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## Child and Mother Play in Three U.S. Cultural Groups: Comparisons and Associations

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Child and mother play ( $n = 113$  20-month-olds) among South American Latino immigrants, Japanese immigrants, and European Americans in the United States was investigated. Culturally universal patterns of play dominated the findings. For example, no cultural differences in the prevalence of exploratory or symbolic play were found for either children or their mothers. Regardless of their culture, boys engaged in significantly more exploratory and less symbolic play than did girls when they played by themselves. Few relations were found between child play in the two play sessions. Across cultural groups, children's exploratory play was significantly positively related to both maternal demonstrations and solicitations of exploratory play. The results identify which realms of child growth, parenting, and family function call for special attention and cultural sensitivity, as well as which do not, in the dynamics of immigrant families.

*Keywords:* play, immigrant, mother, child

Observation of mothers and children engaged in universal, developmentally appropriate activities can help to reveal cultural influences on children's development (Rogoff, 2003). Play constitutes such an activity during the 2nd year of life. Cross-cultural research on children's play has highlighted the importance of culture-specific practices in structuring and organizing the environment in which children's social interactions and play activities take place (see Bornstein, Haynes, Pascual, Painter, & Galperin, 1999; Farver, 1999; Göncü, Tuermer, Jain, & Johnson, 1999; Haight, Wang, Fung, Williams, & Mintz, 1999).

During the 2nd year of life, children's play normatively moves from being exploratory and object oriented to being

symbolic and pretense oriented. During the sensorimotor period, children's initial interactions with objects are exploratory in nature, and their schemas characterize objects (e.g., a ball) as something simply to be physically manipulated (Piaget, 1951/1962). However, as children begin to engage in symbolic play, they use familiar objects in new ways, for example, by pretending that a ball is an orange that they are eating. Although there are individual differences in play development and related cognitive abilities, across cultures achieving representational competence is one of the principal developmental tasks of the 2nd year of life (Göncü & Gaskins, 2007; Haight et al., 1999; Piaget, 1951/1962). However, cultural variation in play is also evident (Bornstein, 2007). Immigrant families may find culture-specific aspects of play in their culture of destination particularly challenging or perplexing during the process of acculturation, and culture-specific aspects of play from the immigrants' culture of origin may be interpreted by clinicians, teachers, or others as problematic simply because they differ from those of the culture of destination.

### The Importance of Studying Immigrant Children's Play

The study of immigrant children's play is important for a variety of reasons. First, immigration is a central social and psychological concern today. For example, nearly 25% of children under the age of 18 in the United States are either immigrants themselves or the children of immigrants (Hernandez, Denton, & Macartney, 2008), and the International Organization for Migration (n.d.) has estimated that approximately 192 million people currently live outside the country of their birth or citizenship. Immigration is also a trans-

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This research was supported by the Intramural Research Program of the Eunice Kennedy Shriver National Institute of Child Health and Human Development. We thank O. M. Haynes, J. Lampard, M. Ogino, N. Okazaki, K. Painter, L. Pascual, D. Putnik, K. Schulthess, W. Smith, and S. Toda for assistance.

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formational force in parents and children, affecting all aspects of their lives. For its part, play is a basic developmental milestone in child development and a key venue of early parent-child relationships. Finally, the achievement and sophistication of children's pretend play has been linked to a variety of cognitive and social outcomes. Because pretend play is one manifestation of the development of symbolic thought (Piaget, 1951/1962; Vygotsky, 1967), it is related to children's representational competence, including language development (e.g., vocabulary, linguistic complexity, semantic diversity, and verbal fluency; e.g., Tamis-LeMonda & Bornstein, 1990). Language development, of course, is one area of particular concern for immigrant children because many are being reared in bilingual homes and thus have the added challenge of mastering two languages before schooling (Hernandez et al., 2008). In the social domain, pretend play fosters children's perspective-taking ability, including their ability to understand the thoughts, feelings, and intentions of others (Rubin & Howe, 1985; Youngblade & Dunn, 1995). Such interpersonal understanding is critical to success in interpersonal relationships, including those with peers, which become increasingly important for all children as they enter social groups outside the home and also begin schooling.

#### Rationale for Selection of Cultural Groups

We chose for this study mother-child dyads from three cultural backgrounds that shared commonalities as well as dissimilarities with respect to general child-rearing goals and views about children's play. Specifically, European American mothers socialize their children to be independent and autonomous (Harkness, Super, & Keefer, 1992; Harwood, Leyendecker, Carlson, Asencio, & Miller, 2002; Richman, Miller, & Solomon, 1988), and one way they do so is by engaging in object-directed activities, such as exploratory play, that allow their children to interact with and gain control over the physical environment (Bornstein, Azuma, Tamis-LeMonda, & Ogino, 1990). In contrast, a major socialization goal of Latino families is for children to learn to act appropriately and respectfully toward other people to develop properly (become *bien educado*, or well educated; Harwood et al., 2002) rather than asserting their own wants and needs. Similarly, in Japan infants and young children are encouraged to interact with other people to develop properly (Caudill & Weinstein, 1969), relate to others empathically (*omoiyari*; Lebra 1994), and interact with others appropriately (DeVos, 1993; Morelli & Rothbaum, 2007; Shand, 1985). In both Latin America and Japan, socialization to develop interpersonal skills is embodied in person- rather than object-directed interactions (Bornstein, Haynes, et al., 1999; Caudill & Weinstein, 1969; Valenzuela, 1997), including engaging in pretend play and role play with others.

Consistent with these cultural differences in child-rearing goals, previous researchers have reported cultural differences in play between these cultural groups. For example, European American children engage in more exploratory or object-directed play (both relative to symbolic play and in

comparison with children in Argentina and Japan), whereas demographically similar children in both Argentina and Japan engage in more symbolic, person-directed play (see Bornstein, Haynes, et al., 1999; Tamis-LeMonda, Bornstein, Cyphers, Toda, & Ogino, 1992). Although comparisons of play among immigrant families are scarce, research has suggested that the play behaviors of Latino immigrants from South America and those of Japanese immigrants tend to differ from those of mothers and children in their respective cultures of origin and appear to be similar to European American mothers and children (Cote & Bornstein, 2005). No research has yet compared the play of Latin American immigrants from South America with that of Japanese American immigrants from Japan, as we do here.

#### Relations Between Child and Mother Play

In addition to exploring intracultural differences in the mean levels of exploratory and symbolic play, we also investigated relations between child and mother play in each group. Because play is an activity through which parents socialize their children in the norms and values of their culture (Tamis-LeMonda, Katz, & Bornstein, 2002), we expected similarities in relations between mother and child play. Relations between children's and mothers' exploratory play and children's and mothers' symbolic play have been found among mother-child dyads in Japan, Argentina, and European Americans in the United States (Bornstein, Haynes, et al., 1999; Tamis-LeMonda et al., 1992). On the basis of these findings, and because play is an activity through which cultural values are transmitted from mother to child (Tamis-LeMonda et al., 2002), we hypothesized that similar child-mother play would be positively related in all three U.S. cultural samples.

#### Cultural Differences in the Initiation of Child Play and Modality of Mothers' Encouragement of Play

When European American mothers encourage children's play by demonstrating or soliciting play, children's play is more sophisticated than when children play alone or when children initiate play with their mothers (O'Connell & Bretherton, 1984; O'Reilly & Bornstein, 1993; Slade, 1987). However, cross-cultural differences characterize the extent to which children versus mothers initiate play (Haight et al., 1999). Specifically, European American mothers have been observed to follow their children's lead and interests, which is consistent with European American mothers' child-rearing goal of fostering their children's autonomy (Harkness et al., 1992; Harwood et al., 2002; Richman et al., 1988) rather than dictating the educational agenda (Farver, 1999). Thus, we predicted that European American children would be more likely to initiate play interactions during the joint play session than would their mothers (i.e., European American children would engage in more child-directed than mother-directed play during joint play). In contrast, Latino parents in South America believe that caregivers need to direct children's behavior if they are to learn obedience and become *bien educado* (Bornstein,

Haynes, et al., 1999; Valenzuela, 1997) and believe that they are assisting children's development when they direct their children's actions. Consistent with these child-rearing goals, Latino parents in South America have been observed to direct interactions with their children (Halgunseth, Ispa, & Rudy, 2006; Harwood et al., 2002). Previous research comparing European American and Japanese (sojourner) mothers' interactions with their children in a shape-fitting task showed that Japanese mothers were more likely than European American mothers to change their children's focus of attention and keep them on task than were European American mothers, which is consistent with the Japanese child-rearing goal of fostering interdependence in the mother-child dyad (DeVos, 1993; Morelli & Rothbaum, 2007; Shand, 1985). Thus, we predicted that both Latino immigrant mothers and Japanese immigrant mothers would be more likely to initiate play interactions during the joint play session than would their children (i.e., children would engage in more mother-directed than child-directed play during joint play).

In addition to these within-culture differences in terms of whether mothers or children take the lead in play interactions, we hypothesized cultural differences with respect to play initiation. Specifically, because mothers in Japan view the mother-child relationship as reciprocal and prize empathy over directiveness (Bornstein et al., 1992), we hypothesized that Japanese immigrant and European American children might engage in more child-directed and less mother-directed play than would Latino immigrant children.

Because cultural differences in the emphasis on adult verbal and nonverbal behaviors have been reported, we coded mothers' play as (physical, nonverbal) demonstrations or (verbal) solicitations. Specifically, U.S. American and Latino adults value verbal assertiveness, and Japanese adults value verbal restraint (Caudill & Frost, 1972). Indeed, previous research with Americans of Latino and Japanese ethnicity has reported that Japanese American mothers speak less to their children than do South American Latinos (Bornstein & Cote, 2001). Thus, we hypothesized that Latino immigrant mothers would engage in more play solicitations and fewer play demonstrations than would

Japanese immigrant mothers. These differences in mothering styles would also have clinical implications for understanding differential dynamics of interactions in immigrant families of different cultures of origin.

This is a follow-up study to Cote and Bornstein (2005), in which play among child-mother dyads in Argentina, Latino immigrants to the United States, and European Americans was compared, and play among child-mother dyads in Japan, Japanese American immigrants to the United States, and European Americans was compared. In that study, we found no differences between European Americans and either Latino immigrants or Japanese immigrants; however, the two immigrant samples were not compared with each other. Thus, this study extends previous work by (a) comparing Latino and Japanese immigrants' play, (b) analyzing relations between child play in two play situations (solitary and joint play), and (c) analyzing relations between child and mother play when engaged in joint play.

## Method

### Participants

One hundred thirteen 20-month-olds (ranging from 18.89 to 22.51 months) and their mothers from three U.S. American cultural groups participated: South American Latino immigrants ( $n = 37$ ), Japanese immigrants ( $n = 36$ ), and European Americans ( $n = 40$ ). All children were firstborn, healthy, and term, and approximately equal numbers of girls and boys participated. All mothers were married to their baby's father, and the families were middle class. As can be seen in Table 1, participating families were demographically similar to each other, regardless of cultural background.

Participants were from a large East Coast U.S. metropolitan area and are representative of middle-class mothers in their particular cultural group in that area (U.S. Census Bureau, 2001). Families were recruited by means of a variety of methods common to research with young children who are not yet school age (i.e., they were recruited from hospital birth notifications, patient lists of medical groups,

Table 1  
*Sociodemographic Characteristics of the Participants*

Participant	Latino immigrant ( $n = 37$ )	Japanese immigrant ( $n = 36$ )	European American ( $n = 40$ )	Differences
Child				
Gender (girls:boys)	16:21	17:19	19:21	$\chi^2(2, N = 113) = 0.17, ns$
Age <sup>a</sup> (days) ( $M[SD]$ )	626.11 (22.57)	614.94 (18.93)	612.78 (6.10)	$F(2, 110) = 6.56, p < .01^a$
Mother				
Age ( $M[SD]$ )	33.31 (4.67)	33.42 (4.05)	31.05 (5.39)	$F(2, 110) = 3.06, ns$
Education <sup>b</sup> ( $M[SD]$ )	5.94 (0.79)	5.69 (0.79)	5.92 (1.07)	$F(2, 109) = 0.87, ns$
Hours of work per week ( $M[SD]$ )	18.25 (19.46)	12.18 (19.07)	16.17 (18.05)	$F(2, 107) = 0.95, ns$
Family				
Nuclear family (%)	78.4	91.7	97.5	$\chi^2(2, N = 113) = 7.70, p < .05$

Note. Sample sizes for some analyses are smaller because of missing data.

<sup>a</sup> Latino immigrant children were older than Japanese immigrant or European American children. <sup>b</sup> Because differences exist between countries in the duration, quality, and content of schooling, bicultural researchers adjusted mothers' years of schooling so that the scales were equivalent to the 7-point Hollingshead (1975) index.

newspaper birth announcements, and advertisements in newspapers, but primarily from mass mailings). Before the conduct of these studies, parents of all participants were informed about the study and provided written consent. Treatment of human participants complied with the ethical standards defined by the American Psychological Association and was subject to oversight by the National Institute of Child Health and Human Development Institutional Review Board.

Immigrant mothers participating in this study self-identified as South American or Japanese American; this is an important methodological issue for research with ethnic minorities (Marín & Marín, 1991). Both sets of mothers were immigrants (using Hernandez et al.'s [2008] definition of immigrants). South American immigrant mothers' first language was Spanish, and they were primarily from Argentina, Colombia, and Peru. (In areas of the United States that lack a large concentration of a single Latino group, immigrants tend to identify themselves by their regional affiliation rather than by their country of origin; see Winn, 1992. Furthermore, empirically there were no differences within the South American immigrant group on any dependent variables.) Japanese immigrant mothers' first language was Japanese. Latino immigrant and Japanese immigrant mothers were bicultural (as indicated on the 5-point South American Acculturation Scale or Japanese American Acculturation Scale; Bornstein & Cote, 2001): Latino immigrant,  $M = 2.36$  ( $SD = 0.43$ ), and Japanese immigrant,  $M = 2.20$  ( $SD = 0.66$ ),  $t(69) = 1.22$ , *ns*. They were either first- or second-generation Americans (33:4 and 33:3, respectively),  $\chi^2(1, N = 73) = 0.13$ , *ns*, and they had lived in the United States for a mean of 10.37 years ( $SD = 6.75$ ) and 7.54 years ( $SD = 3.35$ ),  $t(35.69) = 1.93$ , *ns*, respectively. European American participants were either fourth or fifth generation (i.e., most or all grandparents were born in the United States).

### Procedures

Children and mothers were visited in their homes when the children were 20 months of age. Visits were scheduled at a time when the children were awake and alert, and no one was present except the child, mother, and observer. A standard set of toys that allowed for a variety of different play behaviors was placed on the floor in front of the child. After a 20- to 30-min acclimation period (McCune-Nicolich & Fenson, 1984), the child was videorecorded playing alone for 10 min and then the child and mother were videorecorded playing together for 10 min. Pilot testing undertaken before data collection ensured that the observational context was ethnographically valid (van de Vijver & Leung, 1997). The toy set (i.e., doll, blanket, tea set, telephone, train, two picture books, foam rubber ball, and nesting barrels) was chosen because it is both ethnographically valid and allows for a variety of different play behaviors (including exploratory and symbolic play; McCune-Nicolich & Fenson, 1984). Mothers also completed a demographic questionnaire.

### Play Coding

Child and mother exploratory and symbolic play were coded using a mutually exclusive and exhaustive coding system derived from research on the early development of play (Bornstein & O'Reilly, 1993). The frequency and duration of the following levels of play were recorded: 0 = *default* (no play); 1 = *unitary functional activity* (e.g., throw the ball); 2 = *inappropriate combinatorial activity* (e.g., put the ball into a teacup); 3 = *appropriate combinatorial activity* (e.g., put the cup on the saucer); 4 = *transitional play* (e.g., put the telephone to the ear without speaking); 5 = *self-directed pretense* (e.g., drink from a cup); 6 = *other-directed pretense* (e.g., pretend to feed the doll); 7 = *sequential pretense* (e.g., dial and speak into the telephone); and 8 = *substitution pretense* (e.g., pretend the block is a telephone receiver and speak into it). Children's play in the mother-child joint play session was also coded as either child initiated or mother initiated. Mothers' play demonstrations (i.e., modeling an action for the child; e.g., pouring from the tea kettle into a teacup) and solicitations (i.e., verbally encouraging the child to participate in a specific play activity; e.g., suggesting that the child pour tea from the kettle into a teacup) were coded separately. Play was coded continuously by noting the start time and play level, and play at a given level continued until there was a 10-s or longer break or the player touched another toy when the end time was noted (to 1 s). Minimum play time was set to 1 s.

Coders were unaware of the hypotheses and were trained to reliability ( $\kappa \geq .60$ ; intraclass correlation [ICC]  $\geq .80$ ) on a standard set of videorecordings before they were allowed to code the videorecordings for this study. Additionally, interrater reliability was checked every 10 videorecordings to guard against coding drift. Interrater agreement was computed separately for each cultural group using kappa for behaviors and ICC for frequency of maternal verbal solicitations based on approximately 15% of the videorecordings: child exploratory play,  $\kappa \geq .77$ ; child symbolic play,  $\kappa \geq .76$ ; initiation of child play,  $\kappa \geq .67$ ; mother exploratory play demonstrations,  $\kappa \geq .75$ ; mother symbolic play demonstrations,  $\kappa \geq .71$ ; mother exploratory play solicitations, ICCs  $\geq .89$ ; and mother symbolic play solicitations, ICCs  $\geq .92$ . Play reliability was not systematically related to cultural group.

### Computing the Dependent Variables

Frequency and duration scores for the eight play levels were aggregated into exploratory (sum of Levels 1–4) and symbolic (sum of Levels 5–8) play scores. Four indices of play were computed, separately for play session (solitary, joint), separately for play partner (child, mother), for who initiated child play in the joint play session (child, mother), and for exploratory and symbolic: raw frequency of play bouts, the proportion of play bouts, raw duration of play, and the proportion of duration of play. These four indices (raw frequency, proportional frequency, raw duration, and proportional duration) have consistently been found to be positively and significantly correlated, including with the

current samples (e.g., Bornstein, Haynes, Legler, O'Reilly, & Painter, 1997; Cote & Bornstein, 2005). Therefore, the four indices were aggregated into mean standard scores, which resulted in eight dependent variables: mean  $z$  scores of child exploratory and symbolic play in the solitary play session, mean  $z$  scores of child exploratory and symbolic play in the joint play session that was child initiated or mother initiated, and mothers' demonstrations of exploratory and symbolic play. In addition, for maternal solicitations of child play, two indices of exploratory and symbolic play were developed: the raw frequency of play bouts that were exploratory or symbolic and the proportion of play bouts that were exploratory or symbolic. The two (raw and proportional) scores of frequency of play were then aggregated into two measures of maternal solicitations by taking the mean  $z$  scores separately for exploratory and symbolic play. This resulted in two additional dependent variables: maternal solicitations of exploratory and symbolic play.

## Results

Examination of univariate and multivariate distributions of the dependent variables revealed that all were normally distributed. Because differences in girls' and boys' play have sometimes been reported (Bornstein, Haynes, et al., 1999; Tamis-LeMonda et al., 1992), we used child gender as a factor in the multivariate analyses of variance (MANOVAs). Furthermore, because child age differed among groups (Table 1), and we wanted to rule out child age as a possible confound (because older children are more likely than younger children to engage in symbolic play), we used child age as a covariate in all analyses. Wilks's lambda is reported for all multivariate tests, and pairwise comparisons are  $t$  tests with Bonferroni's correction. Because interaction effects supersede main effects, we report only interaction effects. Because of space limitations, we report only significant results; however, the tables contain all data—that is, means and standard deviations for each dependent variable controlled for child age presented separately by cultural background and child gender.

### Child Solitary Play

We performed a repeated-measures analysis of variance (ANOVA) with two between-subjects factors, cultural background (Latino immigrant, Japanese immigrant, and European American) and child gender; one covariate (child age); and two dependent variables (child exploratory and symbolic play) to investigate cultural and gender differ-

ences in children's engagement in exploratory and symbolic play when they played by themselves. There was a significant multivariate interaction of Play Type  $\times$  Gender,  $F(1, 107) = 4.57, p < .05, \eta_p^2 = .04$ . Univariate ANOVAs revealed that boys engaged in significantly more exploratory play ( $M = .14, SD = .83$ ) and significantly less symbolic play ( $M = -.14, SD = .91$ ) than did girls (exploratory,  $M = -.19, SD = .83$ ; symbolic,  $M = .20, SD = .92$ ): exploratory,  $F(1, 107) = 4.51, p < .05, \eta_p^2 = .04$ ; symbolic,  $F(1, 107) = 3.84, p = .05, \eta_p^2 = .04$ . Neither the multivariate main effect of cultural background, nor any of the interactions involving cultural background, was significant. (See Table 2 for full data.)

We computed a post hoc power analysis to determine whether the sample size of 113 provided sufficient power to detect a medium-sized effect in an ANOVA design with two between-subjects factors with two and three levels and two dependent variables. With an effect size of .25 for between-subjects effects (Faul, Erdfelder, Lang, & Buchner, 2007), an alpha of .05, and a sample size of 113, the power estimate for this design was .99, indicating sufficient power to detect a medium or large Within  $\times$  Between effect.

### Child Joint Play

We performed a MANOVA with two between-subjects factors, cultural background (Latino immigrant, Japanese immigrant, or European American) and child gender; one covariate (child age); and four dependent variables (child-initiated exploratory and symbolic play, mother-initiated exploratory and symbolic play) to investigate cultural and gender differences in the kinds of play in which children engaged when they played with their mothers and whether play differed depending on who initiated play. A significant multivariate interaction of Cultural Background  $\times$  Play Type  $\times$  Initiator emerged,  $F(2, 106) = 3.89, p < .05, \eta_p^2 = .07$ . Japanese immigrant children engaged in more exploratory play ( $M = .41, SD = .73$ ) and less symbolic play ( $M = -.39, SD = .83$ ) when they initiated the play interaction than when their mothers initiated play (maternal exploratory,  $M = -.05, SD = .94$ ; symbolic,  $M = .12, SD = .83$ ): exploratory,  $F(1, 106) = 7.04, p < .01, \eta_p^2 = .06$ ; symbolic,  $F(1, 106) = 8.49, p < .01, \eta_p^2 = .07$ . Both Latino immigrant and Japanese immigrant children engaged in more exploratory than symbolic play when they initiated play: Latino immigrants,  $F(1, 106) = 9.44, p < .01, \eta_p^2 = .08$  (exploratory,  $M = .46, SD = .75$ ; symbolic,  $M = -.24, SD = .85$ ), and Japanese immigrants,  $F(1, 106) = 12.32,$

Table 2  
Cultural and Gender Differences in Child Solitary Play

Play type	Latino immigrant		Japanese immigrant		European American	
	Girls	Boys	Girls	Boys	Girls	Boys
Exploratory play	-.28 (.67)	.06 (.72)	-.09 (.66)	.24 (.68)	-.21 (.68)	.12 (.69)
Symbolic play	.24 (.74)	-.10 (.79)	.18 (.73)	-.16 (.75)	.20 (.75)	-.15 (.76)

Note. Data are means (standard deviations), controlling for child age.

$p = .001$ ,  $\eta_p^2 = .10$  (means for Japanese immigrants are reported above). No (cultural) differences emerged with respect to whether mothers or children initiated play overall (Table 3).

### Mothers' Play

We performed a MANOVA with two between-subjects factors, cultural background (Latino immigrant, Japanese immigrant, or European American) and child gender; one covariate (child age); and four dependent variables (maternal demonstrations and solicitations of exploratory and symbolic play) to investigate cultural and gender differences in the modality that mothers used to encourage different types of play. There was a significant interaction of Cultural Background  $\times$  Play Modality,  $F(2, 108) = 5.54$ ,  $p < .01$ ,  $\eta_p^2 = .09$ . Although univariate tests revealed a significant difference across cultural groups for demonstrations (wherein Japanese and South American immigrant mothers demonstrated more than European American mothers),  $F(2, 108) = 3.60$ ,  $p < .05$ ,  $\eta_p^2 = .06$ , pairwise comparisons did not reach statistical significance ( $p < .05$ ). Univariate tests also showed that European American mothers solicited play significantly more ( $M = .04$ ,  $SD = .39$ ) than they demonstrated ( $M = -.13$ ,  $SD = .28$ ),  $F(1, 108) = 7.55$ ,  $p < .01$ ,  $\eta_p^2 = .07$  (Table 4).

We computed a post hoc power analysis to determine whether the sample size of 113 provided sufficient power to detect a medium-sized effect in a MANOVA design with two between-subjects factors (one factor having two levels and the other having three levels) and two within-subjects factors, each with two levels (i.e., four dependent variables). With an effect size of .25 for between-subjects effects (Faul et al., 2007), an alpha of .05, and a sample size of 113, the power estimate for this design was .84, indicating sufficient power to detect a medium or large Within  $\times$  Between effect.

### Relations Between Child Solitary and Joint Play

We performed Pearson correlations to explore relations between children's play in the two play settings. As Table 5 shows, few relations between children's play in the two play settings emerged.

### Relations Between Child and Mother Play

We performed Pearson correlations to investigate relations between similar kinds of child and mother play. As Table 6 shows, with one exception, all of these relations were significantly positively correlated in every cultural group (all  $r_s \geq .34$ ,  $p_s \leq .05$ ).

## Discussion

### Children's Play

Our findings support species-general developmental views of mother-child object and representational play (Piaget, 1951/1962) and also point to the existence of species-general relations in child-mother play interactions (Bornstein, 1995). Taken together, our findings of few cultural differences in children's play, but differences in play type (exploratory or symbolic) depending on whether mothers or children initiate play, confirm previous reports that children's play tends to be more sophisticated when their mothers encourage them than when children initiate play with their mothers or play alone (O'Connell & Bretherton, 1984; O'Reilly & Bornstein, 1993; Slade, 1987). Moreover, our results extend these findings to two immigrant samples. Developmentally, children first engage in exploratory play, and over the course of the 2nd year of life, as their representational capacities advance, they begin to engage in symbolic play (Piaget, 1951/1962). From an applied or clinical vantage, these results suggest that the play of Japanese and South American immigrant children is similar to that of European American children in the sense that it is more sophisticated when play is mother rather than child initiated and that by playing with their mothers, children's play develops.

Also concerning the universality of play, child gender emerged as a significant factor. Regardless of their culture, boys engaged in significantly more exploratory and less symbolic play than did girls when they played by themselves (Lytton & Romney, 1991). These results confirm previous research on gender differences in children's play that was conducted with European Americans, Latino families in Argentina, and dyads in Japan (Bornstein, Haynes, et al., 1999; Tamis-LeMonda et al., 1992). It is noteworthy that these gender differences were found only for children's

Table 3  
Cultural and Gender Differences in Child Joint Play

Dependent variable	Latino immigrant		Japanese immigrant		European American	
	Girls	Boys	Girls	Boys	Girls	Boys
Child initiated						
Exploratory play	.33 (.57)	.60 (.62)	.28 (.58)	.55 (.60)	-.30 (.63)	-.04 (.64)
Symbolic play	-.23 (.65)	-.26 (.71)	-.37 (.66)	-.41 (.68)	-.16 (.71)	-.19 (.73)
Mother initiated						
Exploratory play	.21 (.73)	.24 (.79)	-.06 (.74)	-.04 (.77)	.03 (.81)	.06 (.82)
Symbolic play	-.13 (.65)	-.18 (.70)	.14 (.65)	.10 (.68)	-.18 (.71)	-.23 (.73)

Note. Data are means (standard deviations), controlling for child age.

Table 4  
*Cultural and Gender Differences in Mothers' Play*

Dependent variable	Latino immigrant		Japanese immigrant		European American	
	Girls	Boys	Girls	Boys	Girls	Boys
Demonstrations						
Exploratory play	.13 (.60)	.29 (.65)	-.06 (.60)	.10 (.62)	-.08 (.62)	.09 (.63)
Symbolic play	-.12 (.63)	-.17 (.68)	.04 (.63)	-.01 (.65)	-.23 (.65)	-.28 (.66)
Solicitations						
Exploratory play	.20 (.75)	.52 (.81)	-.07 (.75)	.25 (.77)	.02 (.76)	.34 (.78)
Symbolic play	-.11 (.66)	-.20 (.71)	-.26 (.66)	-.35 (.67)	-.05 (.67)	-.14 (.69)

Note. Data are means (standard deviations), controlling for child age.

solitary play and not in child-mother joint play. It could be that girls, on average, experience more early caregiving socialization regarding interpersonal skills than do boys or that girls are more susceptible to early caregiving socialization regarding interpersonal skills than are boys (Maccoby, 1988).

We found few relations between child exploratory play in the solitary and joint play sessions and few relations between child symbolic play in the two play sessions. This suggests that across cultures, mothers influence their children's play and that children play differently when their mothers are involved than when they play alone.

Table 5  
*Relations Between Children's Play in the Two Play Situations*

Joint play	Solitary play	
	Exploratory	Symbolic
Child-initiated exploratory		
Latino immigrant	.33*	
Japanese immigrant	.01	
European American	.04	
Mother-initiated exploratory		
Latino immigrant	.12	
Japanese immigrant	-.07	
European American	.00	
Child-initiated and mother-initiated collapsed, exploratory		
Latino immigrant	.29 <sup>†</sup>	
Japanese immigrant	-.02	
European American	.04	
Child-initiated symbolic		
Latino immigrant		.15
Japanese immigrant		.11
European American		.30 <sup>†</sup>
Mother-initiated symbolic		
Latino immigrant		.04
Japanese immigrant		-.17
European American		.11
Child-initiated and mother-initiated collapsed, symbolic		
Latino immigrant		.12
Japanese immigrant		-.02
European American		.31*

Note. Data are Pearson correlations.

<sup>†</sup>  $p < .10$ . \*  $p \leq .05$ .

### *Mothers' Play*

European American mothers engaged in significantly more play solicitations than demonstrations (regardless of whether their play was exploratory or symbolic). This finding is consistent with previous research that has shown European American mothers stress verbal interactions (Bornstein, Tamis-LeMonda, & Haynes, 1999; Caudill & Schooler, 1973), although not necessarily in the play setting. Again, the parenting styles of European American mothers appear to differ from those of immigrant mothers, as do styles of family interaction and expectation.

### *Relations Between Child and Mother Play*

As expected, each of the cultural groups evidenced a consistent pattern of interrelations between child and mother play. For example, children's exploratory play (whether it was child initiated or mother initiated) was significantly positively related to both maternal demonstrations and solicitations of exploratory play in all three cultural groups. These concordances indicate that children and mothers in each of these cultural groups coordinate in their play. Mothers who played more in pretense at 13 and 20 months had children who played more in pretense (Vibbert & Bornstein, 1989). Relations between children's and mothers' exploratory and symbolic play have also been found in Argentine, Japanese, and European American families (Bornstein, Haynes, et al., 1999; Tamis-LeMonda et al., 1992). These findings broaden those results to exploratory play and also to acculturating groups.

Although the direction of effect in these correlational results is not clear, research has shown that when mothers encourage children's play by demonstrating or soliciting, children's play is more sophisticated than when children initiate play with their mothers or play alone (Bornstein & O'Reilly, 1993; O'Connell & Bretherton, 1984; Slade, 1987). Children are likely taught to play in different ways by their mothers and in ways valued by the culture in which their mother was reared. The finding that when boys played alone, they engaged in more exploratory than symbolic play but that this gender difference was absent when they played with their mothers lends further support to this conclusion. From a clinical or applied point of view, these findings suggest that regardless of ethnicity, parents might foster the



Table 6  
*Relations Between Child and Mother Play*

Child	Mother			
	Exploratory demonstrations	Exploratory solicitations	Symbolic demonstrations	Symbolic solicitations
Child-initiated exploratory				
Latino immigrant	.54***	.46**		
Japanese immigrant	.54***	.49**		
European American	.60***	.44**		
Mother-initiated exploratory				
Latino immigrant	.46**	.42**		
Japanese immigrant	.54***	.58***		
European American	.50***	.35*		
Child-initiated symbolic				
Latino immigrant			.58***	.36*
Japanese immigrant			.37*	.34*
European American			.22	.44**
Mother-initiated symbolic				
Latino immigrant			.61***	.51***
Japanese immigrant			.37*	.65***
European American			.37*	.64***

Note. Data are Pearson correlations.  
 \*  $p \leq .05$ . \*\*  $p \leq .01$ . \*\*\*  $p \leq .001$ .

character and quality of their children's cognitive growth by structuring their play interactions according to those characteristics they hope to foster in their children. Parental goals should always be taken into account when assessing immigrants' parenting behavior.

### Conclusions

With respect to child development, parenting, and acculturation, our study suggests that immigrant samples of children and their mothers in the United States tend to resemble each other and European American children and mothers in their culture of destination. This suggests that there may be cultural universals in the expression of (at least some) developmentally important processes, such as the development of child and mother play. Future research should further explore the extent to which play and other important developmental processes are culturally universal or culture specific. For clinicians and others who work with immigrant parents and children, our results point to realms of child growth, parenting, and family function that require special attention and cultural sensitivity.

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Received April 30, 2008

Revision received January 9, 2009

Accepted January 12, 2009 ■



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