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Cultural Differences in Emotional Responses to Success and Failure

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Abstract

The emotional responses to achievement contexts of 149 preschool children from three cultural groups were observed. The children were Japanese (N=32), African American (N=63) and White American of mixed European ancestry (N=54). The results showed that Japanese children differed from American children in expressing less shame, pride, and sadness, but more of both exposure and evaluative embarrassment. African American and White American children did not differ from one another. American children however showed more evaluative as opposed to exposure embarrassment. This finding supports the idea that success and failure are interpreted differently by Japanese children during the preschool years. The low amount of sadness and shame expression, and the limited range of number of different expressions observed in the Japanese children agree with the general finding that East Asian infants and young children differ from Western infants and children primarily in the display of negative expressions. These results demonstrate that cultural differences, whether due to temperament or direct socialization of cultural values, influence how children respond to achievement situations.

Self-evaluative emotions of shame, embarrassment, and pride have been found to be influenced by both biological and socialization factors (Ferguson, Stegge, & Damhuis, 1991; Kochanska, 1995; Lewis, 1992; Lewis & Ramsay, 2002; Rothbart, Ahadi, & Hershey, 1994). Although both biology and socialization impact on the expression of these emotions as well as others, little work in children explores early cultural differences in the expression of self-evaluative emotions. The specific goal of this study is to examine cultural differences in self-conscious emotions during the preschool period. Evidence suggests that the self-conscious emotions emerge in all children once specific cognitive processes develop. The cognitive underpinnings for self conscious emotions emerge sometime after 15–20 months of age, making the expressions of shame, embarrassment, and pride possible as children begin to learn the standards and goals of the social group (Lewis, & Brooks-Gunn, 1979; Lewis, 1992). Exposure embarrassment, an early form of self-consciousness, appears in Western children as soon as

the cognitive representation of self is attained (Lewis, Stanger, Sullivan, & Weiss, 1989). Expressions of self-evaluative behavior and emotion expressions of shame and pride are evident by age 3 years in success and failure situations (Lewis & Sullivan, 2006; Lewis, Alessandri, & Sullivan, 1992; Lewis & Ramsay, 2002; Stipek, Recchia, & McClintic, 1992). While there is no reason to suppose cultural differences in the emergence of the cognitive underpinnings of these emotions, once they emerge their expression and the contexts which elicit them are subject to socialization pressures. Success or failure on simple tasks have been shown to be valid contexts for eliciting self evaluative expressions by age four (Lewis et al., 1992; Lewis & Ramsay, 2002). In American culture, individual differences in achievement striving and self-evaluative styles on such tasks are also evident during this period (Dweck, Chiu, & Hong, 1995; Skinner, 1991; Smiley & Dweck, 1994). If self-evaluative emotions have emerged during this same period in Japanese children, cultural differences in the expression of self-evaluative and other expressions in achievement contexts during the preschool period may reflect differences in the socialization of values regarding achievement. For example, East Asian parents of elementary school children emphasize improvement following failure whereas American parents of similarly aged children emphasize success (Ng, Pomerantz, & Lam, 2007).

While socialization differences are likely the key vehicle for promoting differences in self-evaluative emotion and behavior, the developmental literature suggests that temperament differences may also play a part. Newborn East Asian infants have a higher threshold to pain in infancy, cry less readily, and quiet more quickly (Brazelton, Tobey, & Collier, 1969; Caudill & Weinstein, 1969; Freedman, 1976; Freedman & Freedman, 1969). This difference in reactivity, which likely reflects innate temperament differences (Lewis, 1989; Rothbart et al., 1994), persists beyond the newborn period and is accompanied by physiological differences (Lewis et al., 1986; Lewis, Ramsay, and Kawakami, 1993). Some have suggested that Japanese socialization and culture serve to maintain or enhance these early differences in reactivity and the expression of emotion, and thus may affect the expression of self conscious emotions (Kitayama & Markus, 1999).

Cultural influences supporting differences in emotion expressions include a particular world view, as well as sets of specific goals, values, and practices associated with achievement settings. These cultural beliefs and practices are likely to include the teaching of display rules, behaviors, rituals, and contexts which encourage the expression of some emotions but not others, and possibly the promotion of a differently organized self which filters and interprets emotion states and experiences (Lewis, 1989, 1995; Markus & Kitayama, 1994).

Japanese socialization strategies have been described in the early anthropological and psychological literature as socializing with shame (Ruth Benedict, 1946). However, emotions function in Japan to focus attention away from the self and on the relationship of the self to others. Shame and anxiety are some of the most common negative emotions of cultures socializing interdependency, and Japanese children are socialized to avoid shame as well as to avoid standing out from the group (Kitayama & Markus, 1999). Akiyama (1992) commented that Japanese children are not socialized to monitor, elaborate, or express their personal feelings, so displays of both shame and pride are likely to be discouraged. Instead, they are taught to think about what they did wrong and how to improve their subsequent performance, suggesting a culture focused on guilt, adherence to group standards, and a “learning orientation” in achievement settings (Whiting, 1990; Dweck et al., 1995). Chinese achievement socialization shows a similar pattern. Chinese elementary- age school children report that their mothers de-emphasize academic success and emphasize failure, parenting practices opposite to that reported by their American counterparts (Ng et al., 2007)

Thus Japanese children's socialization emphasizes a "we-self" in contrast to the "I-self" of Western societies. Because Japanese children in general are criticized when the group standards are violated, it may be that behavior shameful in a group context might be less shameful when it takes place outside a group setting. For example, Kitayama, Snibbe, Markus, and Suzuki (2004) found that less self-criticism of personal choices was made by Japanese students in the absence of social cues than by Americans for whom such cues made no difference. In two studies of self-reported or imagined responses of a typical student to success and failure, American college students were more likely to engage in self-enhancement compared to Japanese students who engaged in self-criticism (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). While these studies did not focus on emotion expression specifically, socialization strategies emphasizing interdependence are likely to have implications for the expression of shame and embarrassment about failure because Japanese children are trained to be especially sensitive and attentive to negative, self-relevant information from the group (Kitayama & Markus, 1999; Markus & Kitayama, 1994). This sensitivity may result in heightened anxiety about evaluation or failure. Japanese students report greater fear of failure (Scherer, Matsumoto, Wallbott, & Kudoh, 1988). East Asian children living in the United States and their native land also rated themselves lower on Harter's scale of children's self-esteem, a finding suggestive of less positive self-regard and possibly pride (Stigler, Smith, & Mao, 1985). More embarrassment also has been reported by Japanese students compared to a European sample (Edelmann & Iwawaki, 1987).

In the present study, we examined the type of self-conscious emotions and other expressions expressed in a series of achievement-like tasks by young children from different cultural backgrounds. Japanese nationals living in the U.S.A. and American children, both White American of European descent and African American, were studied. We studied Japanese children because there is evidence for differences in the socialization of emotional reactivity and emotion expression between Japanese and other East Asian groups compared to Europeans and Americans from infancy. The African American children were included because they offered an interesting counterpoint to the contrast between Japanese and White European ancestry Americans. African Americans are a specific minority social-cultural group within American society. Socialization practices in African Americans also have been described as more family and group-oriented compared to non-African Americans. At least some findings suggest that social group factors may be more important to African Americans compared to White Americans in eliciting shame and possibly other self-conscious emotions (Lutwak, Razzino, & Ferrari, 1998). African Americans thus offer a variant of American socialization that is more interdependent and community-focused than that of the majority American culture. Given this greater emphasis on community and group solidarity values in African American compared to main stream American culture, and the limited information on expression differences between African American and other cultural groups, we explored whether differences in early response to achievement situations would be evident.

We hypothesized that cultural differences in emotion expression would occur in response to success or failure on our tasks. White American, African American, and Japanese cultural groups all expect their children to be happy about personal success and to be unhappy with failure, and the general quality of their children's emotion states is thought to be similar. However, Japanese children were expected to show less outward expression of sadness consistent with the literature on infancy and early childhood differences in the expression of basic negative emotions of sadness, anger, and distress to pain (for example, Brazelton et al., 1969; Caudill & Weinstein, 1969; Freedman & Freedman, 1969; Freedman, 1976; Lewis, Miyake, Chen, & Kojima, 1986; Lewis, Ramsay, & Kawakami, 1993). No cultural differences were expected in enjoyment (smiling) following success, since there is little data suggesting that rates of smiling differ between Japanese and Western children.

With regard to self-evaluative emotions, Japanese children were expected to show less pride due to Japanese socialization practices emphasizing group and family rather than personal pride. Because shame expressions typically have been observed in 10–20% of children in previous studies of White and African American children, and because the procedure used in the current study is not explicitly shaming, neither American nor Japanese children were expected to exceed this level (Alessandri & Lewis, 1993; Lewis et al., 1992). If differences were observed, we expected Japanese children to show less shame due to the combined effects of temperament and contextual features. Less shame would be consistent with the temperament view of less expression of negative emotion in young East Asian children. Less shame is also likely because the failure context was designed to foster evaluation of personal performance (an “I-self” evaluation rather than a “we-self” evaluation).

Our hypotheses about embarrassment require that we consider its two distinct forms, evaluative embarrassment during failure and exposure embarrassment during success (Lewis, 1995). In American children, evaluative embarrassment occurs in response to failure and is related to shame, negative self-evaluation, and higher cortisol responses to stressful events (Lewis & Ramsay, 2002). In contrast, exposure embarrassment is not associated with a negative self-evaluation or increased cortisol (therefore, the child is less distressed). It occurs in non-evaluative contexts. Exposure embarrassment can be elicited in non-evaluative contexts such as pointing at the young child, or in response to unsought or unwanted praise or being asked to look at oneself in a mirror while being observed (Lewis, 1995; Lewis, Stanger, Sullivan, & Barone, 1991). Miyake and Yamazaki (1995) referred to this form as being embarrassed “without recognition that one is inferior,” of feeling “childish,” or the feeling of “being watched by others.” Unlike evaluative embarrassment which is associated with stress responses, behavioral withdrawal, or avoidance, exposure embarrassment is associated only with being the object of another’s attention. Thus, although both forms of embarrassment appear to be mildly negative emotion states marked by similar expressions and gestures, they are physiologically and cognitively distinct and vary in their display by context in American children. We expected to observe different patterns in Japanese children. Greater evaluative embarrassment is expected in Japanese children because the children may have greater anxiety following failure, given the greater reports of anxiety about failure in East Asian groups. Exposure embarrassment occurs when the child is the object of another’s attention. Greater exposure embarrassment is likely for Japanese children because their success leads them to stand out in the presence of an unfamiliar observer/evaluator. Thus, Japanese children are likely to show more embarrassment overall than the American groups.

Method

Participants

As shown in Table 1, the participants were 149 children distributed in three cultural groups (White American of European ancestry, African American, and Japanese nationals temporarily residing in America). Overall, sixty-seven were male (42%). There were somewhat fewer boys in the Japanese sample. Japanese children also were somewhat younger on average with more children under 48 months (*t-test, unequal variances, $p < .05$*).

The American children were recruited from preschools in the greater New Brunswick, New Jersey metropolitan area. The White American sample included children from mixed, primarily European backgrounds and whose families did not endorse an African American or Hispanic heritage. All were native English speakers from predominantly middle class backgrounds. The African American children were recruited from a preschool in Newark, NJ, a large urban center. The school served a predominantly African American population and had an African American staff and administrators. All African American children were native speakers of English,

American-born, and came from families that self-designated an African-American heritage. Economic backgrounds ranged from working to middle class.

The Japanese children were recruited through local contacts of the second and third authors with a preschool serving a community of Japanese families in the greater Princeton, NJ area. These families were middle class Japanese nationals working for Japanese-owned businesses and corporations in the central New Jersey area. The children were currently enrolled in or had attended the culturally and linguistically Japanese preschool. They were taught by Japanese teachers. Thus, although these Japanese nationals were living in the US, they were a culturally distinct minority group and committed to maintaining a Japanese cultural identity as much as possible, despite their US residency. As a validity check on their orientation to Japanese culture, mother's completed a brief questionnaire that assessed the length of their time in the US in months, the percentage of time English was spoken at home, the % time the child was spoken to primarily in Japanese, and whether the family intended to return to Japan to live permanently. The results, summarized in Table 2, show that the families were committed to maintaining the Japanese language and cultural orientation. Most intended to return to Japan permanently. Indeed, one family did so within a week of completing the study.

To recruit children for the study, cooperating preschool administrators sent home a standard introductory letter and information about the study to parents. Parents who wished their child to participate signed and returned IRB-approved signed consent forms. For the Japanese materials, the IRB-approved consent form was translated into Japanese by a native speaker, and was then back translated into English to insure fidelity.

Procedures

White American, African American, and Japanese female examiners were trained to follow the study protocol. White American children worked with a White American examiner, African American children worked with an African American examiner, and the Japanese children worked with a Japanese examiner. Japanese children received the Japanese-language procedure, administered by the Japanese female who was a native speaker.

Children were asked to match colored stickers to animal pictures following a key (Lewis & Ramsay, 2002). All completed a practice game to ensure that they understood the task before the experimental tasks began. There were four games, two easy and two difficult. The easy games had fewer items than the difficult version of the task (10 vs. 18). Children were told that each was easy before beginning and that most children could complete it. The difficult games had more items and children were told that each game was difficult before beginning and that most children could not complete it in the time allowed.

To manipulate success and failure, children were told that they had 3 minutes to complete each game, and a timer with a bell was demonstrated at the outset of each game. Unknown to the children, the experimenters controlled the timer's speed, letting the bell ring 5 seconds after completion in the success conditions or before the children finished for the failure conditions. For success, after ringing the bell, the examiner said, "Time is up. You finished before the bell." For failure, after ringing the bell, the examiner said, "Time is up. You did not finish before the bell." The tasks were administered in counterbalanced order with the provision that a failure never occurred last. The examiners maintained a neutral expression and demeanor throughout the games and post-task interval. They remained silent unless asked a direct question and did not otherwise engage or interact with the child.

Children were allowed a 3-minute break after two games had been completed. The procedure was then resumed. Once the procedure was completed, children were debriefed by the experimenter. The experimenters informed children that the timer did not work properly during

the games, told them that they had done as well as most children on all the games, and thanked them for their work. No children in any of the studies requested to have the procedures terminated.

No child detected the manipulation of the time. Pilot work established that even adults were unaware of this subterfuge; they were unable to monitor the time while concentrating on the matching task. Each child experienced an easy version that was successfully completed (easy success), an easy version that was failed (easy failure), a difficult version that was successfully completed (difficult success), and a difficult version that was failed (difficult failure). This procedure has been used in previous studies of self conscious emotions (Lewis, Alessandri, & Sullivan, 1993)

The children were videotaped throughout the procedure. A tripod-mounted mini-camera was located in the room, but concealed, approximately 10 feet from the child. Children ignored or were unaware of its presence. Facial, body, and eye movements and any verbal statements made by children about their own or other's activities alluding to outcomes also were recorded for subsequent coding.

Facial Expression Measures

Both the percent of children showing each expression at least once during the four conditions and the number of times each emotion expression was observed immediately following each of the games was obtained. The coding scheme is based on the work of Geppert (1986; Geppert & Gartmann, 1983; Heckhausen, 1988) and Izard (1995) and has been reliably used in previous work (Lewis, Alessandri, & Sullivan 1993; Lewis & Ramsay, 2002, Lewis et al., 1989, 1991). Coders scored the incidence of all facial and behavioral responses recorded on videotape during the 30-second (s) period immediately following the bell or task completion in both slow and regular speeds. Coders did not know the set of codes required for scoring the emotions and were blind to the specific hypotheses of the experiment. Their task was to accurately record individual body, facial, and gaze movement codes within 30 s interval. Sequences of gaze, posture, and facial expression were tallied subsequently by an independent coder. Following the failure situation, shame, evaluative embarrassment, and sadness were tallied following task completion.

Shame components were defined as showing a combination of at least three specific behaviors within a 10 s interval. The 10 s interval was chosen since pilot work indicated that this interval was needed to capture behavioral sequences. The behaviors which could comprise the shame expression included a collapsed body posture; a facial expression with the corners of the mouth drawn downward and/or the lower lip tucked between the teeth; eyes lowered with the gaze down or askance accompanied or followed by withdrawal from the task situation; and/or a negative evaluative statement about the task or performance (e.g., "I'm too slow"). Following failure, *evaluative embarrassment* components were a smiling expression followed by gaze aversion, touching of the hands to the face, hair, clothes, etc; and lip biting or other signs of a tense or suppressed smile (Lewis et al., 1989). As with shame, all three behaviors had to occur within the same 10 s interval. Sadness, as defined in MAX by downward turning of corners of the mouth (Izard, 1995), was also scored within each 10 s interval.

Following success, pride, exposure embarrassment, and enjoyment were scored for 30 seconds. *Pride* components were defined as showing a combination of at least three specific behaviors within a 10 s interval. The behaviors comprising pride included moving the body into an erect posture, often accompanied by raising shoulders or arms; a broad smile; eye contact; and pointing at the outcome, applauding, or making some other positive self-evaluation (e.g., "I did it!"). Exposure embarrassment consisted of a smiling expression followed by gaze aversion within the interval, and touching of the hands to the face, hair, clothes, etc; and lip biting or

other signs of a tense or suppressed smile (Lewis et al., 1989). We used MAX facial movements (Izard, 1995) to identify smiles of enjoyment occurring within the 10 s interval.

To examine overall expressiveness of the children, the total number of expressions observed across success and failure was calculated. To create an index of variation in expressiveness by condition, the number of different expressions observed for each child in response to failure and success was tabulated. The resulting scores ranged from 0–3 expressions for failure and from 0–3 for success.

Reliability—Coders were trained to the same standard across all the samples to ensure that measurement of expressions and the reliability of coding was maintained within and across the samples. Native Japanese coders first were trained to score American tapes reliably before coding the Japanese tapes. Then, their reliability was reassessed on the Japanese tapes. Interobserver reliability was assessed by having two American raters code 10% of the tapes in the American sample, and two native Japanese raters and one experienced American rater code 20% of the tapes in the Japanese sample. Kappas indicated that reliability was high and above chance levels for all coders. Kappas for enjoyment and sadness were .80 to .90 in the American and Japanese samples. Inter-coder agreement ranged from .75 to .90 for the shame composite, .70 to .80 for embarrassment, and .70 to .75 for pride.

Results

The percentage of children in each cultural group who showed a given expression was the primary measure. We also assessed the amount of expressions shown using Generalized Estimating Equation (GEE) analyses (Liang & Zeger, 1986; Zeger & Liang, 1986) due to the nature of the measures and the data.¹ The GEE analyses were performed modeling an ordinal distribution, logit link, and an unstructured correlation structure for each emotions except shame. Since shame tended either to occur once or not at all, a binomial distribution, was modeled. Use of GEE allowed us to evaluate the effects of age, task difficulty and sex as factors in these analyses. Age was a significant factor only for sad expressions. More sadness was observed in older children ($p = .001$). The only sex difference was observed for enjoyment. Females smiled more than males following success ($p = .05$). Main effects of task difficulty were observed only for the self-conscious evaluative emotions. The results were consistent in showing that shame and evaluative embarrassment are likely to be greater when an easy task is failed, and pride is greater when a difficult task is succeeded (Lewis, 1995; Lewis & Sullivan, 2006). These findings served as an internal validity check on expression measurement. Both mean and percentage data resulted in the same findings, so only the percentage data are presented in detail.

While the GEE analysis indicated that age influenced only the expression of sadness, to control for any effects of age on the percentage of children showing various emotion expressions, analyses were conducted on a subsample of children which excluded Japanese children younger than 48 months of age (7 omitted; $n = 25$). The same pattern of significant findings resulted regardless of whether the younger Japanese children were excluded. Analyses reported include only those Japanese children in the same age range as the American sample.

¹Generalized Estimating Equations or GEE (Hardin & Hilbe, 2003; Liang & Zeger, 1986) are especially appropriate for analyzing correlated data, such as data collected on the same individuals over time, that could otherwise be treated with generalized linear models. GEE are particularly appropriate for categorical and ordinal data such as frequency counts of expressions, as in the current study. Applications of GEE focus on modeling the dependent variable as a function of one or more predictors, with the correlation of observations within individuals treated as a nuisance factor. The PROC GENMOD in the SAS package was chosen because it is suitable for count data when the normality and homogeneity assumptions of parametric analyses are not met for parametric tests.

Group Differences in the Percentage of Children Showing Emotions

Figure 1 presents the percentage of children by cultural group that showed each emotion during the failure and success trials.

Failure Conditions—Shame was only observed during failure, and group differences were found ($X^2 = 6.14, p < .05$). No Japanese children expressed shame, and there were no differences between White and African American children in the number of children showing shame. Thirty-five to 59 percent of all children showed evaluative embarrassment. There was a trend toward a group difference ($p < .10$). A greater percentage of Japanese children showed evaluative embarrassment than White children ($X^2 = 3.65$, *Fisher's Exact*, $p's < .05$); but the percentage of Japanese and African American children did not differ. The percentage of White and African American children also did not differ.

Sadness following failure occurred in about 45% of children in each of the two American groups; however, it was not observed in Japanese children (with the exception of 2 of the youngest, who were excluded), a significant group difference ($X^2 = 22.82, p < .001$.) While there was no difference between White and African American children, both groups differed from Japanese children; *Fischer's Exact*, $p's \leq .001$.

Success Conditions—The percentage of children expressing pride ranged from 33% to 76%. There were differences in pride ($X^2 = 20.24, p < .001$). Fewer Japanese children expressed pride than either of the American groups; for White and African American children respectively: $X^2 = 15.65$ and 15.60 , both $p's \leq .01$. However, percentage of White American and African American children showing pride did not differ.

The percentage of children showing exposure embarrassment varied from 11% to 64%. Comparison also revealed group differences ($X^2 = 24.27, p < .001$). Significantly more Japanese children showed exposure embarrassment than both White and African American children; $X^2's = 14.02$ and 5.90 , both $p's \leq .05$. The two American groups did not differ from one another. Enjoyment following success showed little variability. It occurred in approximately 80% of all children, and no group differences were observed.

Differences in Embarrassment Across Success and Failure

Figure 1 indicates that approximately 58% of Japanese children showed evaluative embarrassment and 64% showed exposure embarrassment. (These figures were also approximately 60% for each form of embarrassment when the sample as a whole was examined). The difference between exposure embarrassment and evaluative embarrassment was not significant in Japanese children. Japanese children who showed exposure embarrassment were likely to show evaluative embarrassment; 48% showed both expressions (*Fisher's exact* = 10.12, $p < .01$). In contrast, both White and African American children showed differences between evaluative embarrassment and exposure embarrassment. White and African American children each were less likely to show exposure embarrassment compared to evaluative embarrassment (McNemar Tests of related proportions dichotomous groups; $p < .001$). Compared to the Japanese children fewer children in each group showed both expressions (16% and 21%, respectively).

Since age had no influence on the mean expression data, overall expressions were examined using all subjects, with age as a covariate in the GEE analyses. The three cultural groups did not differ in the total expressiveness as shown in considered (see Table 3), a cultural difference was observed; $X^2 (1,4) = 11.86, p < .05$. We found that 22% of White American children and 30% of African American children showed two or three different expressions in response to failure compared to none of the Japanese children (for both comparisons with Japanese, X^2

(2df), = 6.31, $p < .05$ and 9.33, $p < .01$, respectively). The American groups did not differ from each other; i.e., they were likely to appear sad and embarrassed, ashamed and embarrassed, or sad and ashamed. Further, no Japanese children showed more than one type of expression per condition. When an expression was scored in response to failure, it was either shame or evaluative embarrassment. Similar percentages of White and African American children showed more than a single scorable expression (20 vs 27%). Thus, Japanese children were as expressive in response to failure, however, in contrast to American children, only a single expression type was shown.

This was not the case in response to the success condition. Japanese and American children did not differ in the number of different expressions shown in response to success. For example, 63% of White American children, 65% of African American children, and 58% of Japanese children expressed more than 2 different emotions in response to success.

DISCUSSION

Theory as well as evidence suggests that the self-conscious emotions might be particularly sensitive to cultural differences between East Asian and Western societies, especially when the context implies self-evaluations of performance, as in achievement settings. In this paper, we examined performance-related emotions; however, since we did not collect concurrent physiological measures or assess young children's cognitions that more directly index state differences, our conclusions must necessarily be limited to the influence of cultural differences on the number and type of emotions expressed at this age. Based on previous developmental findings, self-evaluative emotions are likely to emerge once the cognitive underpinnings are available as children pass their second birthday.

Despite the limited window for differential socialization between age two and school-age, the preschool children in the current study differed by culture. They differed in the emotions expressed in response to both failure and success, as well as in how many different expressions appeared in response to failure. This suggests that cultural differences emerge early, perhaps as soon as or shortly after expressions themselves.

Culture clearly influenced the facial expressions of emotions in this study. Young Japanese children showed less sadness and shame in response to failure and were less likely than American children to show more than one type of expression in response to failure. In response to success, Japanese children were likely to express less pride and more exposure embarrassment. Overall, the percentage of Japanese children who showed some vs. no facial expression, as well as the mean number of expressions, did not differ from American children. This suggests that generalized suppression of emotional expressiveness did not occur in the Japanese children. It is not the case that Japanese culture suppresses facial expression generally, but it is the case that certain types of expression are less or more likely to occur. In general, Japanese children showed little shame or pride relative to American children.

While there were differences between American and Japanese children, there were no differences between White American and African American children. There are few studies supporting emotional differences between African Americans and White Americans of European ancestry. Although there is some suggestion that African American children may be somewhat similar to Japanese children in terms of their reaction to failure (Lutwak et al., 1998), the present results provide no evidence that African American children behave differently from White American children in response to failure or success.

The difference between embarrassment following failure and embarrassment following success was much greater for the American children than for the Japanese children. American children, whether of White or African American ancestry, showed less embarrassment

following success relative to embarrassment following failure, while the Japanese children showed equal amounts in both conditions. The significantly greater display of embarrassment across conditions in Japanese children is most likely related to cultural differences in response to being the object of another's attention, since it does not vary with success and failure. Miyake and Yamazaki (1995) have argued that being the center of attention as opposed to being part of the group is likely to be anxiety provoking and thus embarrassing for Japanese children. In contrast, being singled out for praise is far more common and actually socially desired in American culture. In light of these observations, the two forms of embarrassment, although mildly negative in tone, do not fit the temperament pattern of less negative expression reported in the literature for East Asian infants. Instead, the two embarrassment forms seem to be particularly sensitive to cultural differences in the meaning of the success or failure contexts to the children.

A review of the emotion by culture studies of older children and adults suggests that the Japanese culture of the "we-self" alters the likelihood that some self-conscious and self-evaluative emotions occur in comparison to the "I-self" of the American culture (Kitayama & Markus, 1999; Markus & Kitayama, 1994). This contrasts markedly with a view of Japanese culture suggested by the early anthropological literature. Rather than being a culture socializing by shame exclusively, the cultural goals of fostering a "we-self" orientation may lead to more nuanced self-evaluative emotional responses depending on the demands of the situation, the age, and the goals of the child.

The self conscious, self-evaluative emotions in response to achievement tasks observed in the current study may reflect differences in the "we-self", "I-self" cultural view (Kitayama & Markus, 1999; Kitayama et al., 1997). American children, oriented toward an "I-self" view, may be more likely to feel pride or shame when they succeed or fail. Japanese children, oriented toward a "we-self" view, are less likely to respond to personal success and failure in a setting that reliably elicits these expression in American children. American children, who are socialized in an "I-culture", respond to success and failure outcomes with expression patterns consistent with the self's perceived performance. That is, all expressions vary with success and failure. Embarrassment patterns of American children also reflect outcomes, and evaluative embarrassment exceeds exposure embarrassment. Not so for Japanese children. Instead, Japanese children, who are socialized in a "we-culture", show expression patterns that reflect primarily their anxious ambivalence about being in a context where their performance is displayed to another. If embarrassment is due to anxious ambivalence about one's performance, the examiner/teacher's figure lack of feedback also is different from Japanese cultural patterns where adults' response to failure is more typically focused on performance-improvement (Ng, et al., 2007). The children's uncertainty about how their performance was regarded by the observing adult, may have boosted embarrassment.

Besides cultural practices that may explain the differences in American and Japanese children's self conscious emotional responses, there also is some evidence to suggest that temperament may continue to play a role. Several studies have found early differences between East Asian and Western European groups in the first 6–12 months of life that may be related to temperament. East Asian and European American infants differ in negative facial expressions (Camras, Oster, Campos, Miyake & Bradshaw, 1997, Camras, et al., 1998, Camras, Meng, et al., 2002). For example, Japanese infants had longer latencies to negative expressions at 5 and 12 months in an arm restraint procedure compared to American infants (Camras et al., 1997). Japanese infants showed fewer cry mouth and lowered brow expressions, both characteristic of negative emotion (Camras, et al., 1998). In contrast, few differences in smiling behavior between Japanese and American infants have been found (Camras et al, 1998; Fogel, Toda, & Kawai, 1988). Collectively, these studies suggest that Japanese children exhibit fewer vocal and negative facial expressions compared to Americans of White European ancestry. Less

expression of shame and sadness in the present study supports this general finding of less expression of negative emotions, although the findings of less pride and more embarrassment do not.

Even these early differences in negative expression, often attributed to temperament, may be culturally driven. For example, Japanese caregiving practices may reinforce the tendency of children to be less expressive. Japanese mothers touch their infants more than American mothers and are more likely to respond selectively to infant vocalizations, actions which might serve to inhibit or minimize infant expression (Fogel, et al., 1988). In contrasting Japanese and South American émigré mothers, Japanese American mothers were found to exhibit patterns of behavior consistent with Japanese cultural values of privacy, calmness, and attenuated verbal communication (Bornstein & Cote, 2001). Such socialization practices seem likely to reinforce less intense expressions of emotion, especially negative emotion, in Japanese children. Thus, the tendency of Japanese children to express less sadness, shame, and pride as well as less range in expressions in response to failure in the present study are likely to reflect an interaction of early temperament differences and socialization practices. Examining the interaction of early individual differences in expression and cultural differences is a complex enterprise likely requiring longitudinal study. The current study highlights that cultural differences in self-evaluative emotion expression responses are observable at least by age 4. Whether these cultural differences reflect the frequency of emotional expression only or differences in children's emotional state or states is unclear, since culture also can act on the internal manifestations of the emotion (emotional state), leading to less emotion; that is, making it less likely that the emotion will occur. We believe that it is likely that the cultural context acts on both expression and state, although it is difficult to determine whether the effect is primarily on the expression or state.

It is also the case that the findings presented here represent a snap-shot of a particular context at a particular developmental period. It is unknown how generalizable they are to non-achievement situations or to other developmental periods. Future work will need to explore these differences in order to understand how culture and emotion interact and how this interaction shapes emotional differences during the child's formative years.

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Percent of Children Showing Emotion by Group

Figure 1.
Percent of children who show emotion by group.

Table 1

Sample Demographics

Cultural Group	Participant N			Participant Age in Months		
	Males	Females	% Males	Mean	SD	Range
American:						
White	25	29	46.3	62.8	5.6	51–75
African-American	30	33	47.6	63.5	5.6	50–75
Japanese	12	20	37.5	54.8	9.0	37–72

Table 2

Assessment of commitment to Japanese cultural orientation.

Cultural Indicator	Mean (S. D.)	Mode	Minimum	Maximum
Japanese spoken to the child at home (1–5)	4.6 (0.7)	5.0	2 (20–40%)	5 (81–100%)
% time child speaks Japanese (1–5)	4.4 (1.1)	5.0	1 (< 20%)	5 (81–100%)
Parents speak Japanese only at home (1–5)	4.4 (.82)	4.0	1 (< 20%)	5 (81–100%)
Child watches Japanese language TV(1–5)	3.25 (1.68)	3.5	1(< 20%)	5 (81–100%)
% Planning to Return to Japan (n, unsure, y)	81.2	YES	NO (<10%)	YES

Table 3

Expressiveness in response to Success and Failure by Cultural Group with age Covaried*

Condition/ Group	Mean	S. E.	95% Confidence Interval	
			Lower Bound	Upper Bound
Success				
White American	1.67	.11	1.44	1.89
African American	1.73	.11	1.52	1.93
Japanese National	1.72	.16	1.41	2.04
Failure				
White American	0.90	.10	0.70	1.11
African American	1.03	.10	0.84	1.22
Japanese National	0.69	.15	0.39	0.98

* The age covariate was evaluated at 61.41 months