybalo & Ruble, 1999) that we believe is not accounted for by age differences in verbal ability.

Multidimensionality

Centrality or importance. Along with gender constancy, theorists have outlined several other dimensions of gender identity, a conception of gender identity as a multidimensional construct. One dimension of gender identity that many psychologists converge upon is centrality, which is defined as how important gender is to the child’s overall self-concept (Ashmore, Deaux, & McLaughlin-Volpe, 2004; Luhtanen & Crocker, 1992; Sellers, Smith, Shelton, Rowley, & Chavous, 1998).

Chatman, Malanchuk, and Eccles (2003) defined centrality as implicit centrality and explicit centrality. Explicit centrality refers to the conscious appraisal of an identity element as an important or central part of the self-concept, what we consider centrality in general. Implicit centrality, on the other hand, is the extent to which a given identity is chronically accessible in an individual's everyday, normative experiences as they relate to the self. Like other implicit constructs, it may be helpful to think of implicit centrality as more automatic, more efficient, less controllable, and less intentional than explicit centrality (Nosek, 2007). To our knowledge, researchers have not yet directly examined implicit gender centrality in young children. However, we speculate that a distinction between implicit and explicit gender centrality may not emerge until age 7 or 8. At earlier ages we speculate that explicit versus implicit levels of centrality would largely overlap. Often when very young children respond to questions about explicit gender centrality, they do so without hesitation and with great gusto, in an almost automatic fashion. Also, children may have a greater capacity for self-reflection at this age (Harter, 1998). Other research has provided evidence for stable and distinct implicit evaluative attitudes in children ages 6–11 in regard to racial attitudes (Dunham, Baron, & Banaji, 2006; Sinclair, Dunn, & Lowery, 2005; Turner, Hewstone, & Voci, 2007), age 10 in regard to gender attitudes (Skowronski & Lawrence, 2001), and ages 9–18 in regard to weight and thinness (Craeynest et al., 2005; Craeynest, Crombez, Deforche, Tanghe, & De Bourdeaudhuij, 2008).

Another theorized dimension of identity relates to centrality in a state rather than a trait, stable or chronic form. Sellers et al. (1998) proposed the dimension of salience, which refers to the extent to which one's group identity is a relevant part of one's self-concept at a particular moment or in a particular situation. This dimension of salience was explicitly proposed to describe the unique identity of the African American experience. To date, little research on gender identity in early childhood has taken into account salience as a key dimension. However, one could imagine in certain contexts, such as when a boy sits among a group of girls (e.g., McGuire, McGuire, Child, & Fujioka, 1978), or when children choose a costume in a Halloween store full of Cinderella gowns and Spiderman suits, gender could become more important to a child's identity at that moment than it is at other times. In fact, one recent study showed the fluidity of gender identity centrality. Turner and Brown (2007) showed in a multicultural sample of 5- to 7-year-olds that, after reading about a same-sex individual being excluded from an activity because of his or her sex, the centrality of gender decreased, but only for girls, and only for girls with average levels of centrality. Girls with very low or very high levels of centrality were unaffected by reading about these scenarios.

Evaluation or regard. Another key dimension of gender identity is evaluation of or regard for one's gender group. To borrow from Sellers et al. (1998), regard refers to a child's affective and evaluative judgment of his or her gender group in terms of positive–negative valence. Scholars have separated regard into two components—private regard and public regard (Ashmore et al., 2004; Crocker, Luhtanen, Blaine, & Broadnax, 1994; Luhtanen & Crocker, 1992; Sellers et al., 1998; Shelton & Sellers, 2000).

Private regard is the evaluation of one's gender group as judged by the self. It is a child's personal feelings about her or his gender group. Egan and Perry's (2001) proposed dimension of gender contentedness relates to private regard, that is, feelings of contentment with one's own gender. On the other hand, public regard is a child's judgment of how other people evaluate that child's gender.

The developmental literature has focused more attention on private regard of one's gender in early childhood than on public regard. To our knowledge, no one has yet directly examined these two separate constructs together for gender identity in young children. In fact, most research on public and private regard has focused on racial or ethnic identity.

Other dimensions. Several theorists have proposed additional dimensions of gender identity. Luhtanen and Crocker's (1992) scale of collective identities, in general, distinguished membership esteem as a dimension. They defined membership esteem as involving judgments of how good or

worthy one is as a member of one's social groups in general. If we apply this to gender identity, membership esteem would be how good or worthy children feel as girls or boys.

Egan and Perry (2001) included felt typicality in their model of gender identity and adjustment. Felt typicality includes self-perceptions of gender typicality. Moreover, they considered felt typicality as a continuous dimension, applicable to the general population, and not only to children diagnosed with gender identity disorder. This dimension is thought to remain relatively stable over time—if a boy feels atypical right at this instant, he is likely to feel atypical several weeks, months, and possibly years from now.

Another dimension of Egan and Perry's (2001) model includes felt pressure for gender conformity. They defined this as the degree to which children feel compelled to engage in gender-congruent conduct. Pressure to conform to gender-congruent conduct can come from parents, peers, the media, and other socializing agents. They also included intergroup attitudes as an additional dimension of identity. They noted that children often consider their own sex as superior to the other, so the model includes an assessment of ingroup favoritism. The items in the Intergroup Bias Scale connect to the dimension of private regard, at least for one's own gender group. Intergroup bias can be viewed as personal attitudes toward the other gender group. The scale's items compare girls and boys, asking which group the child considers to be more like certain traits (e.g., truthful, friendly, annoying, lazy).

Most studies of Egan and Perry's (2001) model have focused on children in middle childhood and preadolescence (Carver, Egan, & Perry, 2004; Corby, Hodges, & Perry, 2007). However, research suggests that the model's dimensions may readily apply to young children as well. Some of the dimensions overlap with others already assessed in young children, such as knowledge of group membership, gender contentedness, and intergroup attitudes. A few researchers have looked at these dimensions in relation to self-esteem, which we discuss later in this chapter. Furthermore, no one has specifically and directly looked at gender membership esteem in young children. Thus, we have little knowledge about the levels of these dimensions, the variability of these dimensions, and the applicability of these dimensions in early childhood.

Individual Differences and Variation

Research designed to compare boys' and girls' gender identity has shown mixed results. On one hand, some researchers have found that, at least in middle childhood, boys have higher levels of certain components of gender identity than girls have. Specifically, data have shown that boys have higher levels of gender typicality, gender contentedness, and felt pressure than girls have (Egan & Perry, 2001). On the other hand, some research has shown that girls, in fact, have higher levels of gender centrality than boys have (Turner & Brown, 2007; Verkuyten & Thijs, 2001). We speculate that these discrepancies may have to do with age and cultural differences. Egan and Perry (2001) examined 4th through 8th graders, and the majority was European American, whereas Turner and Brown (2007) studied a wider range of children (5–12 years of age), and three-quarters of them were ethnic minorities. But if these findings are taken at face value, we speculate that the discrepancies point to the multidimensional nature of gender identity. Perhaps boys do have higher levels on some dimensions, whereas girls have higher levels on other dimensions. More research is needed to resolve the issue.

Maccoby (1998) hypothesized that boys have a stronger sense of collective gender identity; that is, membership in the boy group is salient to the boys much more often than membership in the girl group is for girls. She hypothesized that girls perceive boys as part of "those boys," whereas boys see girls in terms of their individual female identities. Her thinking parallels observational

data, which shows that girls often play in dyads or triads, whereas boys more often play in large groups (Maccoby, 2002). Maccoby's (1998) hypothesis is also intriguing given the recent findings in the general social psychological literature on gender differences in the construal of the self. A few insightful studies (Baumeister & Sommer, 1997; Gabriel & Gardner, 1999) show that both men and women construe their selves interdependently, or relationally, but in different ways. Men's interdependent self relies on a larger collective group, whereas women's interdependent self relies on a smaller set of close relationships.

Besides differences in gender identity between girls and boys, we can also consider differences in gender identity between ethnic groups. Unfortunately, the field lacks much research in this area. However, one study showed that European American children in the U.S. considered gender to be more central to their self-concepts than ethnicity, whereas ethnic minority children considered gender and ethnicity to be equally central (Turner & Brown, 2007). Even among adults, only a few researchers have examined gender identity in different ethnic or racial groups. Moore (2004) found that gender identity was more salient in Arab women than in Jewish women. In addition, Arab women associated a salient gender identity as moving toward traditional gender roles, whereas Jewish women associated a salient gender identity as pulling away from traditional gender roles. Harris (1996) examined gender-typed self-descriptions in African American and European American adults with data from a modified version of the Bem Sex-Role Inventory. His results showed that African Americans described themselves in a more androgynous way than European Americans did. Together these studies suggest that gender identity may vary depending on ethnicity, but more research in this area is needed.

A small amount of research has shown differences in gender identity for children questioning their heterosexuality. Carver et al. (2004) applied Egan and Perry's (2001) model of gender identity and adjustment to preadolescents. They found that, regardless of age, questioning children reported fewer gender-typed attributes, a greater sense of feeling different from same-sex others, and less satisfaction with their gender assignment than non-questioning children did. Their results also suggest that questioning one's heterosexuality causes distress, in contrast to the hypothesis that experiencing distress can cause one to question one's heterosexuality. Thus, although the literature on differences in gender identity among sex, ethnic, and sexual orientation groups is growing, there is a need for more research on these topics, especially in early childhood.

Summary

Gender identity is a child's sense of self as a girl or boy. Understanding gender constancy and being able to label the self and others in terms of gender are important steps in achieving gender identity. Moreover, gender identity is multidimensional, and its components vary according to gender, ethnicity, and sexual orientation.

Gender Stereotyping

Gender stereotyping emerges hand in hand with the development of gender identity in early childhood. In this section we first discuss the definition of stereotypes and distinguish between types of stereotyping, then describe the content of those gender stereotypes. Next, we discuss the developmental trajectory of stereotyping. Finally, we discuss possible antecedents of gender stereotyping.

Definition

We define stereotypes here as a set of beliefs about the characteristics or attributes of a group (Judd & Park, 1993). These beliefs distinguish a particular group from other groups by describing differences among groups. Gender stereotypes are beliefs about the characteristics or attributes of men and women, boys and girls. Almost all children become aware of gender stereotypes regardless of family attitudes or values because the mass media and peer interactions, especially at school, expose most children to messages about gender (Maccoby, 2002; Martin & Fabes, 2001).

What kind of gender stereotypes do young children hold? By around 26 months children become most aware of gender differences associated with adults—adult possessions, physical appearance, roles, and abstract characteristics such as softness. At around 31 or 32 months of age, children show awareness of stereotypes about children's toys (Ruble & Martin, 1998). Later on, at around 5 years, children start to exhibit gender stereotype knowledge about traits or attributes such as “gentle” or “adventurous” (Powlishta, Sen, Serbin, Poulin-Dubois, & Eichstedt, 2001).

Recently, researchers have discovered certain themes of masculine and feminine stereotypes (Miller, Lurye, Zosuls, & Ruble, 2009). When spontaneously describing what girls and boys are like, children describe girls largely in appearance-related terms. This includes things such as dresses, jewelry, hair, make-up, and perfume. In contrast, when spontaneously describing what boys are like, children describe boys largely in activity or behavior-related terms. This includes descriptions such as hitting, wrestling, rough-and-tumble play, and action fantasy play. Thus, already at a young age, girls are what they look like, whereas boys are what they do. Indeed, in a recent study of parent-child narratives, conversations with sons more often included “action-based” activities, whereas conversations with daughters more often included mentions of physical appearance (Cristofaro & Tamis-LeMonda, 2008).

In addition, recent research has shown that young children readily associate deontic properties with social categories in general (Kalish & Lawson, 2008). Deontic properties are rights, duties, permissions, and obligations of members of a social category. In this particular study, young children readily interpreted behaviors and social categories deontically. For example, children may say that a girl “has to” play with dolls, which is a deontic property, in contrast to saying that a girl “usually” plays with dolls or “likes” to play with dolls. Moreover, this study showed that children interpret even novel behaviors and novel social categories deontically.

It is important to note that the nature of the content of these gender stereotypes can vary depending on the specific comparison group. For example, when contrasted to girls, 5- to 7-year-old boys described boys as brave, big, and strong, (Sani & Bennett, 2001; Sani, Bennett, Mullally, & MacPherson, 2003). In comparison, when contrasted to adult men, these boys described boys as loud and talkative. More recent work extends how the comparative context can affect children's gender stereotypes about behaviors in addition to traits (Bennett & Sani, 2008). For example, girls in a condition that first judged boys and then girls thought girls would like dressing up more and thought more girls would like dressing up in general than girls did in a condition that first judged women and then girls.

Developmental Trajectory

A meta-analysis of developmental studies of stereotype knowledge suggests that gender stereotypes are well developed by the end of preschool (Signorella, Bigler, & Liben, 1993). However, the first question one might ask is: When does gender stereotyping begin? Traditionally, psychologists have

pointed to about age 30 months as the time when children acquire gender stereotypes for toys, clothing, tools, household objects, games, and work (Huston, 1983, 1985; Ruble & Martin, 1998). However, recent research suggests that children start to develop gender stereotypes at an even earlier age (Martin et al., 2002; Miller, Trautner, & Ruble, 2006; Powlishta et al., 2001). Nonverbal “looking time” tasks have shown that even younger infants have some knowledge of activities and objects associated with each gender. Girls aged 18–24 months matched gender-typed toys with the face of a boy or girl (Serbin, Poulin-Dubois, Colburne, Sen, & Eichstedt, 2001). Two-year-olds paid more attention to gender-inconsistent pictures, for example, a man putting on make-up (Serbin, Poulin-Dubois, & Eichstedt, 2002).

What path does gender stereotyping take after early childhood? That is, does gender stereotyping have a ceiling or a peak? Or does it continue through middle childhood? Does flexibility ever occur? Findings have been mixed. Some studies suggest that gender stereotyping remains strong in middle childhood (e.g., Martin, 1989; Serbin, Powlishta, & Gulko, 1993; Signorella et al., 1993).

Other studies have suggested that gender stereotyping and beliefs become more flexible in middle childhood (Carter & Patterson, 1982; Marantz & Mansfield, 1977; Urberg, 1982). For example, a recent study showed that, for most children, gender attitudes declined in traditionalism from middle childhood to adolescence (Crouter, Whiteman, McHale, & Osgood, 2007). In longitudinal studies, researchers have found that, in children aged 5–10 years, the period of rigid gender stereotypes was short-lived and followed by greater flexibility (Miller et al., 2006; Trautner et al., 2005). That is, children reached peak rigidity by age 5–6 and then showed a dramatic increase in flexibility 2 years later, at age 7–8. One interesting study suggests that flexibility in stereotyping reaches a ceiling at some point during middle elementary school (Blakemore, 2003).

One possible explanation for these discrepancies may have to do with distinguishing cultural knowledge from personal beliefs in stereotypes. Answers to who can or should do which type of activities do get more flexible in middle childhood, especially for girls (Katz & Ksansnak, 1994; Serbin et al., 1993). Stereotype knowledge increases between the ages of 5 and 11–12, and personal endorsement of stereotypes declines after age 6–7 (Signorella et al., 1993). Ingroup bias also typically declines after age 4–5 (Heyman & Legare, 2004; Powlishta, Serbin, Doyle, & White, 1994). Similarly, recent research has shown that reasoning biases that favor one’s own gender decline between the ages of 7 and 11 (Klaczynski & Aneja, 2002).

A dual process model can provide a useful perspective. Martin (1989) posited that, as they get older, children are more likely to use individuating information and to rely less on gender stereotypes when making predictions of how stereotypic an individual would be. However, older children may also be more likely to perceive girls and boys as very different. Thus, as children get older, they have a greater understanding that masculinity can be separated from being a boy and femininity from being a girl. That is, they better recognize variability within groups and subtyping. However, they may also continue to distinguish the sexes in new domains that expand the breadth of their stereotypic knowledge. In sum, it appears that children’s knowledge of stereotypes continues to increase, but their acceptance of stereotypes as inflexible or morally “right” decreases after about 7 years of age (Huston, 1983, 1985; Ruble & Martin, 1998; Ruble, Martin, & Berenbaum, 2006).

Are there individual differences in the developmental trajectory of gender stereotyping and flexibility? Do some children peak and then wane, whereas others remain constant, or do others continually increase and then drop off? One longitudinal study explored whether early individual differences in rigidity continue into later childhood (Miller et al., 2006; Trautner et al., 2005). Results showed that those children who reached peak rigidity at an earlier age reached flexibility earlier as well, whereas children who reached peak rigidity later also reached flexibility later. Differences in levels of flexibility disappeared by age 8. Lurye, Zosuls, and Ruble (2008) also showed that, for older children aged 5–7, rigidity in gender roles at one point in time positively predicted rigidity in gender

roles 3–6 years later. However for younger children ages 3–4, rigidity in gender roles failed to predict rigidity several years later. This suggests that individual differences become more apparent with time, as variability in rigidity increases as children get older. Further longitudinal work is needed on the developmental trajectory of gender stereotyping, perhaps studies that might connect individual differences in trajectories with adjustment, or follow children into adolescence and adulthood to examine rigidity of gender stereotypes at later ages.

Research has also shown differences between gender groups in gender stereotyping. Some studies suggest that girls have greater stereotype knowledge than boys do during preschool and later on. Girls also show greater flexibility in their personal acceptance of gender stereotypes than boys do (Miller et al., 2009; O'Brien, Mistry, Hruda, Caldera, & Huston, 2000; Signorella et al., 1993).

Finally, individual differences in cultural context can affect developmental trajectories of stereotyping. Consistent with prior research, a recent study showed that, regardless of cultural context, young children consider gender groups as natural kinds that stem from natural categories found in the world (Rhodes & Gelman, 2009). Thus, when asked whether a boy and a girl are the same kind of people, the overwhelming response in young children was “no.” However, 10- and 17-year-olds responded differently depending on cultural context. Older children from a mid-sized city became much more flexible in their responding; they were more likely to say “yes,” girls and boys are the same kind of people. In contrast, older children from a rural community were much more likely to respond that girls and boys are different kinds of people.

Summary

Gender stereotypes are beliefs about the characteristics or attributes of men and women that distinguish the two gender groups from each other. Like gender identity, the development of gender stereotype knowledge starts early. Almost all children become aware of gender stereotypes, which are well formed by the time they finish preschool. Gender stereotypes hold together a wide-flung web of associations between gender and all different kinds of domains. Personal belief in gender stereotypes as to who should do what reaches peak rigidity at around 5 years of age and then becomes more flexible later on. And finally, individual, as well as group, differences do occur in the timing of the development of gender stereotyping.

Possible Antecedents of Gender Identity and Stereotyping

Thus far we have discussed gender identity and stereotyping separately; however, these two constructs often share similarities. For example, the emergence of gender identity and stereotyping may share certain antecedents. What are these antecedents? As we come from a cognitive-developmental perspective, we choose to focus on a few broad areas: cognitive development, perceptual distinctions and categorical membership, and essentialism. In addition, we review some literature on parent, peer, and sociocultural influences on gender identity and stereotyping.

Cognitive Development

Kohlberg's (1966) cognitive-developmental theory proposes that age-related changes in cognitive structures affect the emergence of gender identity. To form his theory, he took into account Piaget's

(1965) experiments, which show that an important developmental feat involves understanding the concrete-operational concept of conservation of physical properties. However, Kohlberg expanded Piaget's concept of conservation beyond the physical to the social domain (Emmerich, 1982) by proposing gender constancy, the understanding that a person's sex remains the same over time and across superficial transformations, as a cognitive-developmental feat.

Does understanding gender constancy precede gender stereotyping? That is, is the cognitive understanding that sex is constant a requisite for children to start gender stereotyping? Kohlberg hypothesized that learning of gender's permanence motivates children to attend to gender-related information more vigilantly and to master gender-typical behaviors and attitudes. In other words, achievement of gender identity would motivate the observance and mastery of gender-stereotyped behaviors and attitudes. However, results of empirical research remain controversial. Some studies show that gender constancy does predict gender stereotyping; other studies show no such relation.

One explanation for these mixed results is that these studies assessed gender constancy in different ways. Some studies assessed gender constancy as the understanding of gender stability alone. Others assessed gender constancy as the understanding of gender stability and gender consistency. Data suggest that children's understanding of stability mediates increases in stereotypic knowledge in young children (Ruble, Taylor et al., 2007). Psychologists have theorized that, because of greater attention and responsiveness to gender-related information, attainment of gender stability does not initiate gender stereotyping, but magnifies or amplifies it (Frey & Ruble, 1992; Stangor & Ruble, 1987). In contrast, a full understanding of constancy may lead to decreases, rather than increases in gender stereotyping (Marcus & Overton, 1978; Ruble, Taylor et al., 2007). Indeed, in a recent study, full constancy understanding mediated decreases with age in the rigidity of children's gender-related beliefs and attitudes (Ruble, Taylor et al., 2007).

What other cognitive developments might influence gender stereotyping? In addition to constancy, researchers have examined the role of children's level of classification skills. Piaget (1965) showed that young children have difficulty simultaneously categorizing people or objects along two or more dimensions. Psychologists have theorized that such classification limitations might relate to children's gender stereotyping (Katz, 1983; Liben & Bigler, 1987; Martin, Wood, & Little, 1990; Trautner, Helbing, Sahm, & Lohaus, 1989). For example, Bigler (1995) conducted a study to examine classification skills and gender stereotyping in children ages 6–10. She hypothesized that if a child has difficulty understanding that the same person can belong to more than one category simultaneously, the child may be particularly likely to develop rigid and extensive gender-stereotypic beliefs. In contrast, if a child has acquired multiple classification skill, the child should not necessarily develop more stereotypic beliefs because he or she can characterize individuals along multiple dimensions. She also examined the interaction of the environment and classification skills on gender stereotyping. She showed that among children with less advanced classification skills, those placed in a classroom that made functional use of gender showed greater gender stereotyping as to who should perform what occupational roles than did those in a control classroom. However, children of the same ages with advanced classification skills did not exhibit this pattern. This study is important because it shows that cognitive development does have a relationship to gender stereotyping and that cognitive development can also interact with the environment to affect gender stereotyping.

In a related study, Bigler and Liben (1992) did not simply measure classification skills, they experimentally these skills by training some 5–10-year-old children in multiple classification skills. Children trained in multiple classification skills showed more egalitarian responses to a subsequent measure of gender stereotyping and superior memory for counterstereotypic information embedded in stories than children in a control condition did. Again, in this study, the experimenters

assessed gender stereotyping by asking children who should perform certain occupational roles, an assessment of personal acceptance rather than of knowledge. No age interactions were found between older and younger children on the gender stereotyping and memory measures.

Perceptual Distinctions of Gender Categories

Children's ability to perceive distinctions between male and female attributes is a critical component of gender identity. Recent research has shown that by age 1, most infants can categorize individuals by gender (Quinn, Yahr, Kuhn, Slater, & Pascalis, 2002). Even earlier, infants can distinguish the voices of women and men at 6 months, and most can discriminate between photographs of men and women at 9 months. In addition, infants associate women's and men's photographs and their voices at around ages 11–14 months. These results suggest that very early on, even before they can verbally label people by sex, children use perceptual categories that distinguish the sexes (see Martin et al., 2002). These studies show that by a very young age, children are capable of gender category distinctions, a pre-requisite to gender identity.

Conceptual Distinctions of Gender Categories and Labeling

In addition to distinguishing gender categories through physical perception, children soon distinguish gender categories conceptually as well. Like perceptual distinctions, conceptual distinctions are a critical component of gender identity. Developmental psychologists assess the understanding of conceptual gender categories by presenting pictures of boys and girls and men and women and asking children to identify and discriminate the pictures. Fagot, Leinbach, and Hagan (1986) showed that the mean age for children to do this gender labeling task correctly was about 30 months. By age 3 virtually all children can sort photographs on the basis of sex (Leinbach & Fagot, 1986; Thompson, 1975; Weinraub et al., 1984). In addition to the ability to categorize others by sex, children learn to label themselves accurately by sex. Researchers have shown that children can label their own sex by approximately 24–36 months, but children vary a lot in timing (Ruble & Martin, 1998).

Recent research has pointed to the possibility of an earlier time point for both self- and other-labeling. Zosuls et al. (2009) interviewed mothers periodically. They asked the mothers about their children's spontaneous and completely understood uses of the verbal labels girl or boy, male or female, and woman or man. They showed that 70% of parents reported that their children were able to use and understand at least one gender label by 22 months of age.

Parent and Sociocultural Influences

The way parents socialize their children can also affect children's development of gender identity and stereotypes and perhaps bring about individual differences. First, parents can affect children's gender identities. Remember that the ability to label people by gender is an important component of gender identity and signifies a conceptual understanding of gender categories. Fagot and Leinbach (1989) showed that parents who gave positive feedback to same-gender-typed toy play and gave negative feedback to cross-gender-typed toy play for their children were more likely to have a child who could label girls and boys earlier than average. In another study, Fagot, Leinbach, and O'Boyle

(1992) showed that mothers who endorsed more traditional attitudes toward women and gender roles within the family tended to have children who mastered the gender labeling task at ages 24–36 months. Finally, Fagot and Leinbach (1995) showed that children of more egalitarian families, in which fathers had more egalitarian beliefs and reported sharing parenting responsibilities equally with their spouses, mastered the gender labeling task later, on average, than did children from more traditional families. In sum, these studies show that parents can influence the timing of their child's development of a gender identity.

The same Fagot and Leinbach (1995) study showed parents' influence on children's gender stereotyping. Children of egalitarian families showed less gender stereotype knowledge at age 4 than did children of more traditional families. The authors pointed out that fathers, in particular, may strongly influence children's development of gender stereotyping because the mothers in both types of families exhibited similar attitudes and behaviors. Thus, parents can also affect the development of gender stereotype knowledge.

How do parents communicate gender stereotype content to their children? Narratives, or talking about personal experiences, can affect what children learn about gender. In a study of low-income Puerto Rican, Mexican, and Dominican immigrant families, researchers showed that conversations with sons contained more action-based activities than conversations with daughters did (Cristofaro & Tamis-LeMonda, 2008). Conversations with daughters included references to physical appearance more than conversations with sons did. Parents also communicated expectations of appropriate emotions; they subtly hinted that girls can be scared, but boys should not be. Parents also may communicate that there are essential differences in women and men in their actual language—through use of gender generics, such as “boys” or “ladies.” These terms refer to entire gender groups, which may teach children that men/boys and women/girls differ in significant and nonobvious ways (Gelman, Taylor, & Nguyen, 2004).

Society at large can also affect children's knowledge of and use of gender stereotypes. For example, considerable research suggests that television, and the media in general, affect children's knowledge of and use of gender stereotypes. Despite attempts at change over the past few decades, the media still convey stereotypic messages that teach and reinforce traditional gender roles (Ruble et al., 2006). In particular, the media seldom show boys with feminine traits (Evans & Davies, 2000). Even when authors of children's literature choose equal amounts of male and female main characters, the books include fewer illustrations of girls and women (Gooden & Gooden, 2001). In a recent study of children's books, there were nearly twice as many male as female main characters (Hamilton, Anderson, Broaddus, & Young, 2006). In addition, a content analysis of commercials directed toward children revealed that men and boys were more likely than women and girls to be portrayed playing a major role, having active movement in an individual activity, and being in an occupational setting (Davis, 2003).

This persistent under-representation in the media can convey a message of devaluation to girls. Most studies about the media's effects on children's learning of gender stereotypes are correlational, so it is difficult to disentangle whether exposure to media causes increased gender stereotyping, or whether children who already hold these stereotypes seek out media consistent with their beliefs (Ruble et al., 2006). However, a longitudinal study showed that viewing television early in life affected gender stereotyping later in life. Media with messages counter to gender-typed norms viewed during the preschool years particularly had effects in adolescence (Anderson, Huston, Schmitt, Linebarger, & Wright, 2001). In addition, in a natural experiment in Canada, children in a town without television were found to hold less traditional gender attitudes than their counterparts in a town with television. After television came to their town, the children's gender attitudes had increased in traditionalism 2 years later (Kimball, 1986).

Essentialism

Growing research on essentialism also points to its influence on both gender identity and stereotyping. Broadly, essentialism is the belief that certain characteristics (of individuals or categories) are relatively stable, likely to be present at birth, and biologically based (Gelman, Heyman, & Legare, 2007). Essentialism is the view that certain categories, such as gender, have an underlying reality or true nature that one cannot observe directly but that gives an object its identity. Essentialism is also responsible for inferences about other similarities that category members share (Medin & Ortony, 1989).

Medin and Ortony (1989) theorized that essentialism is a “placeholder.” A child can believe that a category possesses an essence without knowing what exactly the essence is, and this absence of knowledge makes many features of the category mysterious. For example, a child might believe that men and women, and boys and girls, possess serious, invisible differences, but have no idea and no way to talk about those exact differences. Thus, essentialism of categories permits ample inductive inferences; correspondingly, essentialism has implications for stereotyping, as we discuss later.

Research has shown that children use essentialism as a reasoning heuristic and that they indeed essentialize the social category of gender (Gelman, 2004; Gelman, Collman, & Maccoby, 1986; Gelman & Taylor, 2000; Taylor, 1996). In one study, an experimenter taught preschool children new properties for specific boys and girls, such as the presence of “andro” or “estro” in their blood (Gelman et al., 1986). Then the experimenter presented children with a drawing of a new boy or girl, but with an atypical appearance, such as a boy with long hair. Children inferred that the new boy would have “andro” in his blood and that the new girl would have “estro” in her blood. The majority of children’s inferences relied on category membership and ignored conflicting perceptual information.

Young children also believe that an infant will develop personality traits associated with her or his gender category regardless of the immediate environment (Taylor, 1996). For example, experimenters told children to imagine girl babies raised on an island populated by boys and men. Then experimenters asked children to predict how these girl babies would grow up and whether they would exhibit gender-stereotyped attributes. On average, preschool children’s answers relied more on innate potential than on environmental influences.

Young children also use category-based reasoning to predict the consistency of an individual’s preferences and fears. Normally, in contrast to how adults respond, young children respond at chance level regarding consistency in an individual’s preferences over time (Kalish, 2002; Kalish & Shiverick, 2004; Lawson & Kalish, 2006). Hence, after learning that a girl likes chocolate chip cookies, one-half of the time children predict that she will like chocolate chip cookies in the future, and one-half of the time they predict that she will not like the cookies in the future. However, given the chance to make an inference that this cookie-eating habit might be due to her gender, children often grab this chance and predict consistency, whereas before they did not (Rhodes & Gelman, 2008). That is, in a certain condition researchers told children that a girl and a boy each went “bemming” and “spouding,” novel activities created with nonsense words. Then they told children that the boy liked bemming and the girl liked spouding. After that, they asked the child to predict future preferences. When the pair of children in the story were both boys or both girls, children responded at chance level, sometimes predicting consistency, sometimes not. However, when presented with a girl and a boy who like different activities, or are afraid of different objects, children robustly predicted consistency.

In a study of adults, Prentice and Miller (2006) showed that category essence can constrain not just what category members are, but also what they become. To illustrate the enormous inductive potential and possibility to affect what category members become, Prentice and Miller (2006) used the classic overestimator/underestimator social psychological paradigm with a sample of male and

female undergraduates. Participants in cross-sex pairs took a perceptual test to estimate the number of dots on a screen. The experimenter then gave them false feedback on whether they were consistently an “overestimator” or an “underestimator” in their ability to count the dots on the screen. Depending on the condition, the experimenter told the participant that their other-sex partner in the experiment either had the same estimating style, had a different estimating style (e.g., a woman told that she was an “overestimator” found out that her male partner was an “underestimator”), or else gave them no information on estimating style. Those in the condition where the other-sex partner had a different style than their own made stronger inductive inferences about perceptual style and gender. Moreover, when they induced that it was a “sex difference,” participants in the different-style condition treated their perceptual style as if it were stable. They showed no tendency to correct for it in order to be more accurate on the second test, whereas the same-style participants did try to correct. Prentice and Miller further emphasized that, in this experiment, there was only a difference between just one man and one woman, which can be seen as the most minimal evidence of category covariation. Yet, this minimal evidence was sufficient to trigger gender essentialist thinking about perceptual style.

Similarly, after learning that another child had performed better on a novel drawing task, preschool children improved less on the drawing task when they also learned that the better-performing child was a member of the other sex than they did if the better-performing child was of the same sex, or if they received no information about sex (Rhodes & Brickman, 2008). The researchers proposed that, in the other-sex condition, preschool children assumed that gender caused differences in drawing task performance. Because preschoolers also assume that gender differences remain highly stable across time and situations, the children lacked motivation to improve. Assumptions of stable gender differences in drawing task abilities also affected self-evaluations, as children in the other-sex condition had the lowest self-evaluations.

These studies of essentialism together emphasize just how salient gender is to young children. Moreover, they emphasize how minimal information need be to spur category-based reasoning along the lines of gender. They also speak to the widespread impact category-based reasoning can have on all kinds of dimensions, from predicting dispositional consistency to performance on tasks.

Summary

Many different factors influence or precede children’s development of gender identity and stereotyping. Some factors, such as perceptual and conceptual distinctions of gender categories clearly form the building blocks of gender identities. Others, such as general cognitive development remain controversial in terms of what effects they have on gender identity and stereotyping. Although gender constancy is a critical component of gender identity, results vary on whether gender constancy is critical for gender stereotyping. Parent and sociocultural influences, as well, can predict the timing of gender identity development and the degree of stereotype knowledge and use. Finally, research on essentialism does not so much predict gender identity or stereotyping development; it elucidates why gender categories, and hence gender identity, may be so salient to children and why young children may be so quick to stereotype by gender.

Possible Consequences of Gender Identity and Stereotyping

We have primarily examined gender development in early childhood from a cognitive-developmental perspective. However, it is important to recognize other cognitive theories of gender development,

such as gender schema theory, which defines gender schemas as mental networks of interrelated associations that represent information about both genders (Bem, 1981; Liben & Signorella, 1980; Marcus, Crane, Bernstein, & Siladi, 1982; Martin & Halverson, 1981). Gender schemas are dynamic knowledge representations, which change in response to situations and age. Like cognitive-developmental theory, gender schema theory views children as active constructors of their individual gender schemas. Thus gender schemas are prone to errors and distortions, and vary with culture and with individual social experiences and preferences. In addition, other cognitive theories, such as social identity theory and self-categorization theory, focus on the categorization of individuals into gender groups and on identification with those collective categories of gender.

What do these cognitive theories have in common? Together, these theories hypothesize that gender cognitions organize and interpret information and provide the standards that guide behavior. These theories also view children as active seekers and constructors of gender, which is why the cognitive theories are often grouped together as “self-socialization” theories. We use “self-socialization” interchangeably with cognitive-developmental theories in this chapter. Finally, these cognitive approaches focus on increases and decreases in gender knowledge and its use and implications for behavior (Martin et al., 2002).

The possible consequences of gender cognitions have long elicited controversy. Are there clear links between how a child thinks and how that child behaves? Can a child’s gender identity or gender stereotype knowledge actually cause certain behaviors and preferences? Some psychologists have raised concerns about the overemphasis on cognitive factors in gender development (Bussey & Bandura, 1999). Also, other researchers have suggested that the evidence fails to show associations between gender cognitions and behavior. We first discuss possible consequences of gender identity and then possible consequences of gender stereotyping.

Possible Consequences of Gender Identity

What are the possible consequences of gender identity? Do gender identities, which can, in some ways, be viewed as gender cognitions, have any links to behavior? In this section, we first examine whether links exist between gender identity and behavior and preferences. Then we look more closely at a specific behavior and preference that psychologists have observed with great interest—that of sex segregation. We also discuss gender identity’s links to attention and memory to get more at the mechanisms of how cognition might affect behaviors and preferences. Finally, we discuss whether gender identity affects children’s adjustment and intergroup relations.

Identity and behavior and preferences. When we see young girls with bows in their hair and a burst of flowers all over their dresses, or when we observe boys proudly displaying the latest Spiderman T-shirt, what do we make of this? Do the way children choose to dress and their preferences for certain items reflect differences in gender identity?

In this section we first discuss a phenomenon that has recently caught our attention. As noted earlier, self-socialization theories of gender development portray children as “gender detectives” who actively construct their own interpretation of what gender means and how it applies to them (Martin & Ruble, 2004; Martin et al., 2002). As children begin to identify with their gender, they increasingly view gender as a central and positive aspect of themselves (Ruble, Taylor et al., 2007). One way girls, in particular, may display and embrace their new identities is by donning gender-typed clothing—namely, pink, frilly dresses, or “PFD.”

Based on informal observation and anecdotal evidence, previous researchers have described an intriguing phenomenon—a proportion of girls appear to pass through a stage when they refuse to

go out unless they are wearing something very feminine, often pink, frilly dresses (Ruble, Lurye, & Zosuls, 2007). The intensity of these desires, and the extremity with which they are expressed despite great inconvenience, surprise many. For example, some parents report having arguments with their daughters about wearing dresses in below-freezing weather. They often compromise by wearing thick leggings beneath their dress. Other parents report an unending parade of pink clothing worn day to day, which, when interrupted by practical reasons, such as a void of clean pink clothing, leads to a tantrum. Recent work has shown that the majority of children who have strong obsessions at one point or another tend to be boys (DeLoache, Simcock, & Macari, 2007) obsessed with things such as dinosaurs or trains. We speculate that perhaps PFD is an untapped obsession of girls.

To study this phenomenon we first documented PFD to find out how prevalent it is and at what age girls show it (Halim, Ruble, Murphy, Greulich, & Zosuls, 2009). We also wanted to explore whether a parallel phenomenon occurs with boys. We then examined whether PFD, a gender-stereotyped behavior, was associated with gender identity along the dimensions of centrality and gender stability.

Thus, as part of a larger study on gender development, 76 parents of 3–7-year-old children (39 girls, 37 boys) were interviewed to assess the prevalence of PFD and the nature of it. PFD was measured based on parents' reports of children's insistence on wearing gender-typed clothing. Three independent judges coded responses. Furthermore, in interviews with the children, two aspects of gender identity were assessed: (i) centrality and evaluation, and (ii) gender constancy in terms of stability.

First, results of analyses of PFD data show that more than one-half of the girls had exhibited PFD, and it was especially prevalent among 3–4-year olds. On the other hand, about one-quarter of the girls had never exhibited PFD. These data suggest that PFD is a real phenomenon that is quite prevalent.

The boys' data were a mirror image of the girls'. About one-quarter of the boys had displayed a masculine version of PFD (mainly the avoidance of feminine clothing and colors, but also the wearing of suits and ties and the donning of superhero costumes). On the other hand, about one-half of the boys had never gone through a phase of clothing rigidity. In contrast to the findings for girls, clothing rigidity was more frequent among older than younger boys, namely among 5- and 6-year olds. These results suggest that a similar manifestation of PFD does exist for some boys, but it is less common. This asymmetry may relate to findings that appearances are particularly relevant for girls (Miller et al., 2009). Also, the age differences between boys and girls may reflect a general pattern in the literature that boys often lag behind girls in gender development (Ruble et al., 2006). Alternatively, because the appearance issues for boys were most frequently avoiding anything that looks feminine, it may be that it takes longer to learn what to avoid about the other sex, hence their delay in developing a masculine form of PFD.

Second, we examined to what extent PFD was related to gender identity. We found that greater centrality and evaluation positively predicted PFD. That is, placing greater importance on gender in one's self-concept and evaluating one's own gender group more positively was associated with PFD. These results suggest that PFD represents children's displaying and embracing of their gender identities.

To study gender stability we examined only 3- and 4-year-olds, as almost all 5–6-year-olds had already attained it. We found that greater understanding of stability positively predicted PFD. These findings suggest that, once children understand the permanence of their sex, they are more likely to actively attempt to understand and to show off their understanding of gender by engaging in gender-stereotyped behaviors. They act as if they are more committed to their gender. Hence, PFD is a ripe example of how gender-stereotyped behaviors are associated with children's emerging gender identities.

Other researchers also have examined links between gender identity and behavior and preferences, particularly gender constancy. Results reveal inconsistencies. Some research does show such

connections between gender constancy and gender-typed behaviors and preferences. Other research fails to show such connections. In support of connections, many studies show positive relationships between the level of gender constancy and the imitation of same-sex others, engagement in same-sex activities, preferences for same-sex clothing, and peers and gender stereotype knowledge (reviewed in Martin et al., 2002). For example, one particular study (Warin, 2000) showed that young children with a better understanding of gender constancy were more likely than other children to refuse to wear cross-gender-typed clothing, such as a pink frilly dress for a boy or army fatigues for a girl. Gender constant children have also been shown to imitate same-gender models (Perloff, 1982; Ruble, Balaban, & Cooper, 1981) and to select gender-appropriate activities more than their peers do (Frey & Ruble, 1992; Stangor & Ruble, 1989). Other studies corroborate that children with higher levels of gender constancy actively avoid cross-gender-typed activities, in addition to dress (Frey & Ruble, 1992; Newman, Cooper, & Ruble, 1995; Stangor & Ruble, 1989; Zucker et al., 1999). However, other research has shown no support for links between gender constancy and gender-typed behaviors and preferences (e.g., Levy, 1998; Zucker et al., 1999; Huston, 1983).

We speculate that these mixed results can be explained with reasoning similar to why gender constancy only sometimes relates to increased stereotype knowledge. It could be that researchers with contradictory results assessed gender constancy differently. Some assessed gender constancy only as the understanding of gender stability. Others assessed gender constancy as the understanding of gender stability plus gender consistency. It could also be that attainment of gender stability does not initiate gender-typed behaviors and preferences, but amplifies them because of greater attention and responsiveness to gender-related information.

Another way psychologists have examined whether gender identity has any links to behavior and preferences is by looking at gender labeling, a critical, early component of gender identity. As noted earlier, gender labeling of the self and others exhibits a growing understanding that people can fall into categories by gender. It shows understanding of perceptual and conceptual categorical distinctions. In a longitudinal study, children who could label themselves by gender earlier than average increased in gender-typed play over several months (Fagot & Leinbach, 1989). Weinraub et al. (1984) also showed a significant relation between children's ability to label themselves verbally by sex and their gender-typed toy preferences. Zosuls et al. (2009) also showed that understanding of gender labels was associated with an increase in gender-typed play between 17 and 21 months of age. Together these studies provide some evidence that early gender identity is associated with increases in gender-typed play.

Other researchers have shown connections between other aspects of gender identity and a preference for gender-typed behaviors and preferences. For example, Wigfield and Eccles (2000) showed that children with more central gender identities valued domains associated with their sex and devalued those associated with the other sex. For example, girls with greater gender identity centrality devalued math more than other girls did.

Examinations of other populations with alternate types of gender identities can also shed light on whether gender identity has links to behaviors and preferences. For example, in a study of tomboys, researchers assessed gender identity by looking at gender contentedness and gender confusion (Bailey, Bechtold, & Berenbaum, 2002). In this sample, a stronger feminine identity was positively correlated with a preference for feminine-typed activities. Though not a direct assessment of gender identity, another study showed that tomboys in middle to late childhood preferred cross-gender activities more than other girls did (Plumb & Cowan, 1984). Also, one group of researchers showed that children diagnosed with gender identity disorder preferred cross-gender play styles more than other children did (Fridell, Owen-Anderson, Johnson, Bradley, & Zucker, 2006).

In summary, although inconsistencies remain, a growing amount of research suggests that gender identity does have some impact on behaviors and preferences in young children. The most basic sign

of gender identity, the ability to label the sexes verbally, has been linked to increases in gender-typed play. The dimensions of centrality and constancy have been shown to affect children's clothing preferences, and indirect evidence from studies of tomboys and gender dysphoric children also suggests that identity can affect preferences for play style and activity.

Identity and sex segregation. Sex segregation, the tendency for girls' strong preference to play with other girls and for boys to do likewise with other boys, is a particular behavior on which many researchers have focused. Sex segregation has emerged as one of the strongest and most persistent forms of children's gendered behavior (Maccoby, 1998). It emerges very early—at 27 months of age for girls and at 36 months for boys (La Freniere, Strayer, & Gauthier, 1984). Also children consistently report spending more time with same-sex peers and siblings (McHale, Kim, Whiteman, & Crouter, 2004). Consistent with this notion, Martin (1989) showed that children predicted liking of target boys and girls based solely on their sex and not their stereotypic or counterstereotypic interests.

However, does sex segregation have anything to do with gender identity? On one hand, research shows that preschool children do establish gender identities prior to sex segregation (Fagot, 1985; Fagot et al., 1986). This suggests that gender identity may affect sex segregation. It could also be the case that gender identity is a necessary, but not sufficient, contributor to sex segregation (Schelling, 1971).

Empirical data reveal mixed conclusions. Studies of tomboys and children with gender identity disorder often support the notion that gender identity leads to sex segregation. For example, tomboys and children with gender identity disorder report liking other-sex playmates more than same-sex playmates (Bailey et al., 2002; Fridell et al., 2006; Zucker & Bradley, 1995). Another study (Smetana & Letourneau, 1984) suggests that gender identity effects on sex segregation may vary by sex and level of gender constancy. They showed that achievement of gender constancy predicted same-sex playmate choice, but only for girls. They showed that girls who had achieved only partial gender constancy (i.e., understanding gender stability but not consistency) engaged in more same-sex social interaction than did girls who had achieved full gender constancy (i.e., understanding both gender stability and consistency). In contrast, one direct study showed no support for the idea that gender identity as assessed by accurate gender labeling of others and gender role knowledge can predict same-sex peer preferences (Moller & Serbin, 1996). Thus, more research, especially longitudinal studies with young children, is needed to determine whether gender identity affects sex segregation, but the picture appears to be more complex than a simple direct relationship.

Identity, attention, and memory. In addition to examining how identity may affect behaviors and preferences, it is important to examine whether identity affects attention and memory, which can shed light on whether cognitive-developmental theories hold up under empirical scrutiny. Cognitive-developmental theory posits that, as children learn about gender categories, they should increase their attention to and awareness of possible gender-related information. What does the evidence thus far suggest? Indeed, once children understand gender categories, they do show increased interest in watching same-sex others (Luecke-Aleksa, Anderson, Collins, & Schmitt, 1995; Slaby & Frey, 1975). Moreover, young children pay more attention to and remember more information about an activity when they believe that others of their own sex perform that particular activity (Bradbard, Martin, Endsley, & Halverson, 1986). This increase in attention occurs even when the objects or activities are novel (Bradbard & Endsley, 1983; Martin, Eisenbud, & Rose, 1995). Hence, a substantial amount of research on attention and memory support cognitive-developmental theories of gender development.

Identity and adjustment. Does gender identity affect a child's adjustment or psychological well-being? And what kind of gender identity functions most adaptively for children? Psychologists have historically believed that gender conforming, or fitting in with others of one's own sex, facilitates

optimal well-being (Kagan, 1964). It was thought that adhering to gender stereotypes signaled normality in children. Feeling masculine would make a boy more secure in himself, and feeling feminine would make a girl more secure in herself. However, another line of thought posits that following the rigid boundaries of one's own gender identity limit a child's freedom in self-actualization. Instead, developing both feminine and masculine qualities and skills would better equip a child to deal with a wider variety of circumstances (Bem, 1974, 1981). Thus in this school of thought, limiting oneself only to gender-typed prescriptions would lead to poor adjustment.

The latest research in this area empirically supports an integration of these two perspectives. Egan and Perry (2001) showed that self-perceptions of gender typicality contributed to a healthy sense of self, a finding confirmed by subsequent studies (Carver, Yunger, & Perry, 2003; Yunger, Carver, & Perry, 2004). Thus it would seem that this research supports the historical view of identity and adjustment, such that fitting in with gender-typed interests and stereotypes optimizes children's well-being. However, the researchers also concluded that children's adjustment is optimized when they feel both secure in their conceptions of themselves as typical members of their gender and also free to explore cross-gender options when they desire. In multidimensional terms, high felt typicality together with low felt pressure to conform to gender stereotypes predicts a healthy sense of self.

On the other end of the spectrum, children who feel atypical may have worse adjustment. Several studies confirm this hypothesis. Carver et al. (2004) showed that children questioning their heterosexuality reported less satisfaction with their social relationships. The particular combination of low gender contentedness combined with high felt pressure was particularly harmful for these children. Patterson and Bigler (2007) showed that being an atypical group member made younger, but not older, children less happy to be a member of their group. Also, in a study of 9–10-year-old Israeli girls, researchers assessed gender identity by having the girls rate themselves on stereotypically masculine and feminine traits (Lobel, Slone, & Winch, 1997). Those who scored high on masculine traits and low on feminine traits diverged from the rest of the sample. This particular group of girls, on average, was less popular among their peers, had a lower level of self-esteem, and was less satisfied with their gender. Girls who scored high on both masculine and feminine traits did not differ on these measures from girls who scored high on feminine traits and low on masculine traits.

Given these converging results, what might mediate the relationship between high felt typicality and better adjustment or, put another way, between low felt typicality and poor adjustment? Recent research points to peer acceptance as a potential mediator between typicality and adjustment. Smith and Leaper (2006) showed that peer acceptance partially mediated the relation between self-perceived gender typicality and self-worth in a large sample of adolescents. Indeed, other research has shown that gender nonconforming targets in childhood home videos recall more childhood rejection (Rieger, Linsenmeier, Gygax, & Bailey, 2008).

Do these findings apply universally to all children? Few researchers have actually examined the relationship between children's gender identity and adjustment in populations other than European American middle-class children. Those who have looked at other populations reported mixed findings. For example, Corby et al. (2007) found very different relationships between components of identity and adjustment for African American and Hispanic children from low-income homes. Indeed, the strong and consistent relationships they found between components of gender identity and adjustment among European American children did not exist or changed directions in African American and Hispanic children. More specifically, there was a paucity of relations between gender identity and adjustment for African American children. They posited that African American preadolescents are coping with a racial minority identity, which causes other dimensions of identity to be less influential at this age. In partial support of this hypothesis, researchers have shown that, in late adolescence, African American girls, on average, do find their racial identities more salient than their gender identities (Shorter-Gooden & Washington, 1996).

For Hispanic girls, gender contentedness was associated with higher rather than lower internalizing problems (Corby et al., 2007). However, for Hispanic boys, felt pressure was associated with lower rather than higher internalizing problems (Corby et al., 2007). Taking into account this variation of gender identity among different ethnic groups, Corby and colleagues (2007) suggested that the implications of gender identity for adjustment depend on the particular meanings that a child attaches to gender, and these meanings may vary across and within ethnic/racial groups.

There are also few studies of gender identity and adjustment in adult groups besides European Americans. However, one study showed that African American women who endorsed high levels of both masculine and feminine traits in a gender role inventory experienced lower levels of stress than did other African American women in the sample (Littlefield, 2003). Another study showed that Israeli adolescent boys who had a more androgynous identity, according to self-ratings of feminine and masculine traits, had higher levels of social self-esteem, on average, than did those with less androgynous gender identities (Parker & Parker, 1992).

Overall, the data suggest that feeling typical of one's gender predicts a positive sense of well-being. Moreover, peer acceptance may partially mediate gender identity's relationship to adjustment. If a child behaves typically of her or his gender group, peers will more likely accept the child, and the child will experience a greater sense of well-being. However, whereas feeling typical of one's gender group promotes better adjustment, feeling pressured from outside sources to conform to gender stereotypes predicts worse adjustment. Finally, researchers need to examine these relationships in diverse populations, as the little research that does exist suggests different relationships for different ethnic groups.

Identity and intergroup relations. Does gender identity affect relations between boys and girls? Before we can answer this question, we must discuss social identity theory, which provides a framework for the topic at hand. Tajfel and Turner (1986) conceptualized a group as a collection of individuals who perceive themselves to be members of the same social category, share some "emotional involvement" in a common definition of themselves, and achieve some consensus about society's evaluation of their group and their membership in it. Further, they define social identity as "those aspects of an individual's self-image that derive from the social categories to which [an individual] perceives [himself/herself] as belonging" (p. 16).

Social identity theory proposes that individuals strive to maintain or enhance their self-esteem by attaining a positive social identity. Furthermore, individuals maintain or enhance a positive social identity by making social comparisons to relevant outgroups. When individuals fail to achieve a positive social identity, the theory predicts that they will strive to leave the existing group and join a more positively distinct group or to make the existing group more positively distinct. In sum, social identity theory's basic hypothesis predicts that pressures to evaluate one's own group positively through ingroup/outgroup comparisons lead social groups to attempt to differentiate themselves from each other.

These assumptions and predictions derive in large part from many experiments that show that "trivial ad hoc" intergroup categorization leads to ingroup favoritism and discrimination against the outgroup. The experiments used "minimal" groups that were "purely cognitive" and symbolic with no real conflict, economic or otherwise.

One theoretical issue of interest is the interplay between social identity dynamics and the attainment of gender constancy in early childhood. As Lutz and Ruble (1995) discussed, many predictions can be made to the how the two theories interact. For example, one might expect an increase in gender prejudice at the time children acquire constancy for several reasons. First, when children acquire constancy, they learn about the unchanging nature of their gender category membership. Thus, children may view their genders as inescapable, and, as a result, may intensify efforts to make membership in that gender category build up personal self-esteem. Second, during constancy

acquisition, children are actively consolidating gender knowledge that makes gender information more salient and heightens its accessibility.

Few studies have directly tested this prediction. However, in our PFD study (Halim et al., 2009), we assessed intergroup attitudes by asking children how much they thought that certain trait words such as “bad” or “mean” describe the other sex. We found that children who exhibit PFD, particularly the older ones, had more negative outgroup attitudes than other children did. Examinations of the connections between gender identity and gender prejudice would be a productive area of inquiry for future developmental research.

Possible Consequences of Gender Stereotyping

Now that we have considered the possible consequences of gender identity, we examine many of the same areas in regard to gender stereotype knowledge and use. In the first section we focus on gender stereotype knowledge and its connections to behaviors and preferences and attention and memory. Similar to questions on identity’s links to these constructs, studies of whether gender stereotype knowledge has any relations to behavior, preferences, attention, and memory could shed light on the controversy about cognition’s role in gender development. We discuss gender stereotype use and its connections to adjustment and intergroup relations.

Stereotype knowledge, behaviors, and preferences. As noted earlier, according to cognitive-developmental theory, children hold gender stereotypes or mental standards of gender-appropriate behavior. Furthermore, children actively attempt to match their behavior to these newly learned stereotypes or standards (Maccoby & Jacklin, 1974). Thus examinations of stereotype knowledge’s connections to behavior and preferences can inform whether cognitive-developmental theory provides a reasonable depiction of gender development. Based on cognitive-developmental theory, increases in gender stereotype knowledge should lead to increases in gender-stereotyped behavior and preferences in young children. There is surprisingly little research that directly assesses the link between stereotype knowledge and gender-stereotyped behavior (see Huston, 1985; Martin, 1993; Signorella, 1987).

The existing literature reveals mixed findings (see Martin, 1993). Many studies do support cognitive-developmental theory. Studies with correlational designs have yielded positive associations between stereotypic knowledge and gender-stereotyped behavior (Aubry, Ruble, & Silverman, 1999; Coker, 1984; Serbin et al., 1993).

In a longitudinal study, Miller et al. (2006) examined the interplay between the development of gender stereotypes and children’s gender-typed preferences between the ages of 5 and 10. They examined children’s gender-typed preferences for toys, play activities, household chores, and occupational activities, as well as their gender stereotype knowledge. They found interesting interactions. Specifically, boys followed the predicted pattern. For boys, increasing knowledge of stereotypes ran in parallel to increasing gender-typed preferences. Their preferences increased up until the point at which they reached their maximum level of stereotype rigidity, and then preferences tended to remain stable. Thus, for boys, gender-typed preferences may develop at the same time as increasing rigidity of stereotyping. However, girls’ patterns were less clear. The researchers also looked at individual differences. Boys who displayed a higher level of peak rigidity in stereotyping, and boys whose peak rigidity occurred earlier, showed stronger gender-typed preferences than their peers did.

Those patterns are consistent with the results of another longitudinal study of gender stereotype knowledge’s relationship to gender-typed preferences. Aubry et al. (1999) showed that 4–8-year-old boys generally followed the predicted pattern. Gender stereotype knowledge about items and

attributes generally positively predicted gender-typed preferences. However, for girls, the data sometimes revealed no relationship or revealed a relationship in the opposite direction. Gender stereotype knowledge sometimes negatively predicted gender-typed preferences.

Others have used experimental designs to show that children follow newly created gender stereotypes when choosing between different novel toys (Bradbard & Endsley, 1983; Bradbard et al., 1986; Martin et al., 1995). In addition, levels of gender constancy may also affect how children use gender stereotype knowledge. Ruble et al. (1981) found that, among 4–6-year olds, children with high levels of gender constancy used gender stereotypes newly learned from television commercials to guide their toy preferences much more than did children with low levels of gender constancy. Newman, Cooper, and Ruble (1995) hypothesized that gender constant children strive to master gender roles, but how well they do so depends on their knowledge of gender stereotypes. They found that only 5–9-year-old gender constant girls with a rich knowledge of gender stereotypes held less positive attitudes than other children held toward computer use.

However, other data do not support cognitive-developmental theory, at least for very early preferences. For example, Perry, White, and Perry (1984) found, among 2–5-year olds, that boys' acquisition of gender stereotypes lagged behind, rather than preceded, their development of gender-typed preferences for toys by about 1 year. Maccoby (1998) concluded that stereotyping is not a necessary condition for the development of certain aspects of gender-typing. However, it is possible that, once children acquire stereotype knowledge, they use stereotypes to guide their own behavior into sex-appropriate channels.

Stereotype knowledge, attention, and memory. Studies of gender stereotyping, attention, and memory can provide insight on the cognitive mechanisms that affect children's gender development. Children tend to remember information that is consistent with a stereotype and to forget or distort information that is inconsistent with it (Calvert & Huston, 1987; Liben & Signorella, 1980; Martin & Halverson, 1983; Signorella et al., 1993). Young children generally remember same-gender-typed objects better than cross-gender-typed ones (Cherney & Ryalls, 1999). Younger children recalled more information from stories that contained gender-consistent activities than they did from other stories (Conkright, Flannagan, & Dykes, 2000). Also, children who more strongly endorse gender stereotypes display poorer memory for counterstereotypic information than their more egalitarian peers do (Carter & Levy, 1988; Liben & Signorella, 1980; Signorella & Liben, 1984).

It may be that children do not encode information that does not fit their gender stereotypic expectations. In a study of mother–child conversations about gender while looking through a storybook, Gelman et al. (2004) showed that 30-month-olds have some difficulty identifying the gender of a person who is engaging in a gender-atypical activity.

Stereotype use and adjustment. It is surprising that the field lacks studies on gender stereotype use and adjustment in young children. In the adult literature, psychologists have focused only on self-stereotyping of gender attributes and adjustment (e.g., Keyes, 1984; Oswald & Lindstedt, 2006; Spence, Helmreich, & Stapp, 1975).

However, one study of young children did consider gender stereotype use and adjustment (Lurye et al., 2008). To measure gender stereotype use, which they viewed more as gender role rigidity, they first told participants about children who had transgressed in terms of gender; for example, a boy who paints his fingernails with nail polish or a girl who plays with trucks. Then they asked participants if they would be friends with each hypothetical child, and if they would want to go to a school that allowed these kinds of behaviors. In the end, they showed an interesting interplay between gender stereotype use and identity. For 5- to 7-year olds, gender stereotype use predicted lower global self-worth, but only for participants with low gender identity centrality and evaluation. There were no effects for 3- to 4-year-olds. The researchers posited that, because age 3–4 is the normative time for a sharp increase in gender stereotype knowledge and use, rigidity at this age

signals social cognitive development, rather than an individual difference that would impact adjustment. Thus, overall, further research on stereotype use and adjustment in children would benefit the field.

Stereotype use and intergroup relations. When we earlier defined gender stereotypes, we differentiated between gender stereotyping and gender prejudice. General stereotyping has been defined as cognitive representations of culturally held beliefs about outgroup members, whereas general prejudice has been seen as a negative affective response toward an outgroup member (McConahay & Hough, 1976). Similarly, Arthur, Bigler, Liben, Gelman, and Ruble (2008) defined gender prejudice as the more affect-laden component of an individual's thinking about gender that consists of one's evaluative feelings about men and women.

Earlier we discussed social identity theory, a theory with much empirical support. However, there are some theoretical issues in social identity theory that developmental studies, in particular, can address. First, how basic is the drive to categorize and achieve a positive social identity through intergroup comparisons? If all individuals have this drive, and if groups truly can be minimal and still elicit intergroup comparisons, then we should see effects even for young children. That is, if the drive to categorize is universal, and all humans are motivated to achieve a positive social identity, then children, in addition to adults, should exhibit intergroup comparison effects. What does the evidence suggest? Children, in fact, do exhibit ingroup favoritism for their own gender group at an early age. Already between the ages of 2 and 3, children develop preferences for peers of their own gender (Ruble & Martin, 1998). Kuhn, Nash, and Bruckner (1978) demonstrated that 2- and 3-year-old children attributed more positive attributes to their own gender group and more negative traits to the other gender group. Researchers have showed evidence for ingroup gender bias in middle and late childhood as well (Verkuyten & Thijs, 2001; Zalk & Katz, 1978).

Even though most children exhibit gender bias, gender differences may exist, though in which direction remains inconclusive. Some research has shown that, although boys typically develop gender attitudes that favor their own group, in middle childhood, girls typically develop more egalitarian gender beliefs (Signorella et al., 1993). This may parallel how most European American children develop stereotypic, pro-European American attitudes about race, whereas African American children often develop non-biased, and sometimes pro-outgroup-biased attitudes (see Spencer & Markstrom-Adams, 1990). In a direct experimental study of how groups of different statuses may differ in intergroup attitudes, Bigler, Brown, and Markell (2001) showed that children who were members of high status, but not low status, groups developed ingroup-biased attitudes. More specifically, high-status children rated their ingroup more positively than the outgroup. In contrast, low-status children rated the ingroup and outgroup equivalently. However, other research has shown that girls exhibit more pro-ingroup gender bias in evaluative attitudes, though only in 10–13 year olds (Verkuyten & Thijs, 2001). Perhaps an age by sex interaction exists. In one study, Welsh children aged 3–9 felt more positively about their own sex than about the other sex (Yee & Brown, 1994). But among the girls, 3-year olds exhibited the most ingroup bias, whereas among the boys, 5- and 7-year olds showed the most bias.

Another theoretical issue that arises in discussions of social identity theory is whether group categorization and comparisons automatically elicit outgroup derogation. Individuals could possibly derive a positive social identity with ingroup favoritism only, without outgroup derogation. What does the research suggest? Developmental studies suggest, contrary to social identity theory, that ingroup favoritism does not automatically confer outgroup derogation (Cameron, Alvarez, Ruble, & Fuglini, 2001). To support this distinction, in an experimental study with novel groups, children's intergroup bias stemmed from differential evaluation of positive, rather than negative, traits (Bigler, Brown, & Markel, 2001; Bigler, Jones, & Lobliner, 1997; Brewer, 1999). That is, intergroup bias took the form of believing that one's ingroup was nearly perfect and the outgroup was merely good.

In addition, when given the opportunity to rate both girls and boys positively or negatively, boys and children who viewed gender as less important to their self-concepts attributed more positive than negative traits to both genders (Susskind & Hodges, 2007), which signals a decoupling of ingroup positivity from outgroup negativity. Also, in a study of 2nd and 5th graders, both boys and girls exhibited ingroup favoritism, but only girls exhibited negative outgroup evaluation (Zalk & Katz, 1978). This interaction could possibly be due to a general “boys are bad” bias in girls (Heyman, 2001). That is, perhaps the default for both girls and boys is to show ingroup positivity only, but, because there is a bias to judge boys as bad, this bias may appear as outgroup negativity for girls.

What factors might affect children’s attitudes toward the other sex? Research suggests that adults’ labeling and functional use of gender categories can affect intergroup attitudes. Patterson and Bigler (2006) divided children into novel “red” and “blue” groups using T-shirt colors. In the experimental condition, teachers used color groups to label children and to organize the classroom, such as by lining up children based on their T-shirt colors. After 3 weeks, children in the experimental classroom showed greater ingroup bias on some measures than did children in a control classroom where color groups were ignored. Even though they did not directly examine gender in this experiment, the data suggest that labeling and the functional use of gender categories can affect intergroup attitudes.

Research on intergroup attitudes in the broader social psychological and developmental fields continues to grow and branch out in interesting directions. For example, some research has provided evidence that children can show different levels of explicit and implicit bias (Baron & Banaji, 2006; Rutland, Cameron, Milne, & McGeorge, 2005). In addition, recent research has shown that preschool and 1st grade children prefer racial ingroup members that exclusively interact with other racial ingroup members (Castelli, De Amicis, & Sherman, 2007). The children evaluated these loyal group members more positively and felt more similar to them, a preference that disappeared among 9- to 11-year old children. The field currently lacks direct evidence of these types of findings in reference to gender prejudice or for very young children. Other researchers have examined attitudes toward own- and other-gender out- and in-subgroups, but only in late adolescence and not in early childhood (Eckes, Trautner, & Behrendt, 2005). Further research in these areas could provide important insight into the development of intergroup attitudes.

Summary

A survey of research on the possible consequences of gender identity and stereotyping overall reveals the potential reach of these constructs. Not only can gender identity and stereotyping affect cognitive processes such as attention and memory, but they may also affect behaviors and preferences. Moreover, gender identity and stereotyping can affect how children feel about themselves and how they interact with and view their peers. In many of these areas, however, research remains sparse and inconclusive such that empirical data often support competing hypotheses. Further research is needed to disentangle these issues.

Future Directions

Our examination of the literature on gender identity and stereotyping in early and middle childhood as a whole reveals several areas that need more empirical attention. There is a lack of research on

theorized dimensions of gender identity in young children. For example, little research exists on the emergence of public regard. We do not know much about how and when children learn what others think of their own gender. When and how do they learn how much others respect and value their gender? We also need more research on the multidimensionality of gender identity in different ethnic, income, and questioning samples. The little available research on diverse groups suggests wide variation in the multidimensionality of gender identity. There is also a lack of research on gender stereotype use, not just knowledge, and how it relates to adjustment in young children. We also do not know much about how children subgroup genders and about their attitudes toward these subgroups. For example, among girls, there may exist a subgroup of tomboys, but even within tomboys, there may be a subgroup of “sporty” tomboys. Attitudes toward girls could vary depending on subgroup categorization.

There are also areas that have been extensively studied, but still remain contentious in their conclusions. For example, what is the trajectory of gender stereotyping? Does it peak and then wane? Does it increase over time? Also, does gender constancy predict gender stereotype knowledge and use? Does gender identity predict sex segregation? For each of these issues we have suggested ways to explain how different studies might show different results. But further research is still needed, and more longitudinal research is needed as well, especially to capture the temporal, causal effects of these constructs.

Finally, we related gender identity and stereotyping to gender-typed preferences and interests, behavior and activities, beliefs and knowledge, memory, intergroup relations, and adjustment and psychological well-being. Evidence shows that gender identity and stereotyping can relate to all of these facets of children’s lives, which emphasizes its importance in development. We have discussed these facets largely as results of gender identity development and gender stereotyping. However, the direction of causality could go the other way, or could work in both directions, each giving feedback and fueling the other. For example, because being a boy is important to a particular boy, he may want to wear cowboy boots all the time. But wearing these cowboy boots everyday may, in turn, build up the importance of being a boy to him and further bolster or affirm that boys are indeed great. Only future research can clarify the direction of these effects.

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