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Culture at play: A cross-cultural comparison of mother-child communication during toy play

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CROSS-CULTURAL COMPARISON OF MOTHER-CHILD TOY PLAY

Abstract

Maternal scaffolding and four-year-old children's linguistic skills were examined during toy play. Participants were 21 American-English monolingual and 21 Thai monolingual mother-child dyads. Results revealed cross-cultural differences in conversation styles between the two groups. American dyads adopted a high-elaborative style relative to Thai dyads. American and Thai mothers utilized unique sets of elicitation strategies to facilitate different aspects of children's language development, specifically American mothers focused on children's narrative skills whereas Thai mothers emphasized vocabulary learning. The two groups of children showed distinct patterns of conversation, for example American children produced greater evaluative statements whereas Thai children repeated their mothers' utterances more, which aligned with socialization goals of each respective culture. Mother-child narrative styles also differed as a function of child gender. Additionally, significant positive correlations were observed between maternal and child linguistic measures. These findings provide evidence for cross-cultural variation in communicative styles and toy play practices of American and Thai mother-child dyads, which reflect the social norms of individualistic and collectivist cultures. More broadly, the present study suggests that dyadic engagement during play is important for children's development and socialization, as maternal speech transfers knowledge of culture-specific pragmatic rules that the children learn to apply in social interactions. (200/200 words)

Keywords: cross-cultural, mother-child interaction, toy play

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Children typically develop to become competent members of their societies through the support of adults (e.g., Rogoff, Mosier, Mistry, & Gönçü, 1993; Vygotsky, 1978). During infancy and toddlerhood, parental linguistic scaffolding is particularly crucial in shaping children's language development trajectory (e.g., Hoff-Ginsberg, 1985; Rowe, Leech, & Cabrera, 2017). Such scaffolding is evident from early stages of development, where parents tend to adjust the complexity of both their language and play depending on their children's abilities in order to advance language development and play to higher levels (Snow, 1972). As children enter the preschool years, social play interactions contribute to the development of narrative skills (Howes & Wishard, 2004) and provide an opportunity for parents to teach culture-specific behavioral and communicative norms (e.g., Tamis-LeMonda, Sze, Ng, Kahana-Kalman, & Yoshikawa, 2013). The present study examined how maternal scaffolding and children's communicative skills may differ as a function of cultural background and child gender, as well as how maternal and child patterns of language use may be related, by looking at toy play interactions of American and Thai mother-preschooler dyads.

Toy Play as a Context for Parental Language Scaffolding and Socialization

During the early years, parent-child interactions involving unstructured toy play support language development (e.g., Kwon, Bingham, Lewsader, Jeon, & Elicker, 2013; Newland, Roggman, & Boyce, 2001). Specifically, previous research has shown that children's play with adults tends to be more diverse and complex compared to children's play alone (Bornstein et al., 1996) and that maternal linguistic use during dyadic toy play influences infant language abilities at a later developmental time point (e.g., Newland et al., 2001). Importantly, among the many settings in which parents and children interact, unstructured toy play is particularly conducive to

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language scaffolding because the task is relatively more spontaneous compared to other types of tasks (e.g., playing a specific game, where the interaction is determined by the rules of the game and follows a script). The lack of rigid structure provides mothers the freedom to engage in free play with their child responsively and teach lessons they deem important for their child's development. For instance, parents have been shown to provide more positive, cooperative, and child-centered verbal responses (following child's lead: e.g., child hands mother object and mother responds about that object) to their toddlers during toy play compared to caregiving (Lindsey, Cremeens, & Caldera, 2010). This link between language development and play could be explained by the inherent nature of the activity, where mothers typically expose children to linguistic and gestural input as the dyad attends to the same objects (Newland et al., 2001). Moreover, parents often provide narratives related to children's play behaviors and ask children to elaborate on those descriptive stories, thereby further promoting children's language development (Gleason & Melzi, 1997; Howes & Wishard, 2004; McCabe, 1997).

In addition to the opportunity for language scaffolding, joint attention during toy play also allows parents to socialize their children in societal norms and values (Bruner, 1977, 1983). In cooperatively manipulating objects and coordinating actions revolving around toys, parents are transmitting language- and culture-specific knowledge to their children, such as the typical structure of adult-child communication (Bruner, 1977, 1983). Consequently, after repeated exposures, children ultimately assimilate and learn to appropriately engage with others in their cultural community (Bruner, 1983). Given the interactive nature of parent-child play, researchers are able to use this particular social activity to study language and cognitive development from a sociocultural perspective.

Cross-Cultural Differences in Parent-Child Play

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Although play is a universal activity, parents and children around the world engage in different types of play (e.g., Rogoff et al., 1993) and have different points of emphasis during play activities (e.g., Tamis-LeMonda et al., 2013). Culture-specific parent-child play behaviors can be explained by the fact that different societies often vary along a continuum of values and norms. One such continuum is that of individualism - collectivism, also referred to as the independence - interdependence continuum (Triandis, 1995). Individualistic cultures (e.g., North American) tend to emphasize cultivation of independence and assertiveness while collectivist cultures (e.g., Asian) tend to value interdependence. Another continuum that correlates with individualism - collectivism is the low-power-distance - high-power-distance that describes the nature of interpersonal relationships (Hofstede, 2001). Individualistic cultures fall on the low-power-distance end of the spectrum, meaning that all individuals are viewed as equal and interpersonal interactions are less formal. In contrast, collectivist cultures fall on the high-power-distance end, constituting that some individuals have more power (e.g., adults) and are treated with respect by those who have less power (e.g., children). As a result of these value systems, parent-child play interactions tend to be more child-centered in individualistic cultures and more adult-centered in collectivist cultures (Keller, 2009). Specifically, in individualistic low-power-distance cultures, power is more evenly distributed among parents and children and both parties are more equally entitled to determine the structure of the play interaction, allowing for children to take the lead. Conversely, in collectivist high-power-distance cultures, parents are viewed as authority figures whose directions children must typically follow, which often results in the parents directing the course of play.

An illustrative example of how cultural values are expressed in the context of play is a comparative study on American and Japanese mothers' play solicitations (Tamis-LeMonda,

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Bornstein, Cyphers, Toda, & Ogino, 1992). American mothers encouraged their toddlers to engage in independent exploration and play (e.g., placing shapes in shape sorters), whereas Japanese mothers encouraged their toddlers to engage in play that revolved around social interactions (e.g., pretending to greet each other). As shown here and in other work (e.g., Farver & Howes, 1993; Vigil, 2002), caregivers from individualistic low-power-distance cultures are more likely to allow children to explore and play with toys in their own way, whereas caregivers from collectivist high-power-distance cultures tend to explicitly teach children how to play with toys. As children grow older and enter preschool age, other differences in maternal teaching emphasis also emerge. When engaging in toy play, African American mothers focused their attention on teaching literacy concepts, while Chinese mothers emphasized teaching math concepts (Tamis-LeMonda et al., 2013). As demonstrated by these findings, toy play allows us to observe potential cultural differences in maternal scaffolding styles and in teaching emphasis. Compared to earlier in development, play interactions during preschool present a particularly unique opportunity to examine how different cultures may differ in the skills that are viewed as foundational to school readiness.

Because language is an integral part of play, maternal and child linguistic use during the dyadic interaction tends to vary across cultures and reflect unique socialization goals.

Throughout development, parent-child play evolves depending on the children's skills. In infancy and toddlerhood, caregivers are responsible for guiding children's language and play due to their relatively limited linguistic abilities (e.g., Hoff-Ginsberg, 1985; Rowe et al., 2017). Thus, during this developmental period, cultural differences are observed in the language scaffolding techniques that mothers use with their children. In one study, Choi and Gopnik (1995) revealed that Korean-American mothers focused on discussing their toddlers' actions (e.g., "what are you

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doing?”), whereas European-American mothers focused on labeling objects (e.g., “that’s a ball”). Once children enter the preschool years, they become better equipped to co-construct the narrative during play by using more sophisticated communicative acts such as indicating agreement (Leaper & Gleason, 1996). In turn, parents employ a greater variety of contingent responses to build upon their preschoolers’ language, including making suggestions and showing understanding (Nelson et al., 2003). During this period, cross-cultural differences can be observed in both the mothers’ and the children’s language use. For instance, it was found that Korean-American preschoolers are more likely to use polite requests and provide statements of agreement, whereas Anglo-American preschoolers are more likely to use direct commands and show disagreement with their play partners’ suggestions (Farver & Shin, 1997). However, despite research showing cross-cultural differences in linguistic use during play, most of the extant literature has focused on play during infancy and toddlerhood. Less is known about variations across cultures in parental scaffolding techniques and children’s communicative skills during the preschool years. Because parent-child play during this period crucially supports narrative development (Howes & Wishard, 2004), the current study aimed to examine potential differences in the ways that mothers from different cultural backgrounds support language development through play. Additionally, parent-child play interactions during the preschool years serve the purpose of transmitting culture-specific norms that help children become competent adults in their society. Thus, examining preschoolers’ toy play can provide insight into parents’ socialization behaviors and children’s developmental outcomes simultaneously.

Prior work examining cross-cultural differences in mother-child narrative styles in other common settings has shown differences between individualistic (e.g., North American) and collectivist (e.g., Japanese, Chinese, Thai) societies, specifically in the context of

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autobiographical reminiscing (e.g., Minami & McCabe, 1995; Rochanavibhata & Marian, 2020) and book sharing (e.g., Rochanavibhata & Marian, 2021; Wang, Leichtman, & Davies, 2000). When engaging in these dyadic interactions, mothers and children from individualistic cultures tend to be more elaborative (i.e., having more extended conversations, asking more questions, and providing new information) than mothers and children from collectivist cultures. Although cross-cultural research comparing toy play interactions of mothers and children from individualistic and collectivist communities has not focused on the elaborateness of maternal and child linguistic use, there is reason to believe that American and Thai mother-preschooler dyads will differ on this dimension based on the previous work done in other dyadic contexts. Thus, the present study set out to examine whether cultural background has an influence on maternal and child communicative patterns during toy play, including how elaborated their conversations may be and how teaching emphases may differ.

Gender Differences in Parent-Child Play

Gender can also play an important role in shaping children's development. The examination of parent-child interactions has revealed gender-specific socialization goals during activities such as dyadic reminiscing (e.g., Haden, Haine, & Fivush, 1997; Reese & Fivush, 1993) and book reading (e.g., Anderson, Anderson, Lynch, & Shapiro, 2004; Meagher, Arnold, Doctoroff, & Baker, 2008). For instance, parents are more elaborative and evaluative when reminiscing with daughters than with sons (Haden et al., 1997; Reese & Fivush, 1993). Consequently, girls tend to tell longer and more evaluative personal narratives compared to their male counterparts (Haden et al., 1997).

Because play provides opportunities for parents to model behavioral norms and for children to assimilate those behavioral norms, parent-child play is another context that allows for

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the socialization of gender. There is indeed evidence to suggest that parent-child play varies as a function of child gender, specifically in the ways that parents socialize boys and girls through their language (e.g., Lindsey et al., 2010; Lindsey & Mize, 2001). For example, fathers are more likely to use assertive commands with preschool-age sons and polite commands with preschool-age daughters (Lindsey & Mize, 2001). Mothers are more likely to use both assertive and polite commands with sons than with daughters. These findings suggest that parents are more inclined to support the development of autonomy in sons than in daughters. Despite the evidence that parent-preschooler play differs as a function of child gender, comparably less is known about how cultures may differ with regard to gender-specific socialization goals and the way those goals are transmitted through play activities. Therefore, the current study will examine how gender-specific socialization goals may influence the play behaviors and language use of boys and girls during play, as well as how parents' socialization of gender during play may differ depending on the children's cultural background.

The Present Study

Play interactions between parents and children are conducive to fostering language and cognitive development, as well as cultural learning. The current study compared maternal and child communicative patterns of American and Thai dyads during toy play. Although previous research has established differences between individualistic and collectivist cultures in parent-child play, little is known about how parents from different cultures support their children's narrative skills and how children are socialized during this activity. Additionally, despite evidence showing that Thai caregivers differ from their American counterparts in the linguistic scaffolding strategies used during reminiscing (Rochanavibhata & Marian, 2020) and during book sharing (Rochanavibhata & Marian, 2021), there has been no systematic investigation of

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how Thai parents scaffold their children's language during toy play or how Thai children engage in play. To date, researchers have only examined Thai parents' play interactions among other caregiving activities, specifically looking at whether Thai mothers and fathers engage in different types of play with their children (e.g., Tulananda & Roopnarine, 2001). Considering that caregivers from collectivist and individualistic cultures differ in how they provide instructions and engage with toys (Vigil & Hwa-Froelich, 2004) and that Thailand is a collectivist and a high-power-distance culture that holds interdependent values (Hofstede, 2001), comparing Thai and American mother-preschooler dyads will inform our understanding of cultural differences in narrative development and teaching emphases in the context of play.

With respect to gender-specific socialization practices, relatively little is known about how cultural differences in play interactions are moderated by gender. In the context of play, no research to date has examined whether Thai parents scaffold children's language differently depending on child gender or whether Thai boys and girls exhibit different communicative patterns. The present work aimed to explore this gap in knowledge and examine the effect of child gender on maternal and child discourse, as well as any potential moderating effect of child gender on cross-cultural differences in narrative patterns. Comparing parental language use with boys and girls in these two cultural samples helps elucidate how culture- and gender-specific socialization goals interact and influence parent-child play interactions.

Based on previous cross-cultural research, we predicted that the two groups of mothers and children would differ in their linguistic scaffolding techniques and communicative skills, including on the dimension of elaborateness, and that maternal and child patterns of conversation would be related. Additionally, in line with previous findings from the parent-child reminiscing and play literature, we predicted that mothers would socialize boys and girls differently during

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play, specifically in their use of elaborative and evaluative language, and that children themselves would exhibit gender differences in their narrative patterns. By uncovering cultural and gender differences in language use during play, findings from this work carry implications for researchers and clinicians who are designing play interventions to improve developmental outcomes for children from linguistically and culturally diverse populations.

Method

Design

The present study followed a 2 (culture: American, Thai) x 2 (child gender: boy, girl) between-subject design. There were two types of dependent variables: 1) maternal language use during the interaction and 2) child language use during the interaction. The full list of linguistic measures is presented in the Coding and Data Analysis section, as well as in Tables 1a and 1b.

Participants

Twenty-one English monolingual American mother-child dyads (11 boys, 10 girls) living in the United States and 21 Thai monolingual mother-child dyads (10 boys, 11 girls) living in Thailand participated in the study. Dyads in the United States were recruited in the Chicago metropolitan area, and dyads in Thailand were recruited in the Bangkok metropolitan area. American participants were recruited via Northwestern University participant databases, including the Communication Research Registry and the Child Studies Group Registry. Thai participants were recruited through the first author's contacts at preschools in Bangkok and through snowball sampling. Potential participants were first verbally prescreened for their interest and eligibility (age and language knowledge) to participate in the research study before proceeding to provide consent and assent.

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Children were 4-year-old preschoolers (range: 3;11 to 5;0 years). This specific age group was selected in accordance with previous research on maternal language scaffolding and children's development of narrative skills (e.g., Nelson & Fivush, 2004). Compared to three-year-old children, four-year-olds have been shown to be linguistically competent enough to contribute during discourse (e.g., Minami & McCabe, 1995), but are not as advanced in their conversational abilities as five-year-olds (Peterson & McCabe, 1983). As a result, choosing this particular age group allowed for a substantial amount of language samples to be collected from both mothers and children so that cultural differences in mother-child conversation styles, as well as associations between maternal and child discourse patterns, could be examined (e.g., Reese et al., 1993).

Information on mothers' and children's linguistic and socioeconomic status background were assessed using questionnaires. The *Language Experience and Proficiency Questionnaire* (LEAP-Q; Marian, Blumenfeld, & Kaushanskaya, 2007) was used to assess mothers' language profiles including their proficiency in speaking, understanding, and reading in their first language, as well as a second language if there was any. Socioeconomic status information, specifically maternal and paternal education, was also provided in the LEAP-Q filled out by mothers and fathers. American and Thai parents did not differ in their years of education (Mothers: American $M=18.00$, $SD=3.53$; Thai $M=18.55$, $SD=3.07$, $p>.05$; Fathers: American $M=17.81$, $SD=3.12$; Thai $M=19.20$, $SD=6.09$, $p>.05$). In addition, mothers also filled out an adapted child version of the LEAP-Q, which provided information regarding their child's language background and experience. To be included in the study, monolingual mothers and children had to meet the following criteria: (a) exposure to a second language was less than 20% (if mothers and children spoke a second language or were exposed to one) and (b) proficiency in

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a second language was 5 or lower on the 0-to-10 LEAP-Q scale. Fourteen additional mother-child dyads (10 Thai, 4 American) were not included in the present study because they did not meet the inclusionary criteria.

To obtain objective measures of mothers' and children's language abilities, mother-child dyads were also given standardized tests of receptive and expressive vocabulary. American mother-child dyads were administered the *Peabody Picture Vocabulary Test—Third Edition* (PPVT-III; Dunn & Dunn, 1997) and the *Expressive Vocabulary Test* (EVT; Williams, 1997), whereas Thai mother-child dyads completed the translated Thai versions of the two tests. American and Thai dyads did not differ on their PPVT and EVT scores. See Table 2 for additional participant information.

Procedure

During a preliminary visit, mother-child dyads were screened for eligibility to participate in the study. Mothers filled out the LEAP-Q to provide information regarding their own language profile, as well as their child's language background. After mothers completed the language questionnaires, the researcher then administered the PPVT-III (10-15 minutes) and the EVT (10-20 minutes) to assess mothers' and children's English or Thai proficiencies. In a subsequent visit, the researcher visited the dyads' homes and video-recorded each mother-child interaction. Dyads were given a toy set consisting of gender- and culturally-neutral farm animals including a pig, chicken, cow, horse, duck, sheep, and goat (see Figure 1 for a picture of the toy set). Mothers were instructed to play with their children as they normally would and with as many toys as the children were interested in, for as long as the mothers and children would like. No time limit was imposed upon the dyads. The recording was stopped whenever the dyad was done playing. The duration of the toy play interaction was comparable across dyads within and across

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samples (Thai: $M=18.83$ minutes, $SD=10.28$ minutes; American: $M=21.14$ minutes, $SD=13.18$ minutes, $p>.05$). The same set of toys was used for both the English and Thai sessions. See Figure 2 for a picture of the task set-up.

Coding and Data Analysis

Video recordings were transcribed following the Codes for the Analysis of Human Language (CHAT) convention, available through the Child Language Data Exchange System (CHILDES; MacWhinney, 2000). Two native English speakers and two native Thai speakers transcribed and coded all conversations in their respective languages. Interrater reliability was established between the coders on 20% of the transcripts using Cohen's kappa for all of the measures ($\kappa=.96$ for Thai coders and $\kappa=.95$ for English coders). To ensure that the English and Thai coders used the same criteria and frame of reference for their coding, a Thai-English bilingual speaker coded and established inter-rater reliability on 20% of the transcripts in both languages ($\kappa=.93$).

Two types of measures were obtained from the coded transcripts: 1) mother's language use (also referred to as scaffolding strategies) and 2) child's language use (also referred to as narrative skills or communicative skills). Based on coding systems commonly used in the literature (e.g., Bloom, 1970; Tamis-LeMonda, Baumwell, & Cristofaro, 2012; Tomasello & Farrar, 1986), maternal utterances were coded for 16 linguistic measures: affirmation, attention directive, closed-ended question, description, direct action request, expansion, extension, indirect action request, label, negative feedback, open-ended question, positive feedback, recast, reframe, repetition, and request for repetition. Children's utterances were also categorized into the same 16 categories. See Tables 1a and 1b for the full list of measures with their corresponding examples. Additionally, measures of conversation length, including the total number of

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utterances and total number of words, were obtained from the transcripts. Scores for each maternal and child linguistic measure were calculated by dividing the total count by total length of conversation.

Prior to data analysis, outliers were winsorized (69 outliers from the total of 1512 data points were replaced with 2 standard deviations from the mean). Mean percentages of each maternal and child linguistic measure were submitted to a 2 (culture) \times 2 (child gender) ANOVA. Bonferroni correction for multiple comparisons was used in post-hoc comparisons in order to follow up significant interactions between culture and child gender. Relations between maternal and child language measures were examined using correlations.

Results

Results of the maternal and child 2 (culture) \times 2 (child gender) ANOVA analyses can be found in Table 3a and 3b respectively. Maternal and child correlations are presented in Table 3c. A selection of excerpts from transcripts can be found in the supplemental material.

Maternal Narrative Style

American mothers produced a greater number of utterances and used more closed-ended questions, positive feedback, and recasts than Thai mothers ($p < .05$, partial η^2 range: 0.12-0.24), whereas Thai mothers used attention directives, direct action requests, expansions, labels, open-ended questions, reframes, and requests for repetition more than American mothers ($p < .05$, partial η^2 range: 0.17-0.52). There was a main effect of child gender on use of extensions, where mothers of girls used more extensions than mothers of boys ($p < .05$, partial $\eta^2 = 0.13$). There was also a significant interaction between culture and child gender for use of reframes. Further comparisons revealed that Thai mothers of boys used reframing ($M = 0.26$, $SD = 0.21$) more than American mothers of boys ($M = 0.03$, $SD = 0.05$), $t(10) = -3.49$, $p = .006$, 95% CI [0.09, 0.37],

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$d=1.62$, whereas among mothers of girls, Thai ($M=0.12$, $SD=0.08$) and American mothers did not differ in their reframing ($M=0.06$, $SD=0.07$), $t(19)=-1.89$, $p>.025$, 95% CI [-0.01, 0.13].

Child Narrative Style

American children produced a greater number of utterances and more affirmations, direct action requests, indirect action requests, and negative feedback than Thai children ($ps<.05$, partial η^2 range: 0.11-0.33), whereas Thai children produced more attention directives, descriptions, labels, open-ended questions, positive feedback, and repetitions ($ps<.05$, partial η^2 range: 0.14-0.23). There was a main effect of child gender on children's use of indirect action requests, where girls used more indirect action requests than boys ($p<.01$, partial $\eta^2=0.19$). There were no significant interactions between culture and gender for any of the children's linguistic measures.

Associations Between Maternal and Child Narrative Styles

Correlation analyses revealed significant positive correlations ($ps<.05$) between maternal and child number of utterances (American $r=0.85$, Thai $r=0.83$) and number of words (American $r=0.72$, Thai $r=0.68$) for both the American and Thai groups. There were significant positive correlations between maternal and child use of attention directives ($r=0.45$) and extensions ($r=0.53$) in the American group, and a significant positive correlation between maternal and child use of labels ($r=0.80$) in the Thai group.

Discussion

American and Thai mother-child dyads engaged in a toy play task and their interactions were examined. Results suggest that in the context of play, there are cross-cultural differences in linguistic scaffolding and narrative skills of American and Thai mother-child dyads and that the speech patterns of mothers and children are related when engaging in play activity.

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Our study corroborates previous findings in the literature that dyads from Western cultures tend to have a more elaborative conversation style compared to their Eastern counterparts (Minami & McCabe, 1995; Rochanavibhata & Marian, 2020, 2021). During the toy play session, American mothers and children produced longer narratives relative to their Thai peers. Conversely, Thai mothers and children produced a greater number of directives, which is characteristic of a low-elaborative style (Fivush & Fromhoff, 1988; Reese & Fivush, 1993). These differences in length and elaborateness of conversation can be explained by the distinction in socialization goals between individualistic and collectivist cultures (Gudykunst et al., 1996). Due to the emphasis on an independent self-construal in individualistic societies, such as the United States, group members tend to express themselves in a direct and explicit way (Markus & Kitayama, 1991). Additionally, mothers from independent, low-power-distance cultures, such as the American culture, are also likely to follow the child's lead and focus on the child's interests to foster individuality and autonomy (Keller, 2009; Vigil & Hwa-Froelich, 2004). In contrast, collectivist cultures, including the Thai culture, favor an interdependent self-construal. Individuals are socialized to fit in with the group and to be indirect, which leads to fewer explicit messages being conveyed and more concise conversations (Markus & Kitayama, 1991). Moreover, mothers from interdependent, high-power-distance cultures, such as the Thai culture, often use attention directives and imperatives, which serve the purpose of socializing children to follow the group dynamic and obey adults' goals (Keller, 2009; Vigil & Hwa-Froelich, 2004). Our results are consistent with past research and demonstrate that American and Thai mothers and children communicate in culture-specific ways when engaging in toy play. Such differences in maternal discourse styles during play interactions also have implications for children's language development more generally. Children whose cultures value expressiveness are likely

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to develop into adults who have longer and more elaborate conversations, whereas children whose societies emphasize conformity to the group are socialized to be low on loquaciousness.

By comparing maternal elicitation strategies, the current work extends our understanding beyond the previously established dichotomy of Western high-elaborative style versus Eastern low-elaborative style and provides further insight into cross-cultural variation that exists in language use and teaching emphasis during play. Differences in scaffolding techniques suggest that American and Thai mothers may have distinct points of focus when facilitating children's language development. Thai mothers' use of labels, open-ended questions, and reframes may reflect an attempt to use the play interaction as a context for vocabulary learning. Particularly, testing children on their knowledge of animal names and correcting the children's inaccurate responses were important aspects of the Thai mother-child play session. This teaching style is in line with the adult-centered parenting, characteristic of collectivist cultures, where questions are used to redirect children's attention towards what mothers deem important (Keller, 2009; Vigil & Hwa-Froelich, 2004). On the other hand, American mothers' use of positive feedback and recasts may be indicative of a different goal, specifically advancing children's narrative skills. As has been shown in the linguistic scaffolding literature, positive evaluations serve to validate and encourage children's narrative contributions (Zaman & Fivush, 2013), while recasting is an effective technique used to improve children's grammar (Nelson, Camarata, Welsh, Butkovsky, & Camarata, 1996). This approach is also reflective of child-centered parenting, characteristic of individualistic societies, where mothers support children's interests and choices (Keller, 2009; Vigil & Hwa-Froelich, 2004). Such contrast in maternal communicative patterns demonstrates that there are cross-cultural differences in mothers' scaffolding styles, as well as provides evidence that mothers may have unique didactic emphasis, when engaging in toy play with their

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child. Furthermore, these results suggest that children from the two cultures may develop linguistic competence in the specific areas on which their mothers placed greater focus.

Examination of children's discourse patterns during play can also shed light on the socialization goals of each respective society. Greater use of evaluative statements by American children and greater use of repetition by Thai children reiterate cultural differences in values of the individualistic American culture versus collectivist Thai culture (Minami & McCabe, 1995; Rochanavibhata & Marian, 2020, 2021). Specifically, greater use of affirmations and negative feedback exhibited by American children provide evidence for a prevalent value in individualistic societies, where children are socialized to become autonomous individuals (Kitayama & Uchida, 2005). Greater expression of difference in opinion by American children relative to Thai children in our sample also corroborates a previous finding that Anglo-American children often show more disagreement with their play partners than their Korean-American peers (Farver & Shin, 1997). On the other hand, children from collectivist cultures are often taught to respect adults who are the authoritative figure in their community (Gaskins, Haight, & Lancy, 2007; Kitayama & Uchida, 2005), which likely explains Thai children's tendency to repeat after their mothers. Awareness of these natural variations in speech patterns of typically developing children from linguistically and culturally diverse backgrounds benefits clinical practice and minimizes the likelihood of misdiagnosing difference as disorder. Moreover, knowledge of culture-specific communicative norms could also inform the design of interventions. It may be beneficial for clinicians to place greater emphasis on fostering scaffolding strategies that parents are already inclined to use as opposed to techniques that are not culturally normative.

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Despite the cross-cultural differences observed in the present study, there were also similarities in the language scaffolding and communicative patterns of American and Thai mothers and children. Thus, the present findings suggest that although some aspects of parent-child communication and play are culture-specific, other aspects are universal. For example, American and Thai mothers differed in their teaching emphases (i.e., supporting narrative skills vs. vocabulary learning) but used descriptive words and repeated their children's utterances to a similar degree, suggesting that these two linguistic scaffolding techniques are equally valued in both cultures.

When examining the relations between maternal and child language measures, there were associations between maternal and child conversation length in the number of utterances and words produced, as well as in maternal and child use of attention directives, labels, open-ended questions, and extensions. These findings suggest that maternal use of these specific conversation styles can influence their children's use of the same narrative skills and more importantly, that the children are learning communicative patterns from their mothers (Fivush et al., 2006; Reese et al., 1993). However, the lack of significant correlations between maternal and child use of the remaining language measures suggests perhaps that the assimilation process of some narrative skills take longer than others. Furthermore, the small number of significant positive associations between mothers' and children's language measures may also signify that at this age, mothers are still primarily the ones who are providing linguistic support for their children during play. Particularly, given the children's rudimentary narrative skills at this developmental stage, preschoolers are generally less likely to reframe or recast their mother's utterances, regardless of how much their mothers may model such behaviors. Therefore, positive correlations between maternal and child use of some of the linguistic measures are less likely to

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emerge, especially for measures that only mothers are inclined to use. An interesting avenue for future longitudinal work would be to examine the extent to which the influence of maternal scaffolding persists into adulthood. If we were to later examine children's conversation styles during the school years and beyond, we would expect to see the children exhibiting the same pattern of narrative skills that they have acquired from their mothers during the preschool years. Another potential future research direction would be to separate cultural influences from maternal scaffolding influences. By examining how maternal communicative styles vary within a single culture, we could potentially tease apart which scaffolding strategies are a result of culture-specific socialization goals and which strategies are attributed to individual differences and personal parenting beliefs.

Lastly, gender differences in mother-child communicative styles were also examined in the present study. An effect of child gender was found on two language measures, where mothers of girls used more extensions than mothers of boys, and girls used more indirect action requests than boys. These two findings are in line with previous research demonstrating gender differences in socialization goals: 1) mothers tend to utilize more elaborative speech with their daughters compared to sons (Haden et al., 1997; Reese & Fivush, 1993), and 2) similar to their mothers, girls tend to use polite imperatives more than boys (Gleason, 1987). Additionally, there was one language measure for which child gender moderated the cultural difference. Thai mothers of boys used reframing more than American mothers of boys, whereas among mothers of girls, the two groups of mothers did not differ in their use of reframing. Overall, the scarcity of gender differences suggests perhaps that child gender may not be a significant moderator for the cultural differences observed in communicative patterns during play interactions, when compared to other parent-child interactions such as dyadic reminiscing and book sharing where

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socialization goals are more gendered (e.g., Anderson et al., 2004; Haden et al., 1997; Meagher et al., 2008; Reese & Fivush, 1993). For instance, girls tend to produce longer and more evaluative narratives compared to boys during autobiographical reminiscing (Haden et al., 1997), but such gender differences were not observed during play in the present study.

In conclusion, results from the current study suggest that there are cross-cultural differences in the way American and Thai mother-child dyads engage in toy play, specifically in their patterns of conversation. During the play activity, American and Thai mothers used distinct sets of scaffolding strategies to promote different aspects of their children's language development. The two groups of children also differed in their discourse patterns, reflecting the contrasting norms of individualistic and collectivist cultures. Additionally, there were associations between the communicative styles of mothers and their children during dyadic play, providing evidence for the influence of maternal linguistic scaffolding on children's developing narrative skills. These findings underscore the impact that parent-child play during early childhood can have on children's developmental outcomes. By interacting with adults, children acquire linguistic and social skills and are able to appropriately engage with others in their society.

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Tables

Table 1a

Mothers' Language Use and Corresponding Examples

Maternal language measure	Examples
Label	This is a cow
Description	That is a big horse
Open-ended question	What do pigs eat?
Closed-ended question	Is the pig hungry?
Reframe	This is called a sheep, not a goat
Affirmation	Child says, "the horse jumped over the fence"; mother says, "yes it did!"
Repetition	Child says, "neigh"; mother repeats, "neigh"
Request for repetition	What was that?
Expansion	Child says, "pig hungry"; mother says, "the pig is hungry"
Extension	Child says, "horse thirsty"; mother says, "the horse is thirsty, so it drank some water"
Recast	Child says, "duck water"; mother says, "is the duck swimming in the water?"
Direct action request	Put the fence there
Indirect action request	Can you put the fence there?
Attention directive	Here it is
Positive feedback	That's wonderful!
Negative feedback	That's not acceptable!

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Table 1b

Child Language Use and Corresponding Examples

Child language measure	Examples
Label	This is a goat
Description	White duck
Open-ended question	What is this called?
Closed-ended question	Is this a horse?
Reframe	This is water, not soap
Affirmation	Mother says, "the horse is so big"; child says, "yeah it is!"
Repetition	Mother says, "rooster"; child repeats, "rooster"
Request for repetition	What?
Expansion	Mother says, "cute pig"; child says, "this is a cute pig"
Extension	Mother says, "drink water"; child says, "the sheep drank water and it's now full!"
Recast	Mother says, "jump the fence"; child says, "the animals are jumping the fence?"
Direct action request	Play with me
Indirect action request	Can you play with me?
Attention directive	Look here!
Positive feedback	Nice!
Negative feedback	Eww!

Table 2

Demographic and Language Background of Thai and American Children, Mothers, and Fathers

	Children		Mothers		Fathers	
	Thai Mean (SE)	American Mean (SE)	Thai Mean (SE)	American Mean (SE)	Thai Mean (SE)	American Mean (SE)
Age (years)	4.43 (0.08)	4.37 (0.07)	37.66 (0.95)	37.16 (1.20)	40.03 (1.12)	39.01 (1.36)
Education (years)	-	-	18.55 (0.67)	18.00 (0.77)	19.20 (1.33)	17.81 (0.68)
Age of Thai acquisition (years)	0.17 (0.15)	-	1.60 (0.40)	-	1.78 (0.39)	-
Age of English acquisition (years)	1.40 (0.23)	0 (0) ***	8.91 (0.95)	0.17 (0.12) ***	9.33 (1.50)	0.47 (0.19) ***
Age of other language acquisition (years)	-	1.23 (0.45)	-	11.56 (1.26)	-	13.50 (0.50)
Current exposure to Thai ^a	91.19 (1.54)	-	91.43 (1.61)	-	86.90 (2.70)	-
Current exposure to English ^a	8.81 (1.54)	99.50 (0.22) ***	8.57 (1.61)	98.81 (0.43) ***	11.35 (2.38)	99.56 (0.22) ***

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Current exposure to other language ^a	-	0.50 (0.22)	-	1.17 (0.44)	-	0.38 (0.18)
Thai proficiency ^b	5.24 (0.30)	-	9.13 (0.19)	-	9.03 (0.24)	-
English proficiency ^b	2.44 (0.35)	6.17 (0.28) ***	4.25 (0.36)	9.46 (0.13) ***	5.44 (0.39)	9.42 (0.25) ***
Other language proficiency ^b	-	0.92 (0.16)	-	3.70 (0.54)	-	3.83 (0.50)
Thai/English receptive vocabulary (PPVT)	65.14 (4.55)	72.67 (2.67)	195.57 (0.85)	193.14 (1.46)	-	-
Thai/English expressive vocabulary (EVT)	45.95 (1.37)	49.62 (1.57) †	148.24 (2.94)	155.33 (3.35)	-	-

Note. ^aExposure was reported in terms of percentage per day. ^bProficiency was averaged across speaking, understanding, and reading domains, measured using the LEAP-Q, on a 0-10 scale. Children's proficiency was reported by their mothers, whereas mothers' and fathers' proficiencies were self-reported.

† $p < .10$, *** $p < .001$.

Table 3a

Mean Percentages (Standard Deviations) of Mothers' Language Use

Maternal language measure	Culture		<i>F</i> value	Child Gender		<i>F</i> value	Interaction <i>F</i> value
	American <i>n</i> = 21	Thai <i>n</i> = 21		Boys <i>n</i> = 21	Girls <i>n</i> = 21		
Label	0.32 (0.15)	1.23 (0.88)	20.96***	0.77 (0.83)	0.78 (0.73)	0.03	0.24
Description	1.15 (0.63)	1.29 (0.81)	0.36	1.21 (0.69)	1.23 (0.77)	0.003	0.16
Open-ended question	2.52 (1.05)	5.50 (1.88)	40.86***	4.23 (2.37)	3.80 (1.90)	1.46	0.66
Closed-ended question	5.04 (1.35)	3.58 (1.38)	11.38**	4.34 (1.77)	4.29 (1.31)	0.002	0.04
Reframe	0.04 (0.06)	0.19 (0.17)	16.90***	0.14 (0.19)	0.09 (0.08)	2.46	5.77*
Affirmation	2.27 (1.78)	1.40 (1.21)	3.64†	1.58 (1.68)	2.10 (1.44)	1.45	0.21
Repetition	1.45 (0.73)	1.67 (1.04)	0.54	1.46 (0.90)	1.66 (0.90)	0.44	0.13
Request for repetition	0.05 (0.07)	0.20 (0.20)	11.03**	0.12 (0.12)	0.13 (0.21)	0	2.38
Expansion	0.05 (0.08)	0.17 (0.17)	7.79**	0.11 (0.15)	0.10 (0.13)	0.29	0.01
Extension	0.05 (0.08)	0.02 (0.04)	3.37†	0.01 (0.04)	0.06 (0.08)	5.64*	2.64
Recast	0.11 (0.12)	0.01 (0.03)	12.10**	0.08 (0.11)	0.04 (0.07)	2.30	0.85
Direct action	1.18	2.08	10.42**	1.63	1.63	0.03	0.75

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request	(0.74)	(1.01)		(0.94)	(1.05)		
Indirect action	0.63	0.85	2.06	0.65	0.82	1.12	3.86
request	(0.53)	(0.48)		(0.46)	(0.55)		
Attention	0.15	0.65	22.56***	0.40	0.41	0.02	0.01
directive	(0.17)	(0.44)		(0.40)	(0.43)		
Positive	0.62	0.12	10.40**	0.34	0.39	0.26	0.44
feedback	(0.68)	(0.18)		(0.49)	(0.62)		
Negative	0.42	0.49	0.40	0.46	0.45	0.02	0.07
feedback	(0.34)	(0.39)		(0.34)	(0.39)		
Total	257.67	162.29	5.00*	201.71	218.24	0.24	0.73
utterances	(178.83)	(76.93)		(136.10)	(154.94)		
Total words	1252.08	1014.84	1.53	1126.04	1140.88	0.02	1.51
	(710.35)	(513.68)		(653.28)	(609.20)		

Note. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

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Table 3b

Mean Percentages (Standard Deviations) of Child Language Use

Child language measure	Culture		<i>F</i> value	Child Gender		<i>F</i> value	Interaction <i>F</i> value
	American <i>n</i> = 21	Thai <i>n</i> = 21		Boys <i>n</i> = 21	Girls <i>n</i> = 21		
Label	0.63 (0.55)	2.64 (3.52)	6.36*	1.62 (2.49)	1.64 (2.93)	0.01	0.01
Description	1.11 (0.70)	2.34 (1.76)	8.41**	1.76 (1.40)	1.70 (1.56)	0.07	0.02
Open-ended question	0.71 (0.48)	1.56 (1.10)	11.55**	1.31 (1.24)	0.96 (0.46)	2.41	2.79
Closed-ended question	0.84 (0.52)	1.05 (0.74)	1.25	1.04 (0.75)	0.86 (0.50)	1.00	0.97
Reframe	0.01 (0.02)	0.002 (0.01)	0.58	0.003 (0.01)	0.01 (0.02)	0.26	0.19
Affirmation	0.67 (0.52)	0.34 (0.41)	5.62*	0.39 (0.41)	0.61 (0.55)	2.58	0.14
Repetition	0.35 (0.26)	1.08 (1.03)	9.36**	0.62 (0.69)	0.81 (0.96)	0.41	0.001
Request for repetition	0.04 (0.08)	0.08 (0.14)	1.34	0.09 (0.14)	0.03 (0.08)	2.00	3.47†
Expansion	0.001 (0.003)	0.01 (0.02)	1.54	0.001 (0.003)	0.01 (0.02)	1.54	2.42
Extension	0.01 (0.05)	0.004 (0.01)	0.86	0 (0)	0.02 (0.05)	2.99	0.86
Recast	0 (0)	0 (0)	0	0 (0)	0 (0)	0	0
Direct action	1.82	1.08	5.35*	1.41	1.50	0.14	0.65

CROSS-CULTURAL COMPARISON OF MOTHER-CHILD TOY PLAY

request	(1.03)	(1.04)		(1.23)	(0.97)		
Indirect	0.92	0.37	18.87****	0.46	0.83	9.13**	2.46
action	(0.61)	(0.29)		(0.36)	(0.64)		
request							
Attention	0.25	0.66	7.89**	0.54	0.37	1.55	1.04
directive	(0.28)	(0.64)		(0.65)	(0.37)		
Positive	0.03	0.22	6.95*	0.07	0.18	2.13	0.71
feedback	(0.05)	(0.33)		(0.16)	(0.31)		
Negative	1.01	0.48	8.82**	0.82	0.66	0.65	0.001
feedback	(0.61)	(0.50)		(0.63)	(0.60)		
Total	232.95	153.86	4.52*	173.67	213.14	0.96	0.94
utterances	(154.81)	(90.23)		(107.54)	(151.69)		
Total words	1051.99	833.33	1.36	799.42	1085.90	2.21	1.35
	(663.88)	(655.44)		(625.67)	(678.88)		

Note. † $p < .10$, * $p < .05$, ** $p < .01$, **** $p < .001$.

CROSS-CULTURAL COMPARISON OF MOTHER-CHILD TOY PLAY

Table 3c

Correlations between maternal and child language use

Language measure	Culture		
	Both groups	American	Thai
Label	0.81 ***	0.21	0.80 ***
Description	0.34 *	0.36	0.34
Open-ended question	0.45 **	0.14	0.21
Closed-ended question	-0.15	0.20	-0.27
Reframe	0.01	0.40 †	-0.06
Affirmation	0.22	0.16	0.01
Repetition	0.11	-0.24	0.13
Request for repetition	0.02	-0.11	-0.06
Expansion	0.02	0.11	-0.09
Extension	0.52 ***	0.53 *	0.38 †
Recast	N/A	N/A	N/A
Direct action request	-0.06	0.18	0.08
Indirect action request	0	0.19	0.02
Attention directive	0.53 ***	0.45 *	0.38 †
Positive feedback	-0.19	-0.01	-0.03
Negative feedback	0.27 †	0.33	0.39 †
Total utterances	0.84 ***	0.85 ***	0.83 ***
Total words	0.70 ***	0.72 ***	0.68 ***

Note. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

CROSS-CULTURAL COMPARISON OF MOTHER-CHILD TOY PLAY



Figure 1. A farm animal toy set consisting of chicken, cow, duck, goat, horse, pig, and sheep.

CROSS-CULTURAL COMPARISON OF MOTHER-CHILD TOY PLAY



Figure 2. Mother and child engaging in the toy play task.