

Gender Identity: A Multidimensional Analysis With Implications for Psychosocial Adjustment

Susan K. Egan
University of Massachusetts Dartmouth

David G. Perry
Florida Atlantic University

This study examined the relations between components of gender identity and psychosocial adjustment. The aspects of gender identity assessed were (a) feelings of psychological compatibility with one's gender (i.e., feeling one is a typical member of one's sex and feeling content with one's biological sex), (b) feelings of pressure from parents, peers, and self for conformity to gender stereotypes, and (c) the sentiment that one's own sex is superior to the other (intergroup bias). Adjustment was assessed in terms of self-esteem and peer acceptance. Participants were 182 children in Grades 4 through 8. Felt gender compatibility (when operationalized as either self-perceived gender typicality or feelings of contentment with one's biological sex) was positively related to adjustment, whereas felt pressure and intergroup bias were negatively associated with adjustment. The results provide new insights into the role of gender identity in children's well-being, help identify sources of confusion in previous work, and suggest directions for future inquiry.

Gender is a quintessential element of human identity. Given that one's gender assignment ordinarily is immutable and that many fundamental features of life—including the recreational, academic, occupational, and relationship activities that one is expected to pursue—are governed by gender, it seems likely that most people devote at least some time to reflecting on questions like these: How well do I fit with my gender category? Must I adhere to the stereotypes for my sex or am I free to explore cross-sex options? Is my sex superior or inferior to the other? We believe that beginning in childhood, people do ask these questions of themselves and, moreover, that their answers influence their psychosocial adjustment. The present study was designed to test these propositions.

In our view, people's answers to the questions noted above represent components of their *gender identity*. We view gender identity as a multidimensional construct encompassing an individual's (a) knowledge of membership in a gender category, (b) felt compatibility with his or her gender group (i.e., self-perceptions of gender typicality as well as feelings of contentment with one's

gender), (c) felt pressure for gender conformity, and (d) attitudes toward gender groups. In this study, we developed measures of the last three of these aspects of gender identity and explored their relations with adjustment in middle childhood.

Prior Conceptualizations of Gender Identity

Perhaps the most researched aspect of gender identity in childhood is one that we do not examine in this study—children's knowledge of their membership in a gender category. This aspect of gender identity develops in a sequence of steps (Slaby & Frey, 1975). By the age of 2 ½ or 3 years, most children can answer correctly the question "Are you a boy or a girl?" but it is not until several years later that children attain gender constancy, that is, understand that their sex remains invariant across time and changes in surface appearance (e.g., hair length). By age 6 or 7, nearly all children attain full gender constancy, thereby eliminating within-sex variability on this facet of gender identity. This fact means that beyond this age, this aspect of gender identity cannot account for within-sex individual differences in other variables, such as sex typing or adjustment.

A number of investigators have studied children's gender identity in terms of self-perceived similarity to gender stereotypes. Some researchers have developed projective tests for this purpose (e.g., Brown, 1956), but it is unclear what these instruments measure (Huston, 1983; Ruble & Martin, 1998). Another strategy has been to infer children's self-perceived gender typicality from their self-ratings on a specific class of sex-typed attributes, such as toy preferences or personality traits. Most commonly, self-attributions of instrumental traits have been used to infer self-perceived masculinity, and self-attributions of expressive traits have been used to infer self-perceived femininity (e.g., Boldizar, 1991; Hall & Halberstadt, 1980). Numerous studies have explored the relations between these measures and adjustment in children and adults. Some studies have found adjustment (e.g., self-esteem)

Susan K. Egan, Department of Psychology, University of Massachusetts Dartmouth; David G. Perry, Department of Psychology, Florida Atlantic University.

Portions of these data were presented at the April 1999 meeting of the Society for Research in Child Development in Albuquerque, New Mexico.

This research was supported by Grant 1R01HD38280-01A1 from the National Institute of Child Health and Human Development. We gratefully acknowledge the cooperation of the faculty and students of the A. D. Henderson University School. We also thank Noel A. Card, Regina A. Finnegan, Ernest V. E. Hodges, Jenny Isaacs, Carol Martin, Louise C. Perry, Matthew Rockloff, Priscilla Rouse Carver, Janet Spence, and Jennifer Yungler for commenting on a draft of this article.

Correspondence concerning this article should be addressed to David G. Perry, Department of Psychology, Florida Atlantic University, Boca Raton, Florida 33431.

to be optimal when individuals perceive themselves to be both instrumental and expressive, but the more common result has been to find instrumental traits, but not expressive traits, to be positively correlated with adjustment for people of both sexes (Aube, Norcliffe, Craig, & Koestner, 1995; Spence & Hall, 1996; Whitley, 1983).

Although popular, the practice of assessing self-perceived gender typicality in terms of self-perceived personality traits (or any other specific class of sex-typed attributes) has several limitations. First, it is now clear that sex typing is multidimensional (Huston, 1983; Ruble & Martin, 1998; Spence & Hall, 1996; Spence & Helmreich, 1980), meaning that many people exhibit only modest consistency in the degree to which they display male-typical or female-typical behavior across different domains (e.g., personality traits, toy and activity preferences, relationship partner preferences, academic pursuits, and occupational preferences). Thus, it is hazardous to infer an individual's overall gender identity from self-perceived sex typing in any single domain. Second, when respondents rate themselves on specific gender-linked attributes, they may be doing so without perceiving the attributes to be relevant to gender. This calls into question the degree to which such measures allow inferences about how respondents feel about themselves in relation to gender categories. A third criticism applies when researchers ascribe specific motivational significance to patterns of scores on the measures. Bem (1981), for example, suggested that people with (a) high scores on instrumental traits and low scores on expressive traits or (b) low scores on instrumental traits and high scores on expressive traits are *gender schematic*, or motivated to adopt behaviors consistent with one sex role and to shun behaviors associated with the other. However, it seems gratuitous to assume that sex-typed self-perceptions necessarily reflect felt pressure for sex role conformity rather than derive from some other source (e.g., temperamental proclivities).

The discovery that sex typing is multidimensional poses a challenge for gender identity theorists, especially those concerned with understanding people's self-perceptions of gender typicality: Are people's conceptions of gender typicality nothing more than a heterogeneous collection of self-perceptions of specific sex-typed attributes, or do people somehow integrate their self-perceptions of sex-linked attributes to reach an overall estimate of their gender typicality? One provocative formulation that addresses this issue is that of Spence (1985; Spence & Buckner, 1995). Spence suggested that a myriad of social-learning and biological factors interact to determine which specific sex-typed attributes an individual develops. Thus, as the data attest, there is considerable variability among persons of a given sex as to the particular constellation of gender-congruent attributes a person displays. Spence suggested, however, that on occasion people review their sex-typed attributes and reach summary judgments of their overall gender typicality. These summary judgments are influenced by a complex set of factors, including not merely the number of gender-congruent attributes the person possesses but also their salience and perceived importance. When reflecting on their gender typicality, most people most of the time are able to identify a sufficient amount of gender-congruent attributes to feel comfortably gender typical. Occasionally, however, people perceive a salient shortcoming in their sex typing (e.g., a boy realizes he is no good in sports). In such cases, people are motivated to adopt a replacement sex-typed attribute, or at least to assign greater weight to alternate

sex-typed attributes that they do possess, so that their summary self-perceived estimate of gender typicality can return to a higher level.

Spence's dynamic, information-processing analysis is intuitively appealing, and central findings of the sex-typing literature (e.g., the multifactorial nature of gender-related phenomena) are consistent with it (e.g., Spence, 1993; Spence & Buckner, 1995; Spence & Hall, 1996). However, a limitation of Spence's work is the absence of an operational definition for her construct of summary self-perceived gender typicality. Spence suggested that people's overall feelings of gender typicality are captured in part by their self-ratings on the two adjectives *masculine* and *feminine* (Spence, 1993), but she acknowledged that people's self-ratings on these adjectives are also likely to be influenced by other factors, such as their knowledge of their biological sex, and therefore that self-ratings on these adjectives cannot be interpreted unambiguously as indexes of self-perceived gender typicality.

The Present Study

The principal purpose of the present study was to develop measures of three components of gender identity, as we defined it earlier, and to test hypotheses about their impact on psychosocial adjustment in preadolescent children. Although our measures were intended to capture three different facets of gender identity, they share a common structural feature: They all require children to make integrated, summary judgments about gender and self that transcend perceptions of functioning within specific domains of sex typing. Like Spence (1985), we believe that people not only generate domain-specific self-perceptions (e.g., "Are my recreational interests typical for my sex?") but also integrate diverse information about gender and self to reach more abstracted, hierarchically superior components of gender identity (e.g., "Overall, am I a good fit with my gender category?"). Moreover, in our view, it is at the level of integrated, higher order appraisals that people's judgments about themselves in relation to gender take on their greatest meaning and affective force and are most likely to bear implications for psychosocial adjustment (e.g., self-esteem and depression).

The first component of gender identity we investigated was children's sense of psychological compatibility with their gender category. Our interest in this construct and our preliminary conceptualization of what it encompasses were based in part on the qualities of children diagnosed with gender identity disorder (Bradley & Zucker, 1990; Green, 1987; Rekers, 1985). Diagnosis of this disorder requires evidence of both dissatisfaction with one's gender assignment (e.g., wishing to be the other sex, experiencing distress that one is expected to behave like same-sex others or is barred from cross-sex activities) and overt cross-gender behavior (Zucker, 1992). The fact that gender-atypical behavior and dissatisfaction with one's gender assignment co-occur in these children suggests that self-perceived gender atypicality and discontentment with one's gender assignment might be two correlated indexes of a common, more global, underlying factor of felt gender compatibility. Thus, our first objective in the present study was to develop a measure of gender compatibility that included not only items measuring self-perceived gender typicality but also items assessing gender contentedness and to see whether the items would coalesce,

as expected, into a single factor of overall felt gender compatibility.

Three additional comments on our gender compatibility construct are in order. First, despite the fact that children who are diagnosed with gender identity disorder may appear to be a discrete subset of children who are experiencing an extreme degree of gender incompatibility, we suspect that within-sex differences in gender compatibility are likely to be distributed in a continuous rather than a categorical fashion in the general population. We say this partly because the symptoms of gender identity disorder have been observed clinically to be distributed continuously (making it difficult to estimate the prevalence of the disorder; Meyer-Bahlburg, 1985) and partly because many children who do not have gender identity disorder are likely, at least occasionally, to question their gender compatibility and thus should fall in between children who feel strongly gender compatible and those rare children who are strongly cross-gender identified.

Second, we expect gender compatibility to exhibit at least moderate temporal stability. Although Spence (1985) regarded low felt gender typicality (conceptualized here as a component of gender compatibility) as a relatively transitory state that ordinarily is fairly quickly repaired (by refocusing of attention onto alternate sex-typical attributes), we suspect that individual differences in felt gender typicality are often quite stable, sometimes lasting months, years, or even a lifetime. The 10-year-old tomboy who prefers rough play with boys over interaction with other girls or the 13-year-old boy who is coming to realize he is gay may struggle with a profound sense of gender atypicality that lasts many formative years. In the present study, we examined the stability of gender compatibility (and the other measures of gender identity) over a 6-month period.

Third, although it is possible to separate gender compatibility into the two dimensions of (a) felt compatibility with one's own gender and (b) felt compatibility with the other gender, we do not make this separation in our conceptualization or assessment of gender compatibility. Instead, we regard gender compatibility as a single bipolar dimension, with high scores reflecting both high compatibility with one's own gender and low compatibility with the other gender, and low scores reflecting both low compatibility with one's own gender and high compatibility with the other. Such a conceptualization is consistent with the fact that when processing information about themselves or other people, both adults and children tend to treat the superordinate constructs of masculinity and femininity as opposite ends of a single continuum (Berndt & Heller, 1986; Biernat, 1991; O'Heron & Orlofsky, 1990; Pedhazur & Tetenbaum, 1979; Storms, 1979).

In this research, we developed a measure of felt gender compatibility suitable for use with preadolescents. Using this measure, we explored two issues. First, we tested the hypothesis that high gender compatibility is beneficial to children's adjustment (measured in terms of global self-worth, self-perceived social competence in the peer group, and actual acceptance by peers). This prediction is based not only on theories suggesting that children evaluate themselves on the basis of gender compatibility (especially self-perceived gender typicality) and suffer discomfort, even despair, when they come up wanting (e.g., Kohlberg, 1966; Spence & Buckner, 1995) but also on empirical findings indicating that cross-sex-typed children experience anxiety, depression, and peer rejection (e.g., Bailey & Zucker, 1995; Berndt & Heller, 1986;

Ladd, 1983; Rekers, 1985). Although our prediction may appear straightforward, it may not be shared by all who theorize about the relation of gender identity to adjustment. In particular, if one assumes that strong self-perceived gender typicality reflects a strong felt pressure to conform to gender stereotypes that straight-jackets healthy exploration of the self (e.g., Bem, 1981), then one might expect high gender compatibility to be associated with signs of poor rather than good adjustment.

The second issue we explored regarding gender compatibility concerned its determinants. For young children, self-observation of concrete, easily observable aspects of sex typing, such as activity choices and playmate preferences, may be especially important for feeling that one is a good fit with one's gender, but as children get older, self-perceived sex-typed personality traits probably assume greater importance. Maccoby (1998) indicated that preadolescent boys, especially when interacting in same-sex groups, tend to exhibit agentic traits such as competitiveness, daring, and dominance, whereas preadolescent girls tend to exhibit communal behaviors such as intimate exchange, cooperation, and efforts to maintain social harmony. Maccoby pointed out that although peer interaction remains strongly segregated by sex during this age period, there exist considerable within-sex differences in children's tendencies to exhibit the traits typical of their sex. Thus, self-observation of sex-typical traits may figure strongly in preadolescents' felt gender compatibility. Another potentially important contributor to preadolescents' gender compatibility is an emerging sense of the self as a sexual being. Spence and Buckner (1995) suggested that during early adolescence, a person's sense of gender typicality may be either reinforced by a developing heterosexual orientation or threatened by a dawning awareness that one is gay or lesbian. Because sexual orientation appears to be established on average by age 10 (McClintock & Herdt, 1996), it may very well influence gender compatibility in preadolescents. To determine which, if any, of the aforementioned factors predict gender compatibility in preadolescents, we also measured children's self-perceived sex typing in seven specific domains: male-typed activities, female-typed activities, agentic traits, communal traits, liking for male peers, liking for female peers, and heterosexual identity.

The second new measure of psychological gender identity we developed was intended to capture the degree to which children feel compelled to engage in gender-congruent conduct. Numerous theorists have noted that children who experience strong pressure for sex typing from parents, peers, the media, and other socializing agents are likely to internalize the prescriptive and proscriptive messages, coming to anticipate evaluative reactions not only from other people but also from themselves for sex-typed conduct (Bandura, 1986; Bem, 1981; Bussey & Bandura, 1999; Mischel, 1970; Perry & Bussey, 1984).

Felt pressure for sex typing should carry implications for children's mental health. Like Bem (1981), we imagine that children who feel strong pressure for sex typing will be less likely than other children to explore a wide range of options when deciding what interests to pursue or talents to cultivate and therefore will be less likely to settle on options that are maximally fulfilling; this self-limitation should be reflected in a lesser sense of satisfaction with the self (though perhaps not in lesser acceptance by peers). In addition, children who feel strong pressure for sex typing may be said to be experiencing *conditionality of support*—the sense that

one must tailor the self in order to receive the love and acceptance of significant others. Conditional support and the false self it fosters are conducive to low self-esteem and depression (Harter, 1998; Rogers, 1951; Winnicott, 1965).

The separate assessment of felt gender compatibility and felt pressure for sex typing is an important feature of this study. As pointed out above, some researchers have assumed that strong self-perceived gender typicality implies strong felt pressure for gender conformity (e.g., Bem, 1981). In contrast, we do not expect a strong correlation between felt gender compatibility and felt pressure. The reason we do not is that considerable sex typing (and hence gender typicality) results from processes other than felt pressure, such as biological factors and imitation of same-sex models (e.g., Eisenberg, Murray, & Hite, 1982; Maccoby, 1998; Perry & Bussey, 1979); these influences are unlikely to be associated with felt pressure (e.g., behaviors adopted through imitation tend not to be perceived by the imitator as motivated by external pressure; Grusec, Kuczynski, Rushton, & Simutis, 1978). But the more important point is that we expect gender compatibility and felt pressure to relate to children's mental health in opposite directions—positively for gender compatibility and negatively for felt pressure.

Although we are hypothesizing that gender compatibility and felt pressure make separate (and oppositely valenced) contributions to children's mental health, it is also possible that gender compatibility and felt pressure influence adjustment interactively. Of particular interest is the possibility that low gender compatibility is more disturbing for children with high felt pressure than for children who feel little pressure for sex typing. This possibility was also explored in the present study.

The third measure of gender identity we developed was one of intergroup bias—the sentiment that one's own sex is superior to the other. Here, the object of evaluation is one's group rather than the self. Social psychologists have noted that merely perceiving the self to belong to one group rather than to another fosters in-group favoritism (e.g., Tajfel & Turner, 1979). Young children are especially given to same-sex favoritism (e.g., they are likely to attribute positive attributes to their own sex and negative ones to the other), and this bias may contribute to early sex-segregated play (Maccoby, 1998; Ruble & Martin, 1998; Serbin, Powlishta, & Gulko, 1993). However, same-sex favoritism is also evident at older ages, at least for some children. Powlishta (1995) found considerable individual differences in intergroup bias among preadolescents who were asked to evaluate unfamiliar videotaped children; some preadolescents displayed consistent tendencies to favor target children of their own sex, to exaggerate differences between and similarities within the sexes, to make use of gender stereotypes, and to homogenize the other sex.

We developed a scale to assess same-sex favoritism and explored its relations with adjustment. Because intergroup bias sometimes appears to be a strategy for maintaining high self-esteem (Bigler, Jones, & Lobliner, 1997; Taylor & Brown, 1988), it might be positively associated with self-esteem. However, intergroup bias may cause children to experience difficulties with peer interaction (Powlishta, 1995). For example, the distorted perceptions and negative out-group attitudes that are part of in-group favoritism may undermine cooperative, respectful interactions with other-sex peers, reducing the degree to which the biased child will be liked by children of the other sex. Furthermore, because hetero-

sexual interactions become more normative during early adolescence, children who exhibit intergroup bias at this age may be perceived as behaving inappropriately and immaturely by peers of both sexes.

In summary, our purpose was to examine the relations of felt gender compatibility, felt pressure for sex typing, and intergroup bias with indexes of personal and social adjustment in preadolescents. A noteworthy feature of our methodology is that we collected all of our measures from our participants twice—once in the fall of the school year and again in the spring about 6 months later. We did so for two reasons. First, it allowed us to examine the stability of our measures. Second, it allowed us to average each child's scores across two testings to achieve especially reliable measurements. The primary data analyses involved examining associations among these time-averaged scores. However, we acknowledge that the logic of these analyses is essentially that of examining concurrent associations, and therefore the results of these analyses are limited with respect to inferences about direction of causality.

Method

Participants

All children in the fourth through eighth grades of a state university school were invited to participate. Of the 235 children in these grades, 182 (77%; 81 boys and 101 girls) received written parental consent to participate; the children also signed an assent form. The admissions procedures of the school are designed to ensure that the demographic composition of the student body reflects that of the population of the state of Florida as a whole (68% White, 18% African American, 13% Hispanic, and 1% Asian, with annual household income distributed as follows: 6%, \$0–\$17,499; 12%, \$17,500–\$32,499; 22%, \$32,500–\$52,499; and 60%, \$52,500 or more). Approximately equal numbers of children came from each grade (39, 42, 35, 35, and 31 fourth through eighth graders, respectively). Children averaged 11 years 9 months of age in the fall of the school year.

Procedure

Two instruments were administered to children in the fall (November) and again in the spring about 6 months later (May). The first instrument was a 92-item self-report questionnaire assessing most of the measures (global self-worth, self-perceived peer social competence, gender compatibility, felt pressure, intergroup bias, male-typed activities, female-typed activities, agentic traits, communal traits, and heterosexual identity). The second instrument was a sociometric assessment that provided the remaining measures (liking for boys, liking for girls, acceptance from male peers, and acceptance from female peers). The measures were administered during a single session that lasted about 1 hour. Each child was individually tested by one of several female adults who read items aloud to the child. The instruments are described in turn.

Self-Report Questionnaire

This 92-item questionnaire contained 10 scales. All items were written in the format developed by Harter (1985) to reduce the influence of response biases. The first sample item given in the Appendix illustrates the item format. Scale scores were computed by averaging across items and could range from 1 to 4. Cronbach's alpha coefficients are given below for the final forms of the scales; these coefficients are for the time-averaged scores used in the primary analyses.

The first 12 items of the questionnaire were items developed by Harter (1985) to measure the constructs of *global self-worth* (6 items) and *self-*

perceived peer social competence (6 items). The Cronbach's alpha coefficients for these scales were .87 and .81, respectively; the stability coefficients for the measures over the 6-month period were .57 and .68, respectively.

Items 13–54 of the questionnaire measured *gender compatibility* (15 items), *felt pressure* (16 items), and *intergroup bias* (11 items). The items of these three scales were randomly interspersed. The items of these scales were new, and each scale required refinement. We describe the development of these three scales next.

The scale measuring gender compatibility contained items assessing both self-perceived gender typicality (e.g., feeling that one is a typical example of one's gender category, feeling that one's skills or interests are similar to those of same-sex others) and gender contentedness (e.g., feeling happy with one's gender assignment, rarely desiring to do cross-sex things or feeling cheated that other-sex things are off limits). We had expected these two subsets of items to form a single factor of gender compatibility, but because the items were heterogeneous, we performed a factor analysis (principal components with varimax rotation) on the 15 items. This analysis yielded four factors with eigenvalues over 1.0. The first two factors were readily interpretable and reflected clearly distinct factors that could be labeled Gender Contentedness and Gender Typicality. Each of these two factors contained 6 items that loaded at least .50 on the factor but below .40 on any other factor. The first factor, Gender Contentedness, accounted for 28.4% of the variance and had an eigenvalue of 4.25; the second factor, Gender Typicality, accounted for 12.1% of the variance and had an eigenvalue of 1.82. The remaining two factors consisted of stray items and were not considered further. We computed separate factor scores for the Gender Typicality and Gender Contentedness factors for each child by averaging the child's scores on the 6 items of each factor, and we tested all hypotheses concerning the original gender compatibility construct twice—once using Gender Typicality and once using Gender Contentedness scores. The Cronbach's alpha coefficients for the gender typicality and gender contentedness scales were .78 and .79, respectively; the stability coefficients for these measures over the 6-month period were .64 and .56, respectively. The correlation between the two scales was .41. Items making up these scales are given in the Appendix.

Items measuring felt pressure assessed the degree to which children felt pressure from their parents, their peers, and themselves for gender conformity. Again, because the items of this scale were deliberately heterogeneous, a factor analysis was performed on the 16 items. The analysis yielded three factors with eigenvalues over 1.0. However, only the first of these factors was readily interpretable, and inspection of the scree plot confirmed that only this factor accounted for a substantial proportion of the variance; hence, the other factors were not considered further. The first, interpretable factor had an eigenvalue of 6.62 and accounted for 41% of the variance. It clearly represented a general felt pressure for gender conformity and thus was labeled Felt Pressure. The factor comprised 10 items with loadings of at least .50; of these items, 4 captured felt pressure from parents, 4 captured felt pressure from peers, and 2 captured felt pressure from self. A factor score was computed for each child by averaging the child's scores on these 10 items. The Cronbach's alpha coefficient was .92, and the stability coefficient over the 6-month period was .82. Items of the scale are given in the Appendix.

Items measuring intergroup bias assessed the degree to which children are more likely to attribute positive qualities and less likely to attribute negative qualities to their own sex than to the other sex. A factor analysis was not performed on this scale, but three items were eliminated owing to low item-total correlations. Thus, the final version of the scale contained eight items. These items are given in the Appendix. The Cronbach's alpha coefficient was .73, and the stability coefficient from fall to spring was .65.

Items 55–92 of the questionnaire measured *male-typed activities* (eight items), *female-typed activities* (eight items), *agentic traits* (eight items), *communal traits* (eight items), and *heterosexual identity* (six items). Items of these scales were randomly intermingled.

Items on the male-typed activities scale tapped children's perceptions of self-efficacy for boy-typical activities (e.g., from the girls' form of the questionnaire: "Some girls aren't good at building model planes and cars BUT Other girls are good at building model planes and cars"). The other male-typed activities were "using tools to make things," "playing sports," "playing video games," "doing things like washing the car and yardwork," "fishing or hunting," "horsing around and play fighting," and "math and science." Items on the female-typed activities scale tapped children's self-efficacy for the following activities: "babysitting or looking after younger kids," "jump rope or gymnastics," "shopping," "crafts," "tap dancing or ballet," "cheerleading," "making jewelry," and "baking or helping in the kitchen." The Cronbach's alpha coefficients for the male-typed activities and female-typed activities scales were .73 and .84, respectively; the respective stability coefficients were .74 and .84. We elected to assess children's self-perceptions of male-typed and female-typed activities (as well as their self-perceptions of agentic and communal traits) in terms of perceptions of self-efficacy because efficacy beliefs are a major basis for self-evaluation (Bandura, 1986; Harter, 1998) and are highly correlated with behavioral enactment (Bandura, 1986).

Items on the agentic traits scale measured children's perceptions of self-efficacy for instrumental traits (e.g., from the girls' form: "Some girls are good at being a leader among their friends BUT Other girls aren't good at being a leader among their friends"). The other agentic traits were "making up their own minds about things," "defending themselves against bullies," "getting others to do what they want them to do," "taking charge," "standing up for themselves," "taking risks," and "being brave." Items on the communal traits scale measured children's perceptions of self-efficacy for "showing their emotions," "following directions," "helping their friends solve their problems," "making people feel better when their feelings are hurt," "being polite and showing good manners," "being kind hearted," "expressing concern when others need help," and "sharing things with those in need." The Cronbach's alpha coefficients for the agentic traits and communal traits scales were .78 and .77, respectively; the respective stability coefficients were .60 and .68.

Items on the heterosexual identity scale assessed children's expectations for future romantic involvement with other-sex persons. One item was deleted, owing to a low item-total correlation. The resulting five items (from the girls' form) were as follows: "Some girls definitely think they'll get married one day BUT Other girls don't necessarily think they'll get married one day," "Some girls don't know if they'll have a family when they grow up BUT Other girls are sure they'll have a family when they grow up," "Some girls think that they'll be a wife one day BUT Other girls don't think that they'll be a wife one day," "Some girls definitely think they'll be a mother one day BUT Other girls don't necessarily think they'll be a mother one day," and "Some girls aren't sure they'll fall in love with a man someday BUT Other girls are sure they'll fall in love with a man someday." The Cronbach's alpha coefficient was .93, and the stability coefficient was .75.

Sociometric Assessment

Children rated how much they liked each of their participating classmates on a 5-point scale with 1 indicating *dislike a lot*, 3 indicating *neither like nor dislike*, and 5 indicating *like a lot*. *Liking for boys* and *liking for girls* were computed as the average rating given to male and female peers, respectively. *Acceptance from male peers* and *acceptance from female peers* were computed as the average rating received from male peers and female peers, respectively. The stability coefficients for the four foregoing measures were .70, .71, .77, and .53, respectively.

Results

The results are presented in six sections. First, correlations among the measures are presented. Second, sex and age differ-

ences in the measures are summarized. Third, relations between the two gender compatibility scales and adjustment are given. Fourth, relations between the domain-specific measures of sex typing (e.g., agentic traits) and the gender compatibility measures are presented. The fifth and sixth sections present, respectively, the relations between adjustment and felt pressure and intergroup bias. All *p* values in this article are for two-tailed tests unless otherwise indicated.

The results are from analyses conducted on the time-averaged scores. We report the results of the time-averaged data rather than the results of analyses performed at each of the two times of testing because (a) the results with the time-averaged data were highly similar to the results obtained at each time separately and (b) the time-averaged scores are more reliable than single-time scores. Averaging the measures across the two time points is warranted by the considerable temporal stability of the measures, as mentioned previously.

Intercorrelations of Measures

Here we present (a) correlations among the gender identity and sex-typing measures and (b) correlations among the adjustment indexes.

Intercorrelations of gender identity and sex-typing measures. Zero-order correlations among the time-averaged gender identity and sex-typing measures are given, separately by participant sex, in Table 1. Two features of these correlations are noteworthy. First, correlations among the four higher order measures of gender identity were either modest or nonsignificant, confirming the utility of a multidimensional approach to gender identity. Second, consistent with prior literature (Huston, 1983; Ruble & Martin, 1998), associations among the domain-specific measures of sex typing were generally modest to moderate, and many were nonsignificant.

Intercorrelations of adjustment indexes. Zero-order correlations among the time-averaged adjustment indexes are given in Table 2. The low to modest associations among these measures illustrate the usefulness of including multiple indexes of adjustment.

Table 2

Zero-Order Correlations Among Adjustment Indexes

Adjustment index	1	2	3	4
1. Global self-worth	—	.38**	.04	.15
2. Self-perceived peer social competence	.41**	—	.33*	.35*
3. Acceptance by boys	-.06	.43**	—	.52**
4. Acceptance by girls	.02	.30*	.41**	—

Note. Correlations for boys are above the diagonal; correlations for girls are below the diagonal. Correlations are based on time-averaged scores. **p* < .05. ***p* < .01.

Sex and Age Differences in Gender Identity and Sex-Typing Measures

Means and standard deviations of the gender identity and sex-typing measures are given separately by sex in Table 3. To discern significant sex and age differences, we treated each measure as a dependent variable in a multiple regression analysis with sex and age entered as simultaneous predictors. With age controlled, the effect of sex was significant for eight measures, as indicated in the *F* column of Table 3. Boys and girls differed significantly on all four higher order indexes of gender identity: Boys scored higher on gender typicality, gender contentedness, and felt pressure, whereas girls scored higher on intergroup bias.

With sex controlled, the effect of age was significant for four measures. With increasing age, children scored higher on agentic traits (*pr* = .17, *p* < .05), liking for boys (*pr* = .29, *p* < .001), and liking for girls (*pr* = .18, *p* < .05) but lower on gender contentedness (*pr* = -.20, *p* < .01) and intergroup bias (*pr* = -.31, *p* < .001). Because of these effects of age, we controlled for age in subsequent analyses.

Relations Between Gender Compatibility (Gender Typicality and Gender Contentedness) and Adjustment

To examine the relations between gender typicality and adjustment, we performed four multiple regression analyses (one for

Table 1

Zero-Order Correlations Among Gender Identity and Sex-Typing Measures

Measure	1	2	3	4	5	6	7	8	9	10	11
Gender identity											
1. Gender typicality	—	.47**	.09	.01	.22*	-.02	.38**	.31**	.04	.08	.21
2. Gender contentedness	.30**	—	.20	.08	.10	-.29**	.31**	.20	-.18	-.11	.23*
3. Felt pressure	-.07	.06	—	.08	.09	-.37**	.02	-.30**	.08	.21	-.02
4. Intergroup bias	.02	.28**	.33**	—	.19	.02	-.04	.06	.09	-.18	-.24*
Sex typing											
5. Male-typed activities	-.12	-.03	-.36**	-.20*	—	.25*	.48**	.11	.08	.18	.14
6. Female-typed activities	.36**	.28**	-.05	.10	.11	—	.08	.16	-.02	-.09	.13
7. Agentic traits	.14	-.17	-.31**	-.26**	.34**	.23*	—	.43**	-.13	.16	.46**
8. Communal traits	.53**	.20*	-.16	-.06	.10	.47**	.39**	—	-.03	.02	.34**
9. Liking for boys	.21*	-.13	-.20*	-.34**	.13	-.01	.24*	.21*	—	.43**	-.07
10. Liking for girls	.27**	.09	.20*	.17	-.14	.20*	-.02	.19	.20*	—	.15
11. Heterosexual identity	.25*	.13	-.19	-.10	.13	.32*	.15	.34**	.21*	.17	—

Note. Correlations for boys are above the diagonal; correlations for girls are below the diagonal. Correlations are based on time-averaged scores. **p* < .05. ***p* < .01.

Table 3
Means and Standard Deviations of Gender Identity and Sex-Typing Measures by Child Sex

Measure	Boys		Girls		F
	M	SD	M	SD	
Gender identity					
Gender typicality	3.15	.46	2.92	.55	9.24**
Gender contentedness	3.24	.33	2.55	.51	107.21***
Felt pressure	2.64	.53	1.62	.39	220.48***
Intergroup bias	2.49	.43	2.87	.41	46.58***
Sex typing					
Male-typed activities	3.34	.37	2.93	.47	41.64***
Female-typed activities	2.23	.50	3.11	.42	171.60***
Agentic traits	3.23	.49	3.18	.40	1.09
Communal traits	3.08	.36	3.38	.36	28.63***
Liking for boys	3.71	.47	3.22	.62	43.82***
Liking for girls	3.16	.58	3.89	.43	91.60***
Heterosexual identity	3.47	.62	3.42	.56	.65

Note. F values indicate the significance of the sex difference (with age controlled). Entries are based on time-averaged scores.

** $p < .01$. *** $p < .001$.

each adjustment index). In each analysis, sex and age were entered on the first step; gender typicality was entered on the second step; and the interaction of sex and gender typicality was evaluated on the third step.

As expected, gender typicality was positively related to all four adjustment indexes. When evaluated on the second step, gender typicality was significantly associated with global self-worth, $F_{\Delta}(3, 178) = 31.86, p < .001, \Delta R^2 = 15\%$; with self-perceived peer social competence, $F_{\Delta}(3, 178) = 52.56, p < .001, \Delta R^2 = 23\%$; with acceptance from male peers, $F_{\Delta}(3, 178) = 6.77, p < .01, \Delta R^2 = 3\%$; and with acceptance from female peers, $F_{\Delta}(3, 178) = 5.92, p < .05, \Delta R^2 = 2\%$. In no analysis was the

interaction of sex with gender typicality significant. Table 4 presents the relation between each gender identity measure and each adjustment index separately by sex of child as well as for the total sample.

Supplementary analyses confirmed the robustness of the associations between gender typicality and the adjustment indexes. Because certain other gender identity and domain-specific measures of sex typing were also associated with the adjustment indexes (see Table 4), it might be thought that one or more of these other measures account for the association of gender typicality with adjustment. However, the relations between gender typicality and the adjustment measures remained significant when the relations were evaluated with all of the other measures of gender identity and sex typing controlled. These relations are given in Table 5.

It was suggested that the impact of gender typicality on mental health might be moderated by felt pressure, with gender typicality bearing a stronger relation to adjustment for children with high felt pressure than for children feeling less pressure for gender conformity. To explore this issue, we conducted four additional multiple regression analyses (one for each outcome measure). In each analysis, the interaction of gender typicality and felt pressure was evaluated with age, sex, and the main effects of gender typicality and felt pressure in the model. In no analysis did the interaction approach significance, which suggests that the relation between gender typicality and adjustment does not hinge on degree of felt pressure.

Similar analyses were conducted to examine the relations between gender contentedness and adjustment. When evaluated on the second step (i.e., with sex and age controlled), gender contentedness was significantly related to only one adjustment index: global self-worth, $F_{\Delta}(3, 178) = 7.44, p < .01, \Delta R^2 = 4\%$. In no analysis was the interaction of sex with gender contentedness significant. The relations between gender contentedness and each

Table 4
Relations of Gender Identity and Sex-Typing Measures to Adjustment Indexes

Measure	Adjustment index											
	Global self-worth			Self-perceived peer social competence			Acceptance from male peers			Acceptance from female peers		
	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Gender identity												
Gender typicality	.39***	.48***	.36***	.48***	.47***	.48***	.19**	.08	.25*	.18*	.19†	.24*
Gender contentedness	.20**	.24*	.17†	.12	.24*	.07	-.12	-.14	-.05	.03	.01	.00
Felt pressure	-.21**	-.11	-.34***	-.12†	.07	-.29**	-.07	.03	-.12	.13†	.04	.20*
Intergroup bias	-.04	-.02	-.06	-.17*	-.15	-.19	-.21**	-.25*	-.18	-.07	-.20†	.07
Sex typing												
Male-typed activities	.15*	.08	.20*	.18*	.24*	.14	-.06	-.02	-.11	-.18*	.00	-.34***
Female-typed activities	.10	-.02	.20*	.14	.02	.25*	-.12	-.11	-.12	-.09	-.10	-.10
Agentic traits	.32***	.35**	.30**	.41***	.53***	.33**	-.04	-.05	-.03	-.04	.08	-.20*
Communal traits	.46***	.44***	.48***	.24**	.21	.27**	.05	.02	.06	.03	.00	.08
Liking for boys	.00	-.04	.08	.24**	.07	.34***	.46***	.36***	.43***	.06	.19	.12
Liking for girls	.12	.02	.18	.24**	.28*	.25*	.07	.27*	.02	.41***	.44***	.29**
Heterosexual identity	.24**	.27*	.20*	.30***	.36**	.27**	-.03	-.06	.09	.05	-.03	.09

Note. Entries for the entire sample are partial correlations with sex and age controlled; entries for boys and girls are partial correlations with age controlled. Entries are based on time-averaged scores.

† $p < .05$, one-tailed. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Relations of Gender Identity and Sex-Typing Measures to Adjustment Indexes With the Other 10 Gender Identity and Sex-Typing Measures Controlled

Measure	Adjustment index											
	Global self-worth			Self-perceived peer social competence			Acceptance from male peers			Acceptance from female peers		
	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls	All	Boys	Girls
Gender identity												
Gender typicality	.23**	.36**	.15	.39***	.28*	.42***	.20**	.09	.26*	.15*	.16	.18
Gender contentedness	.06	-.05	.09	.01	.02	-.02	-.11	-.12	-.10	-.03	.00	-.09
Felt pressure	-.19**	-.09	-.29**	-.12	.01	-.19†	-.03	.04	-.06	.00	-.08	.10
Intergroup bias	-.02	.00	.00	-.15*	-.16	-.12	-.20**	-.35**	-.09	-.10	-.14	-.03
Sex typing												
Male-typed activities	.09	-.06	.12	.04	-.04	.06	-.07	.05	-.14	-.14	-.07	-.22*
Female-typed activities	-.14	-.11	-.14	-.01	.02	.02	-.16*	-.12	-.21*	-.11	-.06	-.20
Agentic traits	.10	.11	.11	.29***	.37**	.22*	-.06	-.02	-.08	-.05	.04	-.14
Communal traits	.27**	.24*	.31**	-.12	-.07	-.15	.04	.14	.01	.00	-.04	.09
Liking for boys	-.13	-.01	-.13	.13	.03	.15	.43***	.29*	.42***	-.07	-.03	.08
Liking for girls	.13	-.03	.21*	.18*	.19	.20†	-.04	.03	-.12	.40***	.39***	.18
Heterosexual identity	.04	.07	-.01	.12	.10	.09	-.06	-.13	.04	.02	-.11	.10

Note. Entries for the entire sample are partial correlations with sex, age, and the other 10 gender identity and sex-typing measures controlled; entries for boys and girls are partial correlations with age and the other 10 gender identity and sex-typing measures controlled. Entries are based on time-averaged scores.

† $p < .05$, one-tailed. * $p < .05$. ** $p < .01$. *** $p < .001$.

adjustment index, for the total sample as well as for each sex, are given in Table 4.

Although gender contentedness was significantly associated with global self-worth in the foregoing analysis, the association was reduced to nonsignificance when the other measures of gender identity and self-perceived sex typing were controlled (see Table 5).

That gender contentedness is not a strong main-effect predictor of adjustment does not rule out the possibility that gender contentedness interacts with felt pressure to affect children's mental health. As suggested earlier, perhaps low gender contentedness is harmful to children's mental health only when children feel strong pressure for gender conformity. This possibility was evaluated in four multiple regression analyses (one for each adjustment index) in which the interaction of gender contentedness and felt pressure was evaluated with the main effects of age, sex, gender contentedness, and felt pressure controlled. The interaction term was indeed significant, or nearly so, for two adjustment indexes: global self-worth, $F_{\Delta}(5, 176) = 3.56$, $p < .06$, $\Delta R^2 = 2\%$, and self-perceived peer social competence, $F_{\Delta}(5, 176) = 7.90$, $p < .01$, $\Delta R^2 = 4\%$. We explored the nature of these interactions using the procedures recommended by Aiken and West (1991). The results confirmed that the degree to which gender contentedness predicts self-esteem is a direct function of the degree to which children feel pressure for gender conformity. As the level of felt pressure moved from low (-1 SD) to medium (0 SD) to high ($+1$ SD), gender contentedness became increasingly predictive of both global self-worth (respective Bs = .11, *ns*; .36, $p < .01$; and .52, $p < .001$) and self-perceived peer social competence (respective Bs = .03, *ns*; .28, $p < .01$; and .52, $p < .001$).

Relations Between Domain-Specific Sex-Typing Measures and Gender Compatibility (Gender Typicality and Gender Contentedness)

We hypothesized that feelings of gender compatibility rest partly on self-perceived sex typing. Thus we examined the relation between each domain-specific sex-typing measure and each measure of gender compatibility (gender typicality and gender contentedness) in a separate regression analysis. In each analysis, either gender typicality or gender contentedness served as the dependent variable; sex and age were entered on the first step; a domain-specific sex-typing measure was entered on the second step; and the interaction of sex and the sex-typing measure was tested on the third step.

One would expect the factors associated with children's feelings of gender typicality and gender contentedness to vary with sex, and indeed the interaction of sex with sex-typing measure was significant in several analyses. In the prediction of gender typicality, sex interacted with male-typed activities, $F_{\Delta}(4, 177) = 4.71$, $p < .05$, $\Delta R^2 = 3\%$; with female-typed activities, $F_{\Delta}(4, 177) = 9.22$, $p < .01$, $\Delta R^2 = 5\%$; with communal traits, $F_{\Delta}(4, 177) = 5.12$, $p < .05$, $\Delta R^2 = 2\%$; and with liking for girls, $F_{\Delta}(4, 177) = 3.34$, $p < .07$, $\Delta R^2 = 2\%$. In the prediction of gender contentedness, sex interacted with female-typed activities, $F_{\Delta}(4, 177) = 13.55$, $p < .001$, $\Delta R^2 = 4\%$, and with agentic traits, $F_{\Delta}(4, 177) = 8.08$, $p < .01$, $\Delta R^2 = 3\%$. The relations of the sex-typing measures to gender typicality and gender contentedness are presented separately by sex in Table 6. As may be seen, gender typicality in boys was predicted by male-typed activities, agentic traits, heterosexual identity, and (unexpectedly) communal traits; in girls, gender typicality was predicted by female-typed activities, communal traits, liking for girls, heterosexual identity, and (unexpectedly)

Table 6
Relations of Domain-Specific Sex-Typing Measures to Gender Typicality and Gender Contentedness

Sex-typing measure	Gender typicality		Gender contentedness	
	Boys	Girls	Boys	Girls
Male-typed activities	.23*	-.12	.10	-.01
Female-typed activities	-.03	.38***	-.29**	.24*
Agentic traits	.40***	.13	.33**	-.12
Communal traits	.32**	.52***	.21	.24*
Liking for boys	.02	.21*	-.19	.01
Liking for girls	.14	.27**	-.09	.09
Heterosexual identity	.26*	.25*	.26*	.14

Note. Entries are partial correlations with age controlled and are based on time-averaged scores.

* $p < .05$. ** $p < .01$. *** $p < .001$.

liking for boys. Gender contentedness in boys was predicted by agentic traits, heterosexual identity, and low scores on female-typed activities; in girls, gender contentedness was predicted by female-typed activities and communal traits.

Despite the several significant relations between individual sex-typing measures and the gender compatibility measures, it should be pointed out that when considered collectively, the seven sex-typing measures did not account for a large percentage of the variance in either gender typicality or gender contentedness. When examined as a block (with age controlled), the incremental percentage of variance accounted for by the sex-typing measures was 21% for boys' gender typicality, 35% for girls' gender typicality, 29% for boys' gender contentedness, and 13% for girls' gender contentedness. These data suggest that factors other than the sex-typing variables studied here also contribute to children's feelings of gender typicality and contentedness.

Relations Between Felt Pressure and Adjustment

Four multiple regression analyses, one for each adjustment index, were performed. The analyses were similar to those that examined the relations between gender compatibility and adjustment, but felt pressure was substituted for the compatibility variable.

As expected, when evaluated on the second step, felt pressure was significantly and negatively related to global self-worth, $F_{\Delta}(3, 178) = 8.12$, $p < .01$, $\Delta R^2 = 4\%$. Felt pressure was not a significant main-effect predictor of self-perceived peer social competence or acceptance by either male or female peers. However, the interaction of sex and felt pressure was significant in the analysis performed on children's global self-worth, $F_{\Delta}(4, 177) = 4.95$, $p < .05$, $\Delta R^2 = 3\%$, and in the analysis performed on self-perceived peer social competence, $F_{\Delta}(4, 177) = 7.87$, $p < .01$, $\Delta R^2 = 4\%$. As may be seen in Table 4, the negative impact of felt pressure on self-perceived peer social competence was far stronger for girls than for boys. The robustness of these relations is confirmed by the entries in Table 5, which show that the negative relations between felt pressure and the self-esteem indexes for girls remained intact even when the other 10 sex-typing and gender identity measures were controlled.

Relations Between Intergroup Bias and Adjustment

Four regression analyses similar to those reported in the preceding section but with intergroup bias substituted for felt pressure were performed. When evaluated on the second step, intergroup bias was unrelated to global self-worth but was negatively related to both self-perceived peer social competence, $F_{\Delta}(3, 178) = 5.48$, $p < .05$, $\Delta R^2 = 3\%$, and acceptance from the male peer group, $F_{\Delta}(3, 178) = 7.88$, $p < .01$, $R^2\Delta = 4\%$. The interaction of sex with intergroup bias was not significant in any analysis. Associations of intergroup bias with the adjustment indexes when the other 10 sex-typing and gender identity measures were controlled are given in Table 5. The previous relations for the total sample between intergroup bias and self-perceived peer social competence and acceptance from male peers remained significant.

Discussion

The results support the thesis that gender identity is multidimensional. It is apparent that by middle childhood children have developed fairly stable conceptions of (a) the degree to which they typify their gender category, (b) their contentedness with their gender assignment, (c) whether they are free to explore cross-sex options or are compelled to conform to gender stereotypes, and (d) whether their own sex is superior to the other. These dimensions of gender identity are not strongly related to one another, yet all relate to psychosocial adjustment. The pattern of results helps identify not only components of gender identity that promote or undermine children's well-being but also sources of confusion in previous research on the relations between gender identity and adjustment.

That self-perceived gender typicality and felt pressure for sex typing are uncorrelated and relate to adjustment in opposite ways (positively for gender typicality, negatively for felt pressure) is especially noteworthy. It indicates that self-perceptions of gender typicality do not necessarily reflect an unhealthy gender-role straightjacket that undermines well-being; rather, they appear to contribute positively and directly to a healthy sense of self. Clearly, it is felt pressure for gender conformity, not a perception of the self as gender typical, that is harmful. Thus, children's adjustment is optimized when they (a) are secure in their conceptions of themselves as typical members of their sex yet (b) feel free to explore cross-sex options when they so desire. Parents and educators might strive to instill in children a sense that they are free to investigate other-sex options, but these adults should also be respectful of children's need to feel that they are typical and adequate members of their own gender.

An important implication of these results is that researchers working in the area of gender identity should use measures that capture intended constructs in explicit and precise ways. For example, if one wishes to examine effects of felt pressure, one ought to measure felt pressure directly rather than infer it from self-perceived sex typing (e.g., self-perceived agentic or communal traits) or overall gender typicality. Furthermore, it is hazardous to use generic terms like *gender identity*, *gender schematicity*, *sex role orientation*, *masculinity*, and *femininity* unless their precise meanings are spelled out and one is able to rule out alternative, unintended interpretations of the terms (Spence & Buckner, 1995). For example, studies have sometimes found that females who perceive themselves to be high on expressive traits and low on

instrumental traits are disadvantaged on some index of adjustment or competence (e.g., Eccles, 1989; Harter, Waters, Whitesell, & Kastelic, 1998). One interpretation of such findings is that "femininity" is harmful to girls. However, investigators rarely make clear whether by "femininity" they mean a felt pressure to conform to female stereotypes, an overall sense of the self as female typical, or simply a preponderance of female-typed personality traits in the self-concept. If by concluding that femininity is harmful to girls, investigators mean to lay the blame on an overall construal of the self as female typical, the blame is probably misplaced given that the present results indicate that gender typicality is a positive influence on adjustment. The negative adjustment outcomes that have been attributed to girls' "femininity" are more likely attributable to a concomitant (but unmeasured) felt pressure for gender conformity or to the lack of specific adaptive instrumental competencies.

Unlike gender typicality, gender contentedness was not a strong independent contributor to children's adjustment. This fact does not necessarily mean, however, that satisfaction with one's gender assignment plays no role in psychosocial adjustment. It is possible, for example, that gender contentedness influences children's adoption of sex-typed attributes and hence their feelings of gender typicality, which in turn influence adjustment. The results in fact were consistent with this mediational model. Moreover, gender contentedness and felt pressure interacted to predict self-esteem: Gender contentedness was unrelated to self-esteem for children low in felt pressure but was strongly predictive of self-esteem for children with high felt pressure. This pattern is consistent with the notion that low gender contentedness is harmful when children feel strong pressure for gender conformity. Children who wish they were the other sex or who desire to engage in cross-sex activities, then, are at risk for problematic development mainly when they perceive their social environment to be telling them that they cannot be whom they wish to be.

A secondary purpose of this study was to examine some possible determinants of preadolescents' gender compatibility. Our hypothesis was that gender compatibility would depend, in part, on self-perceived sex typing, especially self-perceived personality traits and heterosexual identity. In general, both subdimensions of gender compatibility (gender typicality and gender contentedness) were related to self-perceived sex-typical traits and heterosexual identity in predictable ways, but an unexpected finding was that for boys communal traits were also positively correlated with gender typicality. It is possible that for boys the causal arrow between gender typicality and communal traits runs from gender typicality to communal traits rather than in the reverse direction. That is, boys who perceive themselves to be similar to same-sex others may feel the strongest attachment to their same-sex peer group, and this attachment may lead them to exhibit communal behaviors during peer interactions. It is important to note that the sex-typing measures cumulatively accounted for only modest percentages of the variance in both gender typicality and gender contentedness. Perhaps additional sex-typing dimensions that were not studied here (e.g., fantasy life and nonverbal stylistic characteristics, such as patterns of speech, gesture, and dress) are important too.

As expected, intergroup bias was detrimental to children's peer relations, especially their self-perceived peer social competence and their acceptance from male peers. It is unclear, however, why

male peers would be more likely than female peers to dislike children with intergroup bias.

Sex differences were evident for all four measures of gender identity. It is not surprising that boys had higher scores than girls on gender typicality, gender contentedness, and felt pressure given that boys are more sex typed than girls and actually experience more pressures for sex typing than do girls (Huston, 1983; Ruble & Martin, 1998). It is unclear, however, why girls would exhibit more intergroup bias than boys.

The negative effects of felt pressure on adjustment were more evident for girls than for boys. At least two factors may have contributed to this finding. First, girls are more likely than boys to take to heart the social-evaluative feedback of other people, owing to their desire to maintain interpersonal relatedness (Harter, 1998). Thus, felt pressure may signify stronger internalization of self-limiting social sanctions or stronger felt conditionality of support for girls than for boys. Second, male-typed traits, occupations, and academic pursuits generally incur greater prestige and rewards than do their female-typed counterparts; moreover, agentic competencies are crucial for enabling persons of both sexes to face difficult challenges and to master stressors efficaciously (Bussey & Bandura, 1999). If felt pressure causes children to veer away from cross-sex activities and traits, then girls who are high in felt pressure will be discouraged from developing the instrumental male-typed competencies that bring prestige and promote effectual coping. For boys, on the other hand, felt pressure is more likely to support than to undermine the acquisition of socially valued and adaptive male-typed competencies.

This study illustrates the advantages of using multiple indexes of adjustment when evaluating the impact of gender identity on children's well-being. Indeed, the use of multiple indexes of adjustment allows one to see that a given aspect of gender identity or sex typing may benefit one aspect of adjustment but undermine another. This point is especially relevant for girls. As Table 4 shows, girls who perceive themselves to be competent in male-typed activities and agentic traits are advantaged in terms of self-esteem yet are disliked by female peers. This contradiction may create conflict for girls. Identifying the factors that lead girls either to shun masculine attributes in order to garner peer approval or to cultivate the male-typed competencies that bring self-satisfaction but subject them to peer disapproval is an important task for future research. Felt pressure is likely to be one influential factor.

For the past quarter century, theory and research linking gender identity to adjustment have been dominated by androgyny theory, or the notion that mental health is promoted by a perception of the self as both masculine and feminine (e.g., Bem, 1981). Conceptual and methodological problems have characterized this approach, however. Most notably, androgyny researchers made several questionable assumptions, including the notions that (a) felt overall masculinity and felt overall femininity are orthogonal dimensions, (b) felt overall masculinity and felt overall femininity can be inferred from self-perceptions in a single domain of sex typing (i.e., personality traits), and (c) felt pressure for gender conformity can be inferred from the degree of balance in one's felt overall masculinity and one's felt overall femininity. The present conceptualization takes exception to all of these assumptions, but because the view that masculinity and femininity are orthogonal dimensions has become widely accepted, our decision to resurrect the

more traditional view of masculinity and femininity as polar opposites (in our assessments of gender typicality and contentedness) warrants additional comment.

The view that felt masculinity and felt femininity are orthogonal dimensions was popularized by Bem (1981). Bem assumed that self-perceived masculinity and self-perceived femininity could be inferred, respectively, from self-perceptions of agentic and communal traits. As we and others (e.g., Spence, 1985; Spence & Hall, 1996) have argued, the fact that the degree to which a person is sex typed in one domain is often independent of the degree to which the person is sex typed in some other domain makes it imprudent to infer overall felt masculinity or felt femininity from self-perceived personality traits (or from self-perceptions in any other single domain of sex typing). But, more to the point, even though the correlation of self-perceived agentic traits with self-perceived communal traits is often low, suggesting orthogonality, it does not follow that orthogonality characterizes self-perceptions in other domains of sex typing (e.g., sexual orientation, where a preference for partners of one sex tends to be negatively correlated with a preference for partners of the other sex) or self-perceptions on higher order dimensions of gender identity, such as our measures of gender typicality and contentedness. In fact, as Spence pointed out, neither children's nor adults' self-ratings on the global dimensions of masculinity and femininity are orthogonal; they are negatively correlated. Indeed, self-ratings on the adjectives *masculine* and *feminine* do not correlate with self-ratings on agentic traits and communal traits, respectively, but instead form a separate, two-item bipolar factor (e.g., Pedhazur & Tetenbaum, 1979). It is for this reason that we conceptualize each of our dimensions of overall gender compatibility (i.e., gender typicality and gender contentedness) as a single, bipolar dimension, with felt compatibility with one's own gender defining one pole and felt compatibility with the other gender defining the other pole.

Several limitations of the present study warrant comment. First, the design was correlational, precluding conclusions about cause and effect. Clearly, longitudinal work on both the determinants and consequences of our gender identity measures is indicated.

Second, most of our measures were self-reported. It is appropriate (in fact, necessary) to test hypotheses about the relations between gender identity and subjective well-being using self-report measures, but nonetheless doing so raises the possibility that any associations detected reflect halo effects, mood effects, or response biases. We cannot rule out interpretations in terms of such factors, but analyses in which hypothesized relations between two self-report variables are examined with one or more additional self-report variables statistically controlled (such as the analyses reported in Table 5) should at least help to minimize the operation of some of these potentially confounding influences.

Third, certain of our scales are open to an interpretation in terms of non-gender-specific factors. It is possible, for example, that our felt pressure scale is a general index of anticipated negative reactions from others rather than a measure of pressure anticipated specifically for gender-linked conduct. Our heterosexual identity scale is also open to alternative interpretations. Although low scores on the measure may reflect a nonheterosexual orientation (i.e., a gay or lesbian orientation), low scores may reflect other factors, such as a dismissive attitude toward close relationships (or toward traditional roles) or a lack of confidence in one's ability to attract a mate or to fulfill adult roles competently. In future

research, it would be wise to include measures of these other constructs to serve as control variables.

Finally, additional work on the dimensionality of our felt pressure scale may be in order. This scale was internally cohesive, but it tapped social sanctions from three sources—parents, peers, and the self. We acknowledge that children's expected reactions from these three sources will not always be concordant (see, e.g., Moretti & Higgins, 1999); moreover, different sources of social sanctions may play different roles in sex typing, gender identity, and their links with adjustment. Also, our felt pressure scale tapped the pressure children feel for inhibiting cross-gender behavior; future work might include additional items tapping the pressure children feel for enacting same-gender behavior.

Future research might be devoted to identifying additional determinants of our gender identity measures. We suggested that self-perceived sex typing contributes to feelings of gender typicality and contentedness, but additional factors contributing to these indexes of gender compatibility might include genetics, unusual patterns of attachment (e.g., an enmeshed, preoccupied attachment to the other-sex parent coupled with an avoidant attachment to the same-sex parent), and other salient social experiences (e.g., being treated like a child of the other sex or being seriously belittled for exhibiting a cross-sex-typed attribute). Also, some of the correlation between the sex-typing measures and the gender compatibility measures may reflect the latter influencing the former rather than the reverse. This point may be especially true for gender contentedness, which very likely influences the adoption of sex-typed attributes (and hence gender typicality as well). The possibility that gender contentedness (and possibly gender typicality) predates sex typing is consistent with what is known about children with gender identity disorder, whose early and compelling sense of mismatch with their biological sex appears to motivate cross-sex-typed behavior.

Our major purpose in this study was to examine the relations between gender identity and adjustment, but future research might examine the implications of our dimensions of gender identity for other aspects of development. For example, given Kohlberg's (1966) suggestion that children prefer to imitate models perceived as similar to the self, gender typicality or contentedness might predict imitation of same-sex models; given Bem's (1981) suggestion that felt pressure for gender conformity undermines behavioral adaptability, felt pressure might predict the choice of less attractive or less rewarding (e.g., lower paying) same-sex options when these are pitted against more rewarding but cross-sex options; and given Bigler's (1995) and Powlishta's (1995) discussions of the pitfalls of harboring a belief in the superiority of one's own sex, intergroup bias might predict uncooperative or hostile interactions with other-sex persons. In addition to influencing overt behavior, the gender identity measures might predict gender-related social information processing (e.g., attention, memory, attributional patterns, and defensive reactions to gender-related ego threat).

In conclusion, it is important to respect the multidimensionality of gender identity. Efforts to reduce gender identity to a monolithic entity are probably misguided. We have shown that certain components of gender identity, such as gender typicality and gender contentedness, are associated with favorable adjustment, whereas other components of gender identity, especially felt pressure and intergroup bias, are associated with unfavorable adjustment. Sub-

sequent progress in understanding gender identity development and its implications for children's welfare will require longitudinal work over longer periods of time and the inclusion of additional measures that will permit firmer conclusions about the unique role that gender-relevant self-cognition plays in children's lives.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Aube, J., Norcliffe, H., Craig, J. A., & Koestner, R. (1995). Gender characteristics and adjustment-related outcomes: Questioning the masculinity model. *Personality and Social Psychology Bulletin*, 21, 284–295.
- Bailey, J. M., & Zucker, K. J. (1995). Childhood sex-typed behavior and sexual orientation: A conceptual analysis and quantitative review. *Developmental Psychology*, 31, 43–55.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological Review*, 88, 354–364.
- Berndt, T. J., & Heller, K. A. (1986). Gender stereotypes and social inferences: A developmental study. *Journal of Personality and Social Psychology*, 50, 889–898.
- Biernat, M. (1991). Gender stereotypes and the relationship between masculinity and femininity: A developmental analysis. *Journal of Personality and Social Psychology*, 61, 351–365.
- Bigler, R. S. (1995). The role of classification skill in moderating environmental effects on children's gender stereotyping: A study of the functional use of gender in the classroom. *Child Development*, 66, 1072–1087.
- Bigler, R. S., Jones, L. C., & Lobliner, D. B. (1997). Social categorization and the formation of intergroup attitudes in children. *Child Development*, 68, 530–543.
- Boldizar, J. P. (1991). Assessing sex typing and androgyny in children: The Children's Sex Role Inventory. *Developmental Psychology*, 27, 505–515.
- Bradley, S. J., & Zucker, K. J. (1990). Gender identity disorder and psychosexual problems in children and adolescents. *Canadian Journal of Psychiatry*, 35, 477–486.
- Brown, D. G. (1956). *The IT Scale for Children*. Missoula, MT: Psychological Testing Specialists.
- Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, 106, 676–713.
- Eccles, J. S. (1989). Bringing young women to math and science. In M. Crawford & M. Gentry (Eds.), *Gender and thought* (pp. 36–58). New York: Springer-Verlag.
- Eisenberg, N., Murray, E., & Hite, T. (1982). Children's reasoning regarding sex-typed toy choices. *Child Development*, 53, 81–86.
- Green, R. (1987). *The "sissy boy syndrome" and the development of homosexuality*. New Haven, CT: Yale University Press.
- Grusec, J. E., Kuczynski, L., Rushton, J. P., & Simutis, Z. M. (1978). Modeling, direct instruction, and attributions: Effects on altruism. *Developmental Psychology*, 14, 51–57.
- Hall, J. A., & Halberstadt, A. G. (1980). Masculinity and femininity in children: Development of the Children's Personal Attributes Questionnaire. *Developmental Psychology*, 16, 270–280.
- Harter, S. (1985). *The Self-Perception Profile for Children: Revision of the Perceived Competence Scale for Children* (Manual). Denver, CO: University of Denver.
- Harter, S. (1998). The development of self-representations. In N. Eisenberg (Ed.), *Handbook of child psychology: Social, emotional, and personality development* (Vol. 3, pp. 553–617). New York: Wiley.
- Harter, S., Waters, P. L., Whitesell, N. R., & Kastelic, D. (1998). Level of voice among female and male high school students: Relational context, support, and gender orientation. *Developmental Psychology*, 34, 892–901.
- Huston, A. C. (1983). Sex-typing. In E. M. Hetherington (Ed.), *Handbook of child psychology: Socialization, personality, and social development* (Vol. 4, pp. 388–467). New York: Wiley.
- Kohlberg, L. (1966). A cognitive-developmental analysis of children's sex-role concepts and attitudes. In E. E. Maccoby (Ed.), *The development of sex differences* (pp. 82–173). Stanford, CA: Stanford University Press.
- Ladd, G. W. (1983). Social networks of popular, average, and rejected children in school settings. *Merrill-Palmer Quarterly*, 29, 283–307.
- Maccoby, E. E. (1998). *The two sexes: Growing up apart, coming together*. Cambridge, MA: Harvard University Press.
- McClintock, M. K., & Herdt, G. (1996). Rethinking puberty: The development of sexual attraction. *Current Directions in Psychological Science*, 5, 178–183.
- Meyer-Bahlburg, H. F. L. (1985). Gender identity disorder of childhood: Introduction. *Journal of the American Academy of Child Psychiatry*, 24, 681–683.
- Mischel, W. (1970). Sex typing and socialization. In P. H. Mussen (Ed.), *Carmichael's handbook of child psychology* (Vol. 2, pp. 3–72). New York: Wiley.
- Moretti, M. M., & Higgins, E. T. (1999). Internal representations of others in self-regulation: A new look at a classic issue. *Social Cognition*, 17, 186–208.
- O'Heron, C. A., & Orlofsky, J. L. (1990). Stereotypic and nonstereotypic sex role trait and behavior orientations, gender identity, and psychological adjustment. *Journal of Personality and Social Psychology*, 58, 134–143.
- Pedhazur, E. J., & Tetenbaum, T. J. (1979). Bem Sex Role Inventory: A theoretical and methodological critique. *Journal of Personality and Social Psychology*, 37, 996–1016.
- Perry, D. G., & Bussey, K. (1979). The social learning theory of sex differences: Imitation is alive and well. *Journal of Personality and Social Psychology*, 37, 1699–1712.
- Perry, D. G., & Bussey, K. (1984). *Social development*. Englewood Cliffs, NJ: Prentice-Hall.
- Powlishta, K. K. (1995). Intergroup processes in childhood: Social categorization and sex role development. *Developmental Psychology*, 31, 781–788.
- Rekers, G. A. (1985). Gender identity problems. In P. A. Bornstein & A. E. Kazdin (Eds.), *Handbook of clinical behavior therapy with children* (pp. 658–699). Homewood, IL: Dorsey Press.
- Rogers, C. R. (1951). *Client-centered therapy*. Boston: Houghton Mifflin.
- Ruble, D. N., & Martin, C. L. (1998). Gender development. In N. Eisenberg (Ed.), *Handbook of child psychology: Social, emotional, and personality development* (Vol. 3, pp. 933–1016). New York: Wiley.
- Serbin, L. A., Powlishta, K. K., & Gulko, J. (1993). The development of sex-typing in middle childhood. *Monographs of the Society for Research in Child Development*, 58 (Serial No. 232).
- Slaby, R. G., & Frey, K. S. (1975). Development of gender constancy and selective attention to same-sex models. *Child Development*, 46, 849–856.
- Spence, J. T. (1985). Gender identity and implications for concepts of masculinity and femininity. In T. B. Sonderegger (Ed.), *Nebraska Symposium on Motivation: Psychology and gender* (Vol. 32, pp. 59–96). Lincoln: University of Nebraska Press.
- Spence, J. T. (1993). Gender-related traits and gender ideology: Evidence for a multifactorial theory. *Journal of Personality and Social Psychology*, 64, 624–635.
- Spence, J. T., & Buckner, C. (1995). Masculinity and femininity: Defining the undefinable. In P. J. Kalbfleisch & M. J. Cody (Eds.), *Gender, power, and communication in human relationships* (pp. 105–138). Hillsdale, NJ: Erlbaum.

- Spence, J. T., & Hall, S. K. (1996). Children's gender-related self-perceptions, activity preferences, and occupational stereotypes: A test of three models of gender constructs. *Sex Roles, 35*, 659–691.
- Spence, J. T., & Helmreich, R. L. (1980). Masculine instrumentality and feminine expressiveness: Their relationships with sex role attitudes and behaviors. *Psychology of Women Quarterly, 5*, 147–163.
- Storms, M. D. (1979). Sex role identity and its relationships to sex role attributes and sex role stereotypes. *Journal of Personality and Social Psychology, 37*, 1779–1789.
- Tajfel, H., & Turner, J. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.
- Taylor, S. E., & Brown, J. (1988). Illusion and well-being: Some social psychological contributions to a theory of mental health. *Psychological Bulletin, 103*, 193–210.
- Whitley, B. E. (1983). Sex role orientation and self-esteem: A critical meta-analytical review. *Journal of Personality and Social Psychology, 44*, 765–785.
- Winnicott, D. W. (1965). *The maturational processes and the facilitating environment*. New York: International Universities Press.
- Zucker, K. J. (1992). Gender identity disorder. In S. R. Hooper, G. W. Hynd, & R. E. Mattison (Eds.), *Child psychopathology: Diagnosis criteria and clinical assessment* (pp. 305–342). Hillsdale, NJ: Erlbaum.

Appendix

Items of Scales Measuring Gender Typicality, Gender Contentedness, Felt Pressure, and Intergroup Bias

All items of the final scales are provided here. The response format was the same for all items of all scales, but to save space, the complete item format is given below only for the first item of the gender typicality scale. Items are from the girls' form of the questionnaire. Reverse scoring is required for Items 3 and 5 of the gender typicality scale; for Items 1 and 3 of the gender contentedness scale; for Items 1, 2, 4, 8, 9, and 10 of the felt pressure scale; and for Items 3, 5, 6, and 7 of the intergroup bias scale.

Gender Typicality Scale

- | | | |
|--|-----|--|
| 1. Some girls don't feel they're just like all the other girls their age | BUT | Other girls do feel they're just like all the other girls their age. |
| Very true for me
<input type="checkbox"/> | | Sort of true for me
<input type="checkbox"/> |
| Sort of true for me
<input type="checkbox"/> | | Very true for me
<input type="checkbox"/> |
2. Some girls don't feel they fit in with other girls BUT Other girls do feel . . .
 3. Some girls think they are a good example of being a girl BUT Other girls don't think . . .
 4. Some girls don't feel that the things they like to do in their spare time are similar to what most girls like to do in their spare time BUT Other girls do feel . . .
 5. Some girls feel that the kinds of things they're good at are similar to what most girls are good at BUT Other girls don't feel . . .
 6. Some girls don't feel that their personality is similar to most girls' personalities BUT Other girls do feel . . .

Gender Contentedness Scale

1. Some girls like being a girl BUT Other girls don't . . .
2. Some girls feel annoyed that they're supposed to do some things just because they're a girl BUT Other girls never feel . . .
3. Some girls never feel cheated that there are some things they're not supposed to do just because they're a girl BUT Other girls do feel . . .
4. Some girls wish it'd be okay for them to do some of the things that usually only boys do BUT Other girls never wish . . .
5. Some girls sometimes think it might be more fun to be a boy BUT Other girls never think . . .
6. Some girls don't think it's fair that some things are only for boys BUT Other girls don't mind that . . .

Felt Pressure Scale

1. Some girls think the girls they know would be upset if they wanted to play with boys' toys BUT Other girls don't think . . .
2. Some girls think their parents would be upset if they wanted to learn an activity that only boys usually do BUT Other girls don't think . . .
3. Some girls don't think their parents would be upset if they wanted to learn how to fish or hunt [on boys' form: wanted to learn how to knit or sew] BUT Other girls do think . . .
4. Some girls get really mad if someone says they're acting like a boy BUT Other girls don't . . .
5. Some girls don't think other girls would be upset if they wanted to learn an activity that only boys usually do BUT Other girls do think . . .
6. Some girls don't think other girls would be upset if they wanted to learn how to fish or hunt [on boys' form: wanted to learn how to knit or sew] BUT Other girls do think . . .
7. Some girls don't think their parents would mind if they wanted to learn how to fix cars and bicycles [on boys' form: wanted to take ballet or baton twirling lessons] BUT Other girls do think . . .
8. Some girls don't like girls who sometimes do things that boys usually do BUT Other girls don't dislike girls who . . .
9. Some girls think their parents would be upset if they wanted to play with boys' toys BUT Other girls don't think . . .
10. Some girls think the girls they know would mind if they wanted to learn how to fix cars and bicycles [on boys' form: wanted to take ballet or baton twirling lessons] BUT Other girls don't think . . .

Intergroup Bias Scale

1. Some girls don't think that girls are more *truthful* than boys BUT Other girls . . .
2. Some girls think that girls are more *boring* than boys BUT Other girls . . .
3. Some girls don't think that girls are more *lazy* than boys BUT Other girls . . .
4. Some girls don't get upset if someone says something bad about girls BUT Other girls . . .
5. Some girls think that boys are more *annoying* than girls BUT Other girls . . .
6. Some girls think that girls are more *honest* than boys BUT Other girls . . .
7. Some girls don't think that boys are more *creative* than girls BUT Other girls . . .
8. Some girls think that boys are more *friendly* than girls BUT Other girls . . .

Received September 27, 1999

Revision received January 26, 2001

Accepted January 30, 2001 ■