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Rigidity in Gender-Typed Behaviors in Early Childhood: A Longitudinal Study of Ethnic Minority Children

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Abstract

A key prediction of cognitive theories of gender development concerns developmental trajectories in the relative strength or rigidity of gender typing. To examine these trajectories in early childhood, 229 children (African American, Mexican, Dominican) were followed annually from age 3 to 5 and gender-stereotypical appearance, dress-up play, toy play, and sex segregation were examined. High gender-typing was found across ethnic group, and most behaviors increased in rigidity, especially from age 3 to 4. In addressing controversy surrounding the stability and structure of gender-typing it was found that from year to year, most behaviors showed moderately stable individual differences. Behaviors were uncorrelated within age, but showed more concordance in change across time, suggesting that aspects of gender-typing are multidimensional but still show coherence.

Keywords

Gender behavior; stability; African American; Latino; cognitive

A glance around a playground, a classroom, or a toy store will instantly reveal that early childhood is an important period in gender development for American children. Gender is displayed in highly visible, explicit ways. Flocks of girls, especially at ages 3 and 4, go about their days swathed in pink, glitter, hearts, and ribbons (Halim et al., 2012; Ruble, Lurye, & Zosuls, 2007). Boys, too, exhibit their own kind of “gender rigidity” (defined in this paper as a strong adherence to gender-stereotypical behaviors) (Parsons & Howe, 2006). Often, one can see boys kicking the air, flexing their muscles, and running around imagining themselves as Spiderman. This period when children display their gender so openly and

ostentatiously provides a fascinating window into the early stages of gender development in the lifespan. The degree to which children espouse gender early on could set in motion life-long individual differences in displays of masculinity or femininity (Martin & Ruble, 2009).

Although the existence of obvious differences in gender-typed behaviors among young American boys and girls is clear, fundamental questions remain unanswered. First, we know little of whether different aspects of gender-typing emerge at the same time and connect to each other, or instead, exhibit specificity in expression. Second, questions remain about whether gender-typed behaviors show a predictable pattern of normative developmental change and stable individual differences over time or are a function of unpredictable situational variation. Third, it remains to be seen whether the above portrait of gender-typing can be found across different ethnic groups, or whether the focus on White, middle-class samples has led to distorted conclusions. Despite the explicit gender-typing seen in young children, there has been little empirical investigation of it – over time, across different behaviors, and across different populations. Some may explain these behaviors as just a Disney-provoked middle-class display. However, we argue that these behaviors reflect a manifestation of a fundamental developmental phenomenon that marks the early phases of a life course of a gender divide. Thus investigating these questions is critical in adding to existing literature on gender development.

These questions are unanswered because the literature to date is primarily composed of cross-sectional studies of middle-class White children. Exciting new insights can be obtained by broadening the study of gender development to include samples of ethnically diverse children in a longitudinal design. Insofar as children raised in the U.S. experience the same global culture during the developmentally important preschool years, and insofar as increasing rigidity in gender-typed behaviors reflect a fundamental, generalizable developmental theory, they should show the same patterns of gender development. The present study aims to address these questions by examining the change and stability (consistency of a behavior across time) of different facets of gender-typing in an ethnically diverse sample of 3- to 5-year-old children.

Trajectories of Gender Development in Early Childhood

According to cognitive theories of gender development, as children learn about gender categories, they are predicted to be highly motivated to strictly adhere to gender stereotypes, and this adherence may increase in rigidity as information about gender categories is constructed and consolidated (Martin, Ruble, & Szkrybalo, 2002; Ruble, 1994). These theories view children as active “gender detectives” (Martin & Ruble, 2004), who earnestly seek out information about gender, then attempt to draw inferences and clear conclusions about gender, and finally apply such conclusions rigidly to themselves. Subsequently, cognitive theories of gender development predict that children will integrate their new gender identity with other identities and become more flexible in the application of the conclusions they drew about gender. These theories are, of course, not the only perspectives on gender development. Socialization approaches posit that experiences at home, school, and one’s neighborhood influence children’s gender-typing through processes such as social learning and encouragement from others to behave in gender-typed ways. Biological

approaches emphasize the role of genes, hormones, and the brain in physical and psychological sexual differentiation (Ruble et al., 2006). These perspectives on gender development would predict a high level of gender-typed behaviors in early childhood. However, only cognitive theories of gender development take an explicitly developmental perspective, emphasizing not just high levels, but change over time, upon which we base the current study.

In the present study we employed a longitudinal design to investigate developmental growth within the same individuals. We asked whether gender-typed behaviors *increase* in rigidity during ages 3 to 5, since this period is a time of increasing gender knowledge, rather than just whether rigidity is high. We also explored whether this rigidity begins to level off during these ages; that is, do some gender-typed behaviors show the curvilinear pattern predicted by cognitive theories of gender development?

This question is important, because most studies on the developmental trajectory of gender-typing focus primarily on gender-related beliefs and cognitions. Several studies have shown that children's gender stereotyping increases in rigidity from age 3 to 5, which is then generally followed by flexibility (Signorella, Bigler, & Liben, 1993; Trautner et al., 2005). Other research has found similar increases in rigidity from age 3 to 4 in attitudes about children who violate gender norms (Ruble, Taylor et al., 2007). But how do manifestations of rigidity in gender-related *behavior* develop across early childhood? Do different types of gendered behaviors show a similar course of increasing rigidity as seen in gender-related cognitions? Past research examining developmental trajectories in gender-typed behavior and preferences has largely been limited to either peer or toy preferences. This research, largely cross-sectional with a few longitudinal studies, has found that children increasingly prefer to play with same-sex children from preschool through the elementary school years (e.g., Maccoby & Jacklin, 1987; Martin, Fabes, Evans, & Wyman, 1999; Serbin, Powlishta, & Gulko, 1993) and display increased rigidity in gender-typed toy preferences (e.g., Servin, Bohlin, & Berlin, 1999).

In summary there is little research on the trajectory of multiple aspects of gender-typed behavior during the preschool years, as well as little attempt to pull together the different facets of gender-typing in a single study. The current study addresses this gap in the literature by looking at four different behaviors within one study over time. We were interested in how children adorn themselves since it is relatively unexplored element of gender development and seems both prevalent among children and important to them. Thus we observed children's gender-typed appearances and their involvement in dress-up play. Gender researchers more commonly study activities and peer choice, so we included these elements in the current study to provide reference points for comparison. Based on the aforementioned studies and in line with proposals that gender-typing is multidimensional (Huston, 1983; Ruble et al., 2006), we anticipated different patterns of normative change for different types of behaviors. Physical appearances are salient to children at a very early age (Ruble, Lurye et al., 2007), and thus the process of construction and consolidation might "take off" between ages 3 and 4 (Ruble, 1994). Consistent with this idea, in a study of White, middle-class girls, appearances were the most gender-typed at ages 3 and 4 and lower at ages 5 and 6 (Halim et al., 2012). For these reasons we predicted that children's

actual gender-typed appearances and their engagement in dress-up play would be characterized by a curvilinear pattern across ages 3 to 5 with gender-stereotypicality increasing to a peak and then leveling off or declining. In contrast, participation in gender-typed play activities and sex segregation were expected to continue to increase from ages 3 to 5.

Multidimensional Nature of Gender-Typing

The gender development field has conceptualized gender-typing as a multidimensional matrix (Huston, 1983; Ruble et al., 2006). Is there unity in gender-typing? Or does specificity better describe the way children express their gender? The longitudinal design of the current study allows us to look at the coherence of gender-typing both within and across time. On one hand, there has been a prevalent implicit assumption of coherence in the literature (e.g., if a girl likes to play with dolls, she probably loves pink as well). Indeed, the very construct of gender-typing assumes that there are factors that lead children to become gender-typed as they acquire a set of behaviors and interests that are more typical of their own gender than of the other gender (Maccoby, 2002). Thus if one is to study gender-typing, there needs to be something coherent to study, even if coherence occurs only across a few attributes, a view evident in many prominent traditions (e.g., Martin & Halverson, 1981). On the other hand, specificity in gender manifestations is a possibility; there have been many failures to find relations among all types of gender-related variables (Ruble et al., 1998). There are also studies that find no correlation between gender-typed preferences or behaviors and gender stereotype knowledge. Unity may be more evident in smaller subsets of gender-typing variables (e.g., only within children's gender attitudes) (Ruble et al., 1998). Looking at cohesion both within-time and across-time may shed light on this controversy. Based on past research (Martin & Fabes, 2001), we expected that gender-typed play and sex segregation might correlate with one another both within- and across-time, as these two elements feed into each other bi-directionally.

Stability in Gender-Typing

Another vital and controversial question is whether individual differences in gender-typing are stable over time even in the context of normative changes of increasing gender-typed behaviors (Martin & Ruble, 2009). Does a girl who is highly gender-typed compared to her peers at age 3 remain so at age 4? Are certain aspects of gender-typing (e.g., play activities) more stable than others (e.g., sex segregation) across the ages of 3, 4 and 5? These questions are important for understanding the processes involved in gender development over the lifespan and could have implications for self-perceptions and life choices, such as the valuing of academic domains and occupational aspirations, in ways that would be stronger than mere fleeting gender proclivities. Yet, surprisingly, little empirical data exist on this topic, and the question of the stability of individual differences in gender-typing is an area of contention.

Prominent gender development theories would predict stability in gender-typing, if even for a short time, since hypothesized predictors of gender-typing, such as hormones or parent modeling of gender-typed behavior, also tend to be stable in childhood (see Golombok,

2008). However, some gender researchers have concluded that, actually, the limited data available show little stability in gender-typing (Maccoby, 2002). Instead, Maccoby (2002) suggested that ample variation in situations surrounding a child affects how gender-typed a child may appear. Further, any stability that is found may reflect group-level associations (e.g., classroom peer influences) rather than individual-level ones. Other psychologists have challenged this viewpoint (Martin & Ruble, 2009). Some studies indicate moderate stability in sex segregation in preschool to elementary school-aged children under some conditions (e.g., Martin & Fabes, 2001; Serbin et al., 1993), and other studies indicate moderate stability in gender-typed play and toy preferences among preschoolers and kindergarteners (Golombok et al., 2008; Maccoby & Jacklin, 1987; Martin & Fabes, 2001). In the present study, we sought to address this controversy by examining several behaviors in a single study in order to determine whether certain aspects of gender-typing show more stability than others.

Rigidity in Gender-Typed Behaviors across Ethnic Groups

In the current study we also aimed to test the robustness of the phenomenon of increasing gender-typed behaviors across ethnic groups, as the vast majority of gender development research has only sampled White middle- to upper-middle class children. Because of this bias, only tentative statements as to what is normative in gender development can be made. We examined African American and Latino immigrant children because these ethnic groups widely differ on factors that could affect gender-typing, which would allow us the most stringent test of the generalizability. In addition, these groups have an important presence in the U.S. - African Americans make up a substantial minority, and the population of Latinos is increasing (U.S. Census, 2011). Because we consider increasing gender-typed behaviors to be a fundamental developmental phenomenon driven largely by changes in cognition, we expected curvilinear trajectories across all ethnic groups. However, we explored ethnic variation in overall levels or in the timing of those trajectories based on tentative evidence showing differences in gender roles and gender socialization by ethnic group. For example, scholars have argued that African American women's ample participation in the workforce has brought about more egalitarian gender roles and less sharply differentiated gender stereotypes in African American families (e.g., Stanback, 1985), which has received some empirical support (Jarrett, Roy, & Burton, 2002). Also, African American 4- to 6-year-children have shown less gender stereotype endorsement than White children (Albert & Porter, 1988), although this has not always been replicated (Liben & Bigler, 2002). In contrast, *machismo* and *marianismo* - or, broadly, male dominance and female submissiveness - are key constructs in Latino culture (DeSouza, Baldwin, Koller, & Narvaz, 2004). Further, Latino children have been found to endorse occupational gender stereotypes more than White American children (Bailey & Nihlen, 1990). And a higher proportion of Mexican and Dominican immigrant 2-year-olds were able to produce gender labels compared to African American 2-year-olds (Zosuls, 2008). Based on this sparse literature, we explored whether Latino children might exhibit higher levels of gender-typed behavior and show peak gender rigidity earlier compared to African American children.

Study Overview

The current study assessed four gender-typed behaviors in African American, Mexican, and Dominican children from a large urban Northeastern city. At ages 3, 4, and 5, coders rated how gender-typed the child's appearance was and gathered information from mothers on children's participation in dress-up play, participation in gender-typed play activities, and the number of girls and boys that were children's friends. We examined three types of hypotheses: (i) specific theory-driven hypotheses, (ii) those addressing unresolved controversies, and (iii) exploratory hypotheses. For the first type, based on cognitive theories of gender development, we predicted that across gender and ethnic groups children would show high levels and curvilinear trajectories of increasing rigidity in gender-typed behaviors across ages 3 to 5. Further, we hypothesized that appearance-related behaviors would peak earlier in rigidity and show some leveling off compared to other behaviors. For the second type, we investigated whether these different behaviors would be connected to each other in a constellation of gender-typing and whether they paralleled one another in how they changed. We also investigated whether, in the midst of normative changes, there would be stable individual differences in gender-typing. Finally, for the third type, we explored whether the levels or trajectories of these behaviors would show variation by ethnic group.

Method

Participants and Procedure

Preschool-aged children ($N = 229$: 108 girls, 121 boys) and their mothers (M age = 29.06, $SD = 5.64$) participated: 84 Dominican American (49 boys, 35 girls), 77 African American (42 boys, 35 girls), 68 Mexican American (30 boys, 38 girls). We assessed preschoolers at three waves: at age 3 ($M = 3.03$ years, $SD = .14$), 4 ($M = 4.21$ years, $SD = .16$), and 5 ($M = 5.16$ years, $SD = .12$). Of the 229 families, 154 families participated at all 3 waves, 28 families participated at 2 of the 3 waves and 47 families participated at only 1 of the 3 waves. Comparing families with complete versus incomplete data revealed no significant differences in mother's education, work status, immigrant status, marital status, cohabitation status, dominant language, age, physical health, psychological distress, household income, or child cognitive or language skills at age 2. However, girls and Mexican children were more likely to have complete data.

Participants were recruited as part of a larger longitudinal study from three public hospitals in a large northeastern urban city shortly after mothers delivered their children. Eligibility to participate in the study required the mothers to (i) be at least 18 years old, (ii) not live in a shelter, (iii) have a healthy, full-term infant (birth weight > 2,500 grams), and (iv) self-identify as Mexican, Dominican, or U.S.-born African American. Of all mothers approached who were eligible, 50% agreed to participate. Average family annual income was \$20,500 ($SD = \$14,751$). Dominican mothers were 77% first-generation, and 23% second generation, and were primarily from Santo Domingo. Mexican mothers were 96% first-generation immigrants and were primarily from Puebla. At the infants' births, 73% of Dominican, 48% of Mexican, and 65% of African American mothers completed at least a high school education or a GED. Co-residency rates were highest in Mexican families (87%), followed

by Dominican families (63%), and African American families (46%), $F(2, 216) = 14.44$, $p < .001$.

Interviews took place either at children's homes (age 3 years) or at a university (ages 4 and 5 years). We obtained parental consent either in person or through the mail via signed returned consent forms. We paid mothers \$75.00 for each interview at each wave.

Measures

Observations of gender-typed appearance—We coded children's gender-typed appearance from videotapes of the interviews at each wave. Researchers coded whether they observed a set of specific gender-typed elements (0 = Not present, 1 = Present). For girls, elements included the following (κ 's range = .70 to 1.00): dresses or skirts, feminine colors (e.g., pink), feminine hair accessories (e.g., bows), feminine patterns or logos (e.g., flowers), feminine fabric or fit (e.g., taffeta), trend-conscious styles (e.g., knee-high boots), formal wear (e.g., patent-leather Mary Janes), and jewelry (e.g., bracelets). For boys, elements included the following: masculine colors (e.g., red and black together), masculine patterns or logos (e.g., graffiti), masculine fabric or fit (e.g., baggy pants), sports-themed styles (e.g., baseball jerseys), and formal wear (e.g., skinny tie with a vest). To create a score of gender-typed appearance we summed elements for girls and boys separately. Girls could reach a maximum score of 8 ($M = 3.29$, $SD = 1.66$) and boys could reach a maximum score of 5 ($M = 2.29$, $SD = .99$). Girls' and boys' scores had different possible ranges because few boys showed trend-conscious styles or jewelry, and most had short hairstyles. For comparison purposes, we created z-scores for girls' and boys' scores, each centered around the grand mean (across ages 3, 4, and 5) within sex.

Gender-typed dress-up play—Interviewers asked mothers: "Over the past month, how often did your child play with dress-up clothes or costumes like princess or Spiderman costumes, pocketbooks, or adult-like shoes?" (0 = Never, 1 = Once or twice a month, 2 = Once a week, 3 = Several times a week, to 4 = Everyday) ($M = 1.53$, $SD = 1.50$). Interviewers also asked mothers to list the type of dress-up clothes or costumes with which their child played. Only gender-typed costumes or clothes were counted (excluding five children at age 3, two boys at age 4, and one girl at age 5 who liked to dress-up as Michael Jackson). The most common themes included dressing up as a princess for girls (especially Disney princesses at age 4) and dressing up as some sort of superhero for boys (especially at age 5). Other themes included dressing up in adult-like clothing, including the clothing of parents', siblings', or relatives' (especially at age 3), and dressing up as some sort of TV or cartoon character (e.g., Hannah Montana or a Transformer).

Gender-typed play—Interviewers asked mothers how often over the past month their children played with three feminine items ((i) kitchen sets, tea sets, and/or food sets, (ii) dolls, and (iii) soft toys like teddy bears, stuffed animals, or puppets) and three masculine items ((i) toy guns or objects used as guns and/or swords or objects used as swords, (ii) vehicles like cars, trucks, and trains, and (iii) balls) (0 = Never, 1 = Once or twice a month, 2 = Once a week, 3 = Several times a week, to 4 = Everyday). These toys were chosen based on many studies using the same stimuli (Ruble & Martin, 1998). Prior research has shown

that mother report of children's toy play has good reliability across time (Golombok et al., 2008). To make a scale, for girls we reverse-coded the three masculine items and averaged them together with the three feminine items ($M = 2.74$, $SD = .54$). For boys we reverse-coded the three feminine items and averaged them together with the three masculine items ($M = 2.70$, $SD = .55$). We then combined girls' and boys' scores into a single measure ($\alpha_{\text{age}3} = .59$, $\alpha_{\text{age}4} = .70$, $\alpha_{\text{age}5} = .72$).

Sex segregation—Interviewers asked mothers: “Does your child have the opportunity to spend time with other children?” If mothers answered, “Yes,” they were asked, “Who are they?” Mothers could list up to nine of their child's peers and reported the peer's sex, the peer's age, how the peer was related to the child, and if the peer was actually the child's friend. To be consistent with prior studies on sex segregation, we excluded peers that were either over age 10 or siblings and only included peers who were counted as friends. At each age we calculated the proportion of same-sex peers out of total peers named ($M = 63.01\%$, $SD = 30.00\%$).

Results

We first discuss findings pertaining to normative changes in gender-typed behaviors from age 3 to 5 and report any cultural or gender variation in the level and trajectory of these behaviors. Next we report whether these different behaviors are connected to each other in a constellation of gender-typing by examining their associations both (i) within time and (ii) across time as the behaviors change. Finally, we report the stability of gender-typing across consecutive years.

Change in Gender-Typed Behavior over Time and Group Differences

Analytic strategy—We examined change over time of gender-typed behavior by conducting multilevel models for each behavior, which included children with at least two waves of data. For each model, we first calculated Type III sums of squares to indicate overall omnibus fixed effects for time (centered at age 4), gender (female reference group), ethnicity (Dominican reference group), and interactions among the three variables and a random participant intercept effect in predicting each behavior. For ease of communication we present the results using fitted means from the mixed models. For detailed model coefficients and formulas see Halim (2012). We treated gender and ethnicity as factors and time as a covariate, and we assumed that the residuals were uncorrelated and homoscedastic over time. Next, we repeated the model with the linear and quadratic components of time separated. For follow-up analyses, we repeated the mixed models but with alterations (e.g., treated time as a factor for post-hoc time period comparisons; used effects coding to look at effects across gender or across ethnicity).

Observations of gender-typed appearance—Overall, children, especially girls, were very gender-typed in their appearances. Dominican girls were more gender-typed in their appearance compared to Mexican girls. Furthermore, as predicted, gender-typed appearance followed a curvilinear pattern across time for the sample as a whole. Trajectories varied across ethnic groups. See Figure 1a and Table 1.

Specifically, the mean number of feminine appearance elements at age 4 was 3.73 ($SD = 1.97$). Although a mean of 3.73 out of a possible 8 may seem low, qualitatively, it indicates that on average, girls exhibited between three and four gender-typed elements, such as wearing a pink dress with hearts and an additional big bow in her hair, creating a very feminine appearance. Boys exhibited between 2 and 3 elements out of 5 overall at each age, indicating overall masculine appearances as well, such as wearing dark, baggy clothes with a graffiti pattern.

In exploring ethnic differences we found that across time, the model revealed a main effect of ethnicity, $F(2, 485.4) = 5.49, p = .004$, qualified by a gender by ethnicity interaction, $F(2, 485.4) = 6.79, p = .001$, such that the effect was concentrated in the girls. Dominican girls ($M = 4.05, SD = 1.74$) were significantly more gender-typed in their appearances compared to Mexican girls ($M = 2.82, SD = 1.58$), $p = .015$, but not compared to African American girls ($M = 3.04, SD = 1.37$), $p = .165$. Among boys, there were no differences in gender-typed appearance among the three ethnic groups.

The average level of gender-typed appearance changed over time, and the overall effect was curvilinear as expected (time linear: $F(1, 337.1) = 16.40, p < .001$; time quadratic: $F(1, 330.9) = 8.65, p = .004$). The level of gender-typed appearance was not different from age 3 to 4 ($p = .646$). Age 5 gender-typed appearance was lower than age 3 and 4 levels (p 's $< .001$). We also found an interaction between time and ethnicity, $F(2, 333.8) = 2.83, p = .025$. Both Dominican (time linear $p = .001$, time quadratic: $p = .041$) and African American children showed significant curvilinear patterns (time linear: *ns*, time quadratic: $p = .004$). Mexican children showed a significant negative linear trend over time ($p < .001$). See Figure 1a. The interaction between time and gender was not significant, $F(2, 333.9) = 1.98, ns$.

Gender-typed dress-up play—As predicted, girls played dress-up more frequently than boys at all ages, $F(1, 175.2) = 35.36, p < .001$. We explored whether Latino children played dress-up more frequently than African American children, but there were no differences among the three ethnic groups ($F(2, 175.3) = .91, ns$), nor any gender by ethnicity interaction ($F(2, 175.3) = 1.21, ns$). Further, as expected, dress-up play followed a curvilinear pattern across time and we again found cultural variation in these trajectories. Specifically, the overall dress-up play mean of 2.00 for girls can be interpreted as girls playing dress-up about once a week on average, whereas the boys' mean of 1.08 can be interpreted as playing dress-up about once or twice a month on average during the preschool years. Examined another way, 56% of girls and 31% of boys played dress-up anywhere from once a week to every day across the preschool years.

As for developmental change, we found a significant main effect for time, $F(2, 325.3) = 5.26, p = .006$, with both linear ($F(1, 327.0) = 4.58, p = .033$) and quadratic ($F(1, 323.7) = 5.99, p = .015$) components. Dress-up play increased in frequency from ages 3 to 4 ($p = .002$), then leveled off in frequency from ages 4 to 5, but this small decrease was not significant ($p = .246$). The model also revealed an interaction between time and ethnicity, $F(4, 325.3) = 4.72, p = .001$. African American children increased linearly over time in dress-up play frequency ($p < .001$). Mexican children increased then decreased in dress-up play frequency, peaking at age 4 (quadratic: $p = .011$). Dominican children did not

significantly change over time. See Figure 1b. The interaction between time and gender was not significant, $F(2, 325.3) = .76, ns$.

Gender-typed toy play—We first conducted mixed models on the full 6-item gender-typed play scale followed by exploration of a breakdown of the scale: 3 items of cross-gender-typed play and 3 items of same-gender-typed play. Both boys and girls showed high levels of same-gender-typed play (approximately once a week to several times a week) and low levels of cross-gender-typed play (approximately one to two times a month), and boys and girls did not significantly differ in their levels ($F(1, 175.9) = .27, ns$). An exploration of differences by ethnic group ($F(2, 176.0) = 2.56, ns$) or by gender and ethnic group ($F(2, 176.0) = 2.33, ns$) revealed no significant effects.

Gender-typed toy play (6-item scale) linearly increased over time across ethnicity and gender, $F(2, 328.1) = 6.67, p = .001$. Children engaged in more gender-typed play at ages 4 and 5 compared to age 3, $p = .010, p < .001$, respectively. This pattern was driven by linearly decreasing levels of cross-gender-typed play, $p < .001$ ($M_{\text{age } 3} = 1.40, SD_{\text{age } 3} = .84$; $M_{\text{age } 4} = 1.22, SD_{\text{age } 4} = .89$; $M_{\text{age } 5} = .97, SD_{\text{age } 5} = .82$). Girls' female-typed and boys' male-typed play was high at all time points and did not change.

Sex segregation—At age 3, 48% of children's friends were of the same gender, at age 4, 70% were of the same gender, and at age 5, 74% were of the same gender. As predicted, sex segregation increased over time in a curvilinear fashion, and there was no evident variation by ethnicity ($F(2, 164.8) = .01, ns$) or gender ($F(1, 164.8) = .05, ns$) or interaction between the two ($F(2, 164.8) = 1.12, ns$). Specifically, the model revealed a main effect for time, $F(2, 310.9) = 39.04, p < .001$ (linear: $F(1, 312.2) = 69.02, p < .001$; quadratic: $F(1, 310.0) = 10.10, p = .002$). Sex segregation increased from ages 3 to 5 with the sharpest increase from age 3 to 4 (from 3 to 4, $p < .001$; from 4 to 5, $p = .094$).

Summary—As expected, children exhibited rigid male- and female-typed behaviors during the early childhood years. They dressed and played in gender-typed ways and mainly were friends with same-gender peers. We found few ethnic differences in overall levels of gender-typing except that Dominican girls dressed in more stereotypical ways than did Mexican girls.

Our expectations for the developmental pattern of increased rigidity in gender-typed behaviors were supported as well. From age 3 to 5 children's friends were increasingly same-gender peers. Also, children increasingly avoided cross-gender-typed play. Showing a slightly different pattern, children increasingly played dress-up from age 3 to 4 then remained steady. In contrast, children's gender-typed appearances showed some movement toward flexibility, remaining highly stereotypical at ages 3 and 4, then becoming less so from age 4 to 5. Our exploration of ethnic variation in trajectories showed ethnic differences for two of the four behaviors (appearance and dress-up play).

Coherence in Gender-Typed Behaviors

The second goal was to examine the multidimensional nature of gender-typing and speak to the controversy surrounding whether different aspects of gender-typing develop in concert.

We first tested whether exhibiting gender rigidity in one behavior tended to be associated with rigidity in other behaviors at each age by examining correlations for the sample as a whole, by gender, and by ethnicity, similar to what most of the little existing research has done (Martin & Ruble, 2009). We next expanded upon this literature and tested whether a change in one gender-typed behavior from one year to the next was related to change in other gender-typed behaviors across the same time period. The focus on change has received new attention in recent years (McArdle, 2009). Based on the assumption that a coherent developmental process underlies the changes, we hypothesized that the various behaviors would be moderately associated with each other, within and across age. Given the number of associations we wanted to investigate, and the possibility of making Type I errors, to estimate within-age associations we conducted a structural equation models that simultaneously included all associations. We used Mplus to estimate the model and used full information maximum likelihood estimation, which allowed participants with incomplete data to be included. We also estimated the across-age correlations in the context of Mplus because it allowed the matrix of correlations to be estimated simultaneously and also allowed the handling of missing data under the assumption of a data missing at random pattern.

Within-age correlations among gender-typed behaviors—In the model we tested associations among different gender-typed behaviors within each age ($N = 145$) (Figure 2). To investigate stability of gender-typing within measures, we simultaneously tested whether gender-typing scores at one age predicted gender-typing scores at the consecutive age, which will be discussed later in this section. Results indicated satisfactory model fit, $\chi^2(40) = 55.63$, CFI = .887, RMSEA = .052. Unexpectedly no predicted associations were found between any measures at any age (Figure 2). Furthermore, multiple groups analyses indicated no significant improvement in model fit when separating the model by child gender ($\chi^2(8) = 12.57$, *ns*) or ethnicity ($\chi^2(16) = 24.02$, *ns*).

Change-to-change associations among gender-typed behaviors—We calculated difference scores for the four gender-typed behaviors (e.g., dress-up play at age 3 from dress-up play at age 4) and assessed associations among these difference scores. Three of the twelve correlations were significant (Table 2). An increase in sex segregation was positively associated with an increase in dress-up play from age 3 to 4, $r(176) = .17$, $p = .024$, and with an increase in gender-typed play from 4 to 5, $r(176) = .16$, $p = .034$. Unexpectedly, an increase in sex segregation from 4 to 5 was associated with a decrease in gender-typed appearance from 4 to 5, $r(176) = -.19$, $p = .011$. There were no significant differences by ethnicity. However, in examining correlations by gender we found that for boys only, increases in gender-typed appearance were positively associated with increases in gender-typed play at the same time interval ($r_{3 \text{ to } 4}(93) = .31$, $p = .002$; $r_{4 \text{ to } 5}(93) = .20$, $p = .055$). Surprisingly, for girls these relations trended in the negative direction ($r_{3 \text{ to } 4}(83) = -.21$, $p = .055$; $r_{4 \text{ to } 5}(93) = -.19$, $p = .087$) and differed from boys' correlations ($p < .001$, $p = .004$, respectively).

Stability of Gender-Typing within Measures

Stability in children's gender-typing was tested in the structural equation model as above (Figure 2) with gender-typing scores at one age predicting gender-typing scores at the consecutive age. Notably, both gender-typed dress-up play and gender-typed play showed considerable stability across consecutive ages (dress-up: $\beta_{\text{age 3 to 4}} = .49, p < .001, \beta_{\text{age 4 to 5}} = .40, p < .001$; play: $\beta_{\text{age 3 to 4}} = .38, p < .001, \beta_{\text{age 4 to 5}} = .53, p < .001$). Gender-typed appearance ($\beta = .22, p = .010$) and sex segregation ($\beta = .24, p = .012$) were only significantly related from age 4 to 5. The estimates from age 3 to 4 were smaller than those from age 4 to 5 and were only a trend for appearance ($\beta = .14, p = .083$), but not significant for sex segregation ($\beta = .10, p = .237$).

Multiple groups analyses indicated no significant improvement in overall model fit when examining separate models for each gender or for each ethnicity as reported above. However, examination of the data revealed that the stability of gender-typed appearance was evident for girls, even from age 3 to 4, ($\beta_{\text{age 3 to 4}} = .31, p = .001, \beta_{\text{age 4 to 5}} = .32, p = .002$) but not for boys ($\beta_{\text{age 3 to 4}} = .02, p = .894, \beta_{\text{age 4 to 5}} = .13, p = .364$).

Discussion

Cognitive theories of gender development posit that as young children learn about gender categories and that they belong to one of these categories, they will be highly motivated to conform to gender stereotypes (Martin et al., 2002). As children actively construct and consolidate information about gender, their strict adherence may increase in rigidity (Ruble, 1994). Do gender-typed behaviors of young children follow this predicted pattern of increasing rigidity? The current results lend support to this conceptualization of gender development, and indicate its robustness across children from different ethnic backgrounds. Each of the four gender-typed behaviors followed a course of change from age 3 to 5, with nearly all behaviors moving toward greater rigidity. Specifically, children's dress-up play, gender-typed play, and sex segregation increased in rigidity from age 3 to 4. Children's observed gender-typed appearance was already high at age 3, but did not increase in level. Findings point to the transition from age 3 to 4 as an especially important time in children's gender development for the active consolidation of gender information. This consolidation manifests in multiple aspects – from gendered activities to the peers with whom children play. The period from age 4 to 5 showed more divergence. Sex segregation trended towards increasing further, corroborating past, largely cross-sectional, research on middle-class White children (Ruble et al., 2006). In contrast, dress-up play and gender-typed play remained unchanged from age 4 to 5, although cross-gender-typed play decreased. Gender-typed appearance decreased in rigidity, suggesting growing flexibility.

In light of the behavioral rigidity we observed, an interesting juxtaposition is that during the same developmental period children show flexibility in some gender-related judgments. For example, research has shown that a majority of preschoolers viewed exclusion from gender-stereotyped activities based on gender (e.g., girls excluding a boy from playing dolls with them because he is a boy) as unfair and wrong (Killen, Pisacane, Lee-Kim, & Ardila-Rey, 2001; Theimer, Killen, & Stangor, 2001). Furthermore, the judgment that exclusion based on gender is wrong becomes more pronounced, complex, and more based on moral

reasoning rather than on social convention as children develop through elementary school (Killen, 2007). In addition, around age 5 or 6, children's gender-stereotype beliefs start to grow in their flexibility (Trautner et al., 2006). Thus, at times, children's gender-typed behaviors might misalign with their gender-related beliefs, perhaps due to feeling pressure from peers to conform to gender norms in their behavior. This is an interesting area for future investigation and highlights the importance of examining in future research whether the developmental shifts we observed are linked to children's growing understanding of gender, as cognitive theories would predict, as it is possible that other perspectives (e.g., socialization, biological) could also explain rigidity in gender-typed behaviors.

Children's physical appearance may be the first to move towards flexibility because it may peak in rigidity earlier as well, as physical appearance is one of the most salient traits to children in early childhood (Ruble & Dweck, 1995). Indeed, research on the "pink, frilly dress" phenomenon and girls' extremely intense interest in playing dress-up suggests that this appearance rigidity could start as early as age 2 (DeLoache, Simcock, & Macari, 2007; Halim et al., 2012). Gender-related cognitions, especially gender stereotypes, tend to increase in rigidity then grow more flexible (e.g., Trautner et al., 2005), and interestingly, in this same study, children who showed earlier rigidity showed earlier flexibility. Findings here suggest that the trajectory of gender-typed appearance is similar to that of gender-related cognitions.

Patterns in the timing and shape of trajectories for the four behaviors were robust across gender. That no gender differences in the timing or shape of any trajectory for any of the four behaviors were seen is somewhat surprising as some research on White, middle-class children would suggest that girls sometimes precede boys in gender development (La Freniere, Strayer, & Gauthier, 1984; Signorella et al., 1993; Zosuls et al., 2009). Perhaps in Latino and African American cultures, masculinity (i.e., *machismo*) is strongly emphasized so that gender development for boys occurs as early as it does for girls (e.g., DeSouza et al., 2004; Rowan, Pernell, & Akers, 1996).

In terms of ethnic variation, Dominican and African American children were similar in their developmental trajectories. Mexican children differed the most. For some measures (gender-typed appearance, dress-up play), Mexican children's trajectories suggest that their peaks in rigidity and subsequent flexibility in gender-typed behavior occurred earlier. The concordance in the trajectories of African American and Dominican children may be due to possessing similar demographics (e.g., mother's education, father cohabitation, urban background). Alternatively, more cross-cultural influence may occur between Dominican and African American groups because some Dominicans are perceived and/or identify as Black and also because of the influence of African American hip hop culture on Dominican youth (Duany, 2008; Torres-Saillant & Hernandez, 1998). The uniqueness of Mexican children's trajectories may have been due to less acculturation. Although both Dominican and Mexican families were largely first generation, Dominicans resided in the US for more years than Mexicans, and a small proportion of them (15%) were second generation.

Group Similarities and Differences in Levels of Gender-Typing

A strength of the current study was our inclusion of multiple measures of gender-typed behavior, as stressed by the matrix of gender-typing (Ruble et al., 2006). This strength became evident when we examined group differences in levels of gender-typing. If we had relied on only one measure, we would have erroneously concluded that one group was more gender-typed than the other, when, in fact, each group manifested gender rigidity in different behaviors.

Gender similarities and differences—Notably, we found differences in the ways that boys and girls expressed their gender. Girls engaged in dress-up play more than did boys. And although we could not formally test differences in gender-typed appearance, girls appeared to find a larger number of ways to dress in feminine ways compared to boys. Thus in two of the four measures, girls' manifested their gender rigidity in self-adornment rather than in what they play with or with whom they play. Prior research has suggested that boys sometimes show stronger gender-typed behavior compared to girls, but these studies focused largely on play (Huston, 1983; Perry, White, & Perry, 1984; Turner, Gervais, & Hinde, 1993). Our results suggest that girls' adherence to maintaining a feminine appearance and in pretending to be princesses should also be examined as important gendered behaviors. Future research should examine the broader societal implications of this early emphasis on physical appearance for girls. If girls tie their self-worth to one's physical appearance this could potentially put girls at risk for psychological distress later in life (Crocker & Wolfe, 2001; Nolen-Hoeksema, 2001).

Consistent with past research, boys and girls did not differ in levels of sex segregation (Fabes, Martin, & Hanish, 2003; Howes, 1988). They also did not differ in levels of gender-typed play (including cross-gender-typed play), which may be surprising. Studies have shown that White, middle-class grade-school boys compared to girls tend to reject cross-gender-typed behaviors and preferences more (Pickering & Repacholi, 2001; Raskin & Israel, 1981). The lack of a gender difference in our sample could possibly be due to the young age or to the different ethnic background and class of our sample. This is an area for future research.

Cultural similarities and differences—Another strength of the current study was the diversity of the sample. We explored whether Latino children would have higher levels of gender-typed behaviors compared to African American children based on literature suggesting egalitarian gender roles in African American families (e.g., Hill, 1971). Results largely indicated no differences in levels. Indeed, it was remarkable that African American and Latino children often looked the same. Both African American and Latina girls exhibited similar levels of dress-up play, gender-typed play, and sex segregation. And boys, as we mentioned earlier, showed no ethnic group differences. These results indicate that rigidity in gendered behaviors is robust and generalizable to children of multiple ethnic backgrounds.

One exception was that Dominican girls dressed in more feminine ways than did Mexican girls. Qualitative interviews with Caribbean American communities have revealed persistent

traditionalism in gender roles concerning household responsibilities and liberties (Lopez, 2002). These values could translate into the encouragement toward Dominican girls to maintain a highly feminine appearance. Of course, in interpreting differences, it is important to recognize that although groups in our sample were similar on a number of demographic variables and representative of the ethnic groups in New York City, a limitation of our study was that not all demographic variables were identical. Future research should attempt to equalize other demographic variables to determine the cause of these ethnic group differences.

Why we found no ethnic differences in boys is a question for future research. Perhaps both Latino and African American cultures value masculinity in boys to such a high degree (DeSouza et al., 2004; Rowan et al., 1996) that it would mask any cultural variation. Indeed, the boys often wore baggy clothing with contrasting red and black and graffiti designs suggesting an early “toughness” that may symbolize masculinity as young as age 3 in an urban setting.

Coherence of Gender-Typing

Whether different dimensions of gender-typing show coherence within a single individual has long been debated (Huston, 1983). We found no significant correlations among the different behaviors within each age even though at the group level, 3 of the 4 behaviors increased in rigidity from ages 3 to 4. Our findings support studies suggesting that gender-typing dimensions are distinct, at least when assessed within age. When we examined change across successive years, a different picture emerged. Increases in sex segregation were positively correlated with increases in dress-up play and gender-typed play at certain time intervals consistent with past research on the bidirectional link between gender-typed play and sex segregation (Martin & Fabes, 2001). It was surprising that changes in gender-typed appearance showed no connections to changes in dress-up play and further surprising that changes in gender-typed appearance showed no positive connections to any other behavior for girls. In fact, increases in gender-typed appearance were related to decreases in gender-typed play for girls and decreases in sex segregation for both boys and girls from age 4 to 5. Perhaps these negative or null relations are due to the disparate trajectories of each behavior with gender-typed appearance showing an earlier period of rigidity. Alternatively perhaps peers are rejecting children who look highly gender-stereotypical at later ages. This is a question for future research.

The different conclusions drawn from within-time versus across-time associations between different gender-typed behaviors may shed light on the conundrum of gender-typing coherence (Martin & Ruble, 2009). On one hand, the within-time data suggest that at one point in time, children may express their gender in a variety of ways. A child who dresses in an extremely feminine way does not necessarily play with only dolls and kitchen sets. The lack of associations may also indicate that different behaviors emerge at different times in response to different antecedents (e.g., cognitive development or social pressures). On the other hand, the across-time data suggests that gender-typing shows some unity with some gender-typed behaviors changing in parallel to others for certain groups and at certain age intervals. Overall then, gender-typed behaviors seem to exhibit specificity in one sense

(within-time), but more cohesion in another (across-time). These data stress the importance of looking at associations between variables across time in future research.

Stability in Gender-Typing

Did children show stability in specific gender-typed behaviors across time? Or is gender-typing primarily a group-level rather than an individual-level phenomenon (Maccoby, 2002)? We found stability in dress-up play and gender-typed play across successive ages for the whole sample. Girls also showed stability in their gender-typed appearance. In addition, children's sex segregation was stable between the ages of 4 and 5. R^2 's ranged from .18 to .47. These associations further support our claim that children may adopt individualized ways of displaying gender through play, appearance, and dress-up play that continue over time. Moreover these stability coefficients were robust and generalizable across different ethnic groups.

The lack of stability for sex segregation from age 3 to 4 is consistent with some past research (Maccoby & Jacklin, 1987), but not with other research (Martin & Fabes, 2001; Serbin et al., 1993). Perhaps this is not surprising given that our research design was most consistent with Maccoby and Jacklin's (1987) study which examined children over a two-year period from age 4 ½ to 6 ½ years. The lack of sex segregation at age 3 may partly explain this lack of stability – the mean percent of same-gender friends was not significantly different from 50%. This suggests that sex segregation in low-income African American and Latino populations emerges later than what is found in White, middle class samples (around 27 months for girls, 36 months for boys) (Ruble et al., 2006). On another note, the lack of stability in sex segregation from age 3 to 4, and the lower level of stability from age 4 to 5, compared to the other three behaviors, hints at the possibility that sex segregation may reflect different underlying processes. Perhaps sex segregation is less of a reflection of the internally-motivated, child-directed consolidation of gender, and more of a reflection of socialization and of children's experiences in playing with the other gender, such as girls' dislike for boys' tendencies toward rough-and-tumble play (Pellegrini & Smith, 1998).

The lack of stability in appearance for boys is intriguing as well and opens up directions for future research. Perhaps appearances are not as central to boys in expressing their gender compared to other behaviors such as play (Miller et al., 2009). It is also possible that girls get to choose their clothing at earlier ages than boys do. Thus starting from age 3, girls' appearances may already reflect their preferences for feminine clothing, whereas boys' appearances may not reflect their own preferences until later ages.

These findings argue for continued research on individual-level differences in gender-typing, not just group-level ones. They suggest that even though gendered behaviors do not necessarily align in a constellation of gender-typing within a certain age, when just one behavior is examined, that behavior shows stability within an individual girl or boy over time. Future research should examine whether these individual differences during ages 3 to 5 have downstream influences on children's identity, behavior, preferences, and values later in life. For example, it would be interesting to see whether girls who are low on gender-typing tend to become tomboys in middle childhood or whether girls who are high on gender-typing tend to disengage with mathematics and science in adolescence. These future

directions would further speak to possible antecedents of gender-typing and allow us to further examine stability within the context of normative increasing rigidity followed by flexibility later in development.

Limitations

It is important to note that mothers provided data for several of the behaviors we examined, with the exception of observed gender-typed appearance. We stress the importance of continued research on these behaviors using more observational techniques to replicate our results. In addition, although the developmental trajectories we observed support the hypotheses of cognitive theories of gender development, it is important to recognize other perspectives on gender development, such as biological and socialization perspectives (Ruble et al., 2006). Parents' own adherence to gender norms may influence the importance they place on children's gender conformity, and families make decisions that influence what their children wear, what they play with, and with whom they play. Nevertheless, some studies have shown that parent influence on children's appearances is minimal across ages 3 to 6 (Halim et al., 2012), and children are likely to have considerable independence from parents in play and peer choices in preschool contexts. However, exploring other influences is an important area of future research.

In addition, another limitation of our study was our inability to examine acculturation's influence on gender-typed behavior. In our sample, ethnicity was confounded with immigration status as all African American children were third generation or later, and all Latino children were first or second generation. Even within the Latino group, the vast majority of children had foreign-born parents, so we were unable to compare first versus second generation children. It would be interesting for future research to examine whether acculturation plays a role in the level and timing of gender-typing. For example, it is possible that since American culture values equality, including gender equality (Tamis-LeMonda & McFadden, 2009), later generation children would show lower levels of gender-typing and later peaks in gender-typing. At the same time it is important to note that all of the children in our sample were part of a large urban context, and indeed, even part of a larger U.S. context. The levels and patterns of gender-typed behavior we observed may reflect this larger context as well.

Conclusion

A child can express gender in multiple behaviors – through what they wear, through the costumes they don, through the objects they play and do not play with, and through the peers that they befriend. On a group level, most of these behaviors generally showed similar trajectories from age 3 to 4, with children increasingly acting in gender-stereotypical ways, consistent with predictions based on cognitive theories of development. From age 4 to 5, the behaviors diverged. The timing and levels of behavior sometimes varied by ethnic group, highlighting the importance of studying gender development in multiple, diverse groups. Despite group-level parallels, at the individual level, children who were highly gender-typed in one way (e.g., wearing a lot of pink dresses) were not necessarily gender-typed in another way (e.g., playing frequently with dolls). Nevertheless, there was some coherence across pairs of gender-typed behaviors in change across time, as well as moderate stability in

individual gendered behaviors from year to year. In short, our findings contribute to the ongoing conversation about gender-typing's developmental trajectories, multidimensional nature, and stability of individual differences in an ethnically diverse sample through a longitudinal design. The examination of young children's gender-typed behaviors provided a snapshot into a dynamic, exciting period of gender development, involving both stability and change, that could have implications for gender throughout the life course.

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a (left panel).

b (right panel).

Figure 1.

Means of observed gender-typed appearance over time by ethnic group.

Means of gender-typed dress-up play frequency over time by ethnic group.

Figure 2.

Structural equation model showing within-age correlations and stability estimates among gender-typed behaviors.

Note: Standardized coefficients are depicted. Coefficients not in boldface are non-significant.

[†] $p < .10$. * $p < .05$. *** $p < .001$.

Table 1

Means and Standard Deviations of Gender-Typed Behaviors

	Age 3		Age 4		Age 5		Across Time	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Observed Appearance Rigidity								
Boys overall	2.52	.94	2.36	1.05	1.99	.91	2.28	.99
Girls overall	3.32 _{a,b}	1.32	3.73 _a	1.97	2.80 _b	1.51	3.28	1.66
African American children [*]	-.24 _{a,d}	.68	.23 _{b,d,e}	1.04	-.24 _{a,d,e}	.93	-.07 _d	.93
Mexican children [*]	.11 _{a,e}	.96	-.15 _{a,b,d}	1.05	-.52 _{b,d}	.86	-.18 _d	.99
Dominican children [*]	.43 _{a,e}	.85	.37 _{a,e}	1.23	-.16 _{b,e}	.93	.20 _e	1.05
All children overall [*]	.12 _a	.88	.16 _a	1.13	-.30 _b	.91	-.01	1.00
Gender-Typed Dress-Up Play								
Boys overall	.71 _{a,d}	1.13	1.29 _{b,d}	1.35	1.22 _{a,b,d}	1.38	1.08 _d	1.31
Girls overall	1.89 _e	1.6	2.15 _e	1.57	1.96 _e	1.50	2.00 _e	1.55
African American children	1.02 _a	1.45	1.63 _{a,b}	1.54	1.96 _{b,d}	1.49	1.56	1.54
Mexican children	1.51 _{a,b}	1.55	1.76 _a	1.60	1.08 _{b,e}	1.29	1.46	1.50
Dominican children	1.31	1.47	1.71	1.43	1.63 _{d,e}	1.53	1.55	1.48
All children overall	1.29 _a	1.49	1.70 _b	1.52	1.57 _{a,b}	1.48	1.52	1.50
Gender-Typed Play								
Boys overall	2.60 _a	.56	2.73 _{a,b}	.62	2.78 _b	.46	2.70	.55
Girls overall	2.64 _a	.53	2.74 _{a,b}	.54	2.81 _b	.50	2.73	.53
African American children	2.52 _a	.61	2.76 _{b,d,e}	.59	2.68 _{a,b,d}	.52	2.66	.58
Mexican children	2.64 _a	.55	2.61 _{a,b,d}	.65	2.80 _{b,d,e}	.52	2.66	.58
Dominican children	2.68 _a	.48	2.82 _{a,b,e}	.50	2.89 _{b,e}	.38	2.80	.46
All children overall	2.62 _a	.55	2.73 _b	.59	2.80 _b	.48	2.72	.54
Sex Segregation								
Boys overall	.48 _a	.29	.71 _{a,b}	.26	.73 _b	.28	.65	.30
Girls overall	.49 _a	.28	.68 _{a,b}	.29	.75 _b	.25	.64	.30
African American children	.55	.28	.66	.27	.71	.30	.65	.29

	Age 3		Age 4		Age 5		Across Time	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mexican children	.44 _a	.28	.70 _b	.32	.78 _b	.25	.64	.32
Dominican children	.46 _a	.29	.72 _b	.25	.73 _b	.25	.64	.29
All children overall	.48 _a	.29	.70 _b	.28	.74 _b	.27	.64	.30

Note: Means not sharing the same (i) *abc* subscripts within row, and (ii) the same *de* subscripts within columns and sections are significantly different at $p < .05$. Subscripts are only given where findings were significant.

* Means given for boys and girls separately are in original scale for ease of interpretability. Means when girls and boys are combined are the z-scored means.

Table 2

Correlations Among Change Scores of Gender Rigidity Measures

Measure	1	2	3	4
Change between consecutive ages				
1. Gender-typed appearance	—	.05	-.01	-.19 *
2. Dress-up play	.12	—	-.06	-.12
3. Play with gender-typed toys	.00	-.06	—	.16 *
4. Proportion of same-sex peers	-.01	.17 *	-.10	—

Note. $N = 175$. Correlations below the diagonal refer to changes in variables from age 3 to 4. Correlations above the diagonal refer to changes in variables from age 4 to 5. See Halim (2012) for further details.