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# Learning What Feelings to Desire: Socialization of Ideal Affect Through Children's Storybooks

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*Previous findings suggest that cultural factors influence ideal affect (i.e., the affective states that people ideally want to feel). Three studies tested the hypothesis that cultural differences in ideal affect emerge early in life and are acquired through exposure to storybooks. In Study 1, the authors established that consistent with previous findings, European American preschoolers preferred excited (vs. calm) states more (indexed by activity and smile preferences) and perceived excited (vs. calm) states as happier than Taiwanese Chinese preschoolers. In Study 2, it was observed that similar differences were reflected in the pictures (activities, expressions, and smiles) of best-selling storybooks in the United States and Taiwan. Study 3 found that across cultures, exposure to exciting (vs. calm) storybooks altered children's preferences for excited (vs. calm) activities and their perceptions of happiness. These findings suggest that cultural differences in ideal affect may be due partly to differential exposure to calm and exciting storybooks.*

**Keywords:** *culture; socialization; emotion; children; values*

Most people say they want to “feel good” (Larsen, 2000). However, people differ in the specific “good” states they want to feel. Whereas some people want to feel excited, enthusiastic, and other high arousal positive states (HAP), others want to feel calm, peaceful, and other low arousal positive states (LAP). In a recently proposed theory (affect valuation theory; Tsai, Knutson, & Fung, 2006), we suggested that these differences in “ideal affect”

(i.e., the affective states that people value and ideally want to feel) are primarily due to cultural factors.

Although a variety of cultural factors may shape ideal affect, we have primarily focused on individualism-collectivism. We predict that differences between individualistic and collectivistic contexts in their preferred ways of relating to others may produce cultural differences in ideal affect. Individualistic cultures, such as American culture, encourage their members to influence others (i.e., assert personal needs and change others' behaviors to fit those needs) more than collectivistic cultures. In contrast, collectivistic cultures, such as many East Asian cultures, encourage their members to adjust to others (i.e., suppress personal needs to accommodate others' needs) more than individualistic cultures (Morling, Kitayama, & Miyamoto, 2002; Weisz, Rothbaum, & Blackburn, 1984). Whereas influencing others initially requires immediate action (e.g., asking someone to do something), adjusting to others initially requires suspended action (e.g., waiting for others'

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instructions). Immediate action involves increases in physiological arousal, whereas suspended action involves decreases in physiological arousal. Therefore, when individuals aim to influence others, they should value high arousal states, whereas when individuals aim to adjust to others, they should value low arousal states. Thus, although members of all cultures should value positive states, members of individualistic cultures, who are chronically encouraged to influence others, should value high arousal positive states more than members of collectivistic cultures, and members of collectivistic cultures, who are chronically encouraged to adjust to others, should value low arousal positive states more than members of individualistic cultures (Tsai, Miao, Seppala, Fung, & Yeung, 2006).

In support of these predictions, we have observed that among college students, European Americans valued HAP more than Hong Kong Chinese, whereas Hong Kong Chinese valued LAP more than European Americans (Tsai, Knutson, et al., 2006; Tsai, Miao, et al., 2006). Furthermore, Chinese Americans who were oriented to both American and Chinese cultures valued HAP more than Hong Kong Chinese and valued LAP more than European Americans. These cultural differences were observed with self-report as well as behavioral measures of ideal affect. Moreover, group differences in ideal affect were mediated by influence and adjustment goals but not by temperamental factors such as neuroticism and extraversion or by other individual differences such as regulatory focus. Together, these studies support the hypothesis that differences in ideal affect have cultural origins.

What remains unknown, however, is how people learn to value specific affective states over others. According to Kroeber and Kluckhohn (1952), culture is comprised of socially transmitted ideas that are instantiated in practices, products, and institutions. Indeed, a number of studies have demonstrated that cultural ideas are reflected in various “products” or material objects that are widely distributed within a cultural context (e.g. see, Han & Shavitt, 1994; Markus, Uchida, Omoregie, Townsend, & Kitayama, 2006). Thus, if differences in ideal affect are culturally transmitted, they should be (a) reflected in cultural practices, products, and/or institutions and (b) acquired through exposure to or engagement with those practices, products, and/or institutions. This article reports findings from three studies that test this hypothesis in young children. Prior to describing the studies, we briefly review the literature on the socialization of emotion in young children.

### Socialization of Emotion in Young Children

One of children’s primary socialization tasks is to learn to “express and regulate their emotions in *socially*

*desirable and valued* [italics added] ways” (Eisenberg, Cumberland, & Spinrad, 1998, p. 242). Because socialization begins during the first days of life (Greenfield, Keller, Fuligni, & Maynard, 2003), cultural differences in ideal affect should be evident among young children, particularly once they develop some understanding of their own and others’ emotions and are able to recognize and internalize standards and norms. Although signs of emotional understanding are observed during infancy (Saarni, Campos, Camras, & Witherington, in press), most children show significant emotional understanding by 3 years of age, when they enter preschool and have extended contact with peers (e.g., Denham et al., 2002; Ridgeway, Waters, & Kuczaj, 1985). At this age, most children can distinguish among different affective states, including excitement and calm (Ridgeway et al., 1985; Ridgeway & Waters, 1987), and know that some states are more situationally appropriate than others (e.g., Cole, 1986; Josephs, 1994). Thus, at 3 years of age, most children should also have affective preferences. Surprisingly little research, however, has examined the affective states that children ideally want to feel, either within or across cultural contexts.<sup>1</sup>

Similarly, although significant research has examined parental socialization of emotion (e.g., Chaplin, Cole, & Zahn-Waxler, 2005; Cheah & Rubin, 2003; Denham & Grout, 1993), no studies have directly examined how children learn to value specific affective states over others. Clearly, parents should play an important role in shaping children’s ideal affect. In addition to reinforcing specific affective states while talking with their children (e.g., “Tell me about all the exciting things you did today” and “Calm down!”), parents may expose their children to specific practices, products, and institutions that reflect culturally valued affect. For instance, children spend significant amounts of time reading or being read books that are selected by their parents or teachers (Dyer, Shatz, & Wellman, 2000; Marum, 1996). Because cultural values are reflected in the thematic content of children’s books (Zheng, 1997) and stories (Miller, Wiley, Fung, & Liang, 1997), children may learn which affective states to value through exposure to popular storybooks. Thus, storybooks are what Kroeber and Kluckhohn (1952) would refer to as “products of action” (i.e., made by humans and reflections of their cultural values) as well as “conditioning elements of further action” (i.e., shapers of subsequent values and behavior).

### The Present Research

To examine whether ideal affect is culturally transmitted through exposure to storybooks, we conducted three studies. In the first study, we examined whether previously observed differences in ideal affect generalized to

preschool children. Specifically, we compared the ideal affect of children who varied in their orientation to American and East Asian cultures (and therefore in their exposure to individualism and collectivism): European American (EA) children (primarily oriented to American culture), Asian American (AA) children (oriented to both American and East Asian cultures), and Taiwanese Chinese (TC) children (primarily oriented to Chinese culture). We focused on preschool children because we wanted to examine socialization processes that occur at relatively early stages of the life span but after children demonstrate significant increases in emotional development (Saarni et al., in press). In Study 2, we examined whether cultural products relevant to children (children's storybooks) reflected cultural differences in ideal affect. Specifically, we compared the affective content of best-selling storybooks in the United States and in Taiwan. We reasoned that by analyzing best-selling storybooks, we were examining the most widely distributed storybooks in each cultural context. Finally, to examine directly whether exposure to storybooks influenced ideal affect, in Study 3, we exposed EA, AA, and TC children to storybooks with either "exciting" or "calm" content and then examined their affective preferences.

### STUDY 1: IDEAL AFFECT IN EA, AA, AND TC PRESCHOOL CHILDREN

For obvious reasons, we could not ask preschool children to use a rating scale to indicate their ideal affect. Therefore, to examine whether previously observed cultural differences in ideal affect generalized to EA, AA, and TC children, we compared children's smile and activity preferences and their associations with happiness. We hypothesized that children would be more likely to prefer the smiles and activities that most closely reflected their culture's ideal affect and that they would be more likely to associate their culture's ideal affect with happiness. Specifically, we predicted that consistent with previous findings with adults, EA children would prefer excited (vs. calm) smiles more, would perceive excited (vs. calm) smiles as happier, and would prefer exciting (vs. calm) activities more than would TC children. Because AA children were oriented to both American and East Asian cultures, we predicted that their affective preferences would fall in between those of EA and TC children.

#### Method

##### *Participants*

In Study 1, 34 EA (44.1% female), 33 AA (54.5% female), and 39 TC (41.0% female) children attending university preschools in the United States and Taiwan

participated. EA children and their parents were born and raised in the United States, and their ancestors were from Northern and Western Europe. AA children were either born overseas or in the United States, and their parents were born and raised in an East Asian context (48.5% Chinese, 30.3% Korean, 6.1% Japanese, 3% Singaporean, 12% mixed Asian).<sup>2</sup> To assess how acculturated AA children were, teachers were asked to rate children's English and Asian language proficiencies using a 5-point scale (1 = *not at all*, 3 = *somewhat*, 5 = *very much*). Although on average AA children were significantly more proficient in English than in an Asian language, they were still moderately proficient in an Asian language, English = 4.30,  $SE = .20$ ; Asian language = 2.91,  $SE = .30$ ,  $t(32) = -3.31$ ,  $p < .01$ . These findings suggest that although AA children were on average primarily oriented to American culture, they were also somewhat oriented to their Asian heritages.<sup>3</sup> TC children and their parents were born and raised in Taiwan or Mainland China.

Although all children were in preschool, there was a significant group difference in age,  $F(2, 102) = 16.02$ ,  $p < .001$ , with TC children being older than AA and EA children, EA = 4.56 (.10), AA = 4.31 (.10), TC = 5.06 (.09),  $p < .001$ . This was because the Taiwanese preschool did not admit 3-year-old children, whereas the American preschool did. Due to the small number of AA children at the American preschool, we included 3-year-olds in the American sample to increase our sample size.

##### *Tasks/Measures*

For TC children, instruments were translated into Mandarin Chinese using standard translation and back-translation techniques.

*Smile task.* Children were presented with two smiling faces placed side by side. The faces were exactly the same; only the size of the smiles differed. The "big smile" was wider and deeper (width = 1.63" and depth = 0.73") than the "small smile" (width = 1.27" and depth = 0.59"). To ensure that children accurately perceived the difference between the smiles, the experimenter asked, "Are these two faces the same or different?" If children did not accurately detect the difference, the experimenter pointed to the smiles and showed the children that the smiles differed in size. The experimenter then asked, "Which one [smile] would you rather be?" This question was presented first so that children's answers were not biased by their previous responses. To ensure that children viewed the big smile as the excited smile and the small smile as the calm smile, the experimenter then asked: (1) "Which one is more excited?" and (2) "Which one is more calm?"<sup>4</sup> The order of these latter two questions was counterbalanced. To assess which smile children perceived as happier, the

experimenter asked, "Which one is more happy?" This question was presented last so that children had selected each smile at least once prior to answering the question and therefore would be equally likely to choose either smile in response to this question. The experimenter waited until children understood each question before moving on to the next one.

### Activity Task

We developed a storybook (see Appendix A for text; pictures available upon request) containing four vignettes, one per illustrated page. Each vignette focused on an activity familiar to preschool children in the United States and Taiwan (swinging, swimming, drumming, and painting). For each vignette, there were two characters of the same sex as the participant. Only the backs of the characters' heads were visible to obscure the race of the character and increase the likelihood that children would identify with the character. One character engaged in the activity in an excited way; the other engaged in the same activity in a calm way. For example, in the swimming vignette, one character "likes to jump and splash in the swimming pool," whereas the other "likes to sit and float on an inner tube in the swimming pool." The order in which the characters were presented was counterbalanced across participants. After each vignette, the experimenter asked the participant to identify the character he or she was more like. The number of times the participant chose the character who engaged in the exciting (vs. calm) version of the activity was tallied and divided by the total number of activities presented.

### Procedure

Children were run individually in a research room at the preschool by a female experimenter. The smile task was administered first, followed by the activity task.

### Data Analyses and Results

The smile preference and perceptions of happiness data were dichotomous (0 = calm smile, 1 = excited smile); therefore, to test our hypotheses, we conducted logistic regression analyses, treating group (0 = EA, 1 = AA, and 2 = TC) as a between-subjects factor. Because the activity preference data were continuous, we conducted analyses of variance (ANOVA) to test our hypotheses, treating group as a between-subjects factor. In our initial analyses, age was treated as a covariate, and gender was treated as a between-subjects factor; however, because the results did not change when these variables were included, we dropped them from the final analyses.

We first examined whether there were group differences in the perceptions of the big smile as excited and the

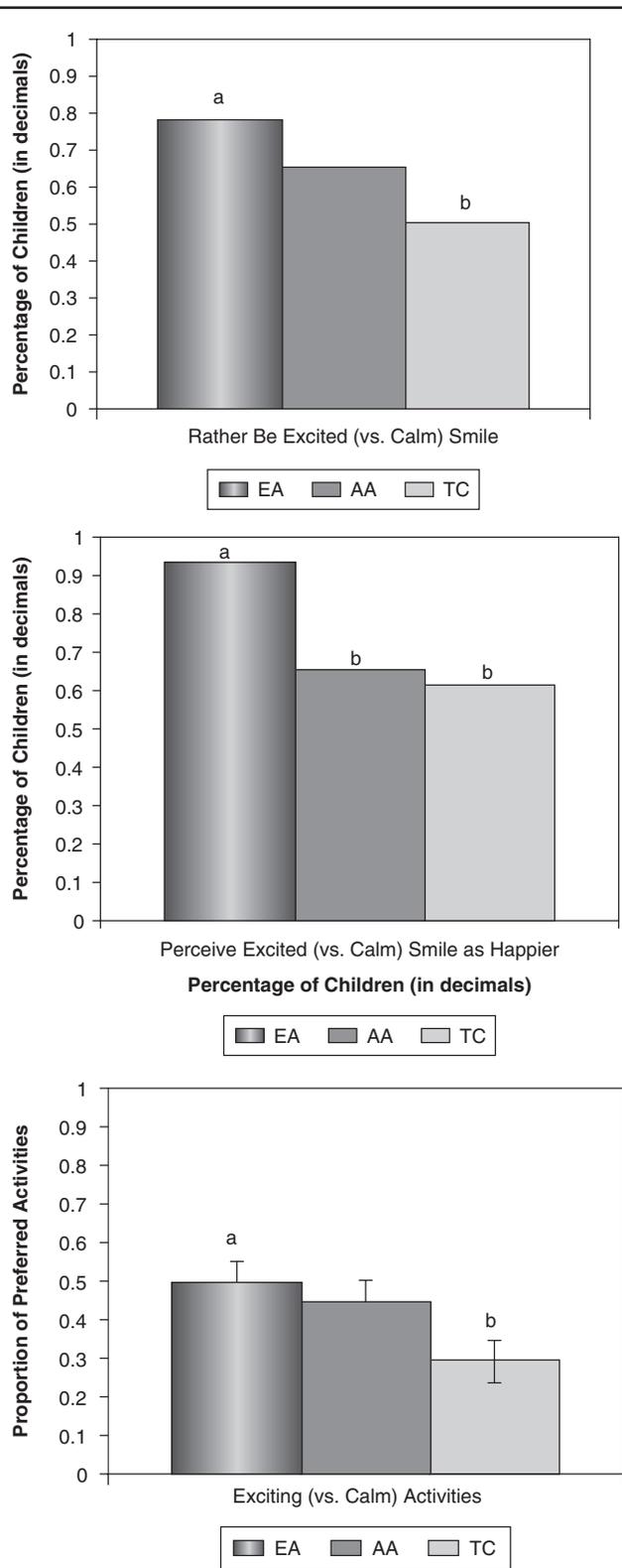
small smile as calm. Analyses revealed that the model fit was poor,  $\chi^2(2) = 2.89$ , *ns*, and that group was not a significant predictor of smile choice. Thus, there were no group differences in identification of the big smile as excited and the small smile as calm. Across groups, most children identified the big smile as excited and the small smile as calm (EA = 79.4%, AA = 60.6%, and TC = 71.8%). Typically, children who did not accurately identify the big smile as excited and the small smile as calm did not know the difference between excited and calm states, did not understand our instructions because they were still learning English (if they were AA), or were not paying attention to the experimenter. Therefore, we dropped these children from the remainder of our analyses.

### Hypothesis Testing

*Smile preferences.* We then examined whether there were group differences in smile preferences. Analyses revealed that the fit of the model approached significance,  $\chi^2(2) = 4.69$ ,  $p < .10$ . As predicted, EA children were 3.50 times (odds ratio) more likely to prefer the excited (vs. calm) smile than were TC children ( $B = 1.25$ ,  $SE = .60$ ,  $Wald = 4.39$ ,  $p < .05$ ). There were no significant differences in smile preference between EA and AA children or between AA and TC children. In other words, as predicted and illustrated in Figure 1 (top), a greater percentage of EA than TC children preferred the excited (vs. calm) smile, with AA children falling in between the other two groups.

*Perceptions of happiness.* Next, we examined whether there were group differences in the smile that was perceived as happier. The model fit was significant,  $\chi^2(2) = 9.31$ ,  $p < .01$ . As predicted, pair-wise comparisons revealed that EA children were 8.08 times (odds ratio) more likely to perceive the excited (vs. calm) smile as happier than were TC children ( $B = 2.09$ ,  $SE = .83$ ,  $Wald = 6.34$ ,  $p < .05$ ). EA children were also 6.73 times (odds ratio) more likely to perceive the excited (vs. calm) smile as happier than AA children ( $B = 1.91$ ,  $SE = .87$ ,  $Wald = 4.79$ ,  $p < .05$ ); however, AA and TC children did not significantly differ from each other in their perceptions of happiness. Figure 1 (middle) shows the percentages of EA, AA, and TC children who perceived the excited (vs. calm) smile as happier.

*Preferences for exciting (vs. calm) activities.* Analyses revealed a significant main effect of group on preference for exciting (vs. calm) activities,  $F(2, 96) = 3.44$ ,  $p < .05$ . As predicted, EA children preferred more exciting (vs. calm) activities than did TC children (Cohen's  $d = .63$ ,  $p < .05$ ), with AA children falling in the middle of the other groups (see Figure 1, bottom).



**Figure 1** Results from Study 1.

NOTE: Smile preferences (top), perceptions of happiness (middle), and activity preferences (bottom) by group. Letters indicate significant group differences ( $p < .05$ ). EA = European American children, AA = Asian American children, TC = Taiwanese Chinese children.

## Study 1 Discussion

In summary, as predicted, EA children preferred excited (vs. calm) smiles and exciting (vs. calm) activities more than TC children. EA children were also more likely to perceive the excited (vs. calm) smile as happier than were TC children. This pattern of findings mirrors previous results with college students (Tsai, Knutson, et al., 2006; Tsai, Miao, et al., 2006). Also as predicted, AA children, who were exposed to both American and East Asian cultures, fell in between the two groups. These findings suggest that between-group differences in ideal affect can be observed early in life. To begin to test our hypotheses that these differences are culturally learned, we examined the affective content of popular storybooks, products that transmit cultural values and with which children have extensive contact.

## STUDY 2: IDEAL AFFECT IN CHILDREN'S STORYBOOKS

The vast majority of preschool children in the United States and Taiwan read storybooks at home and/or at school (Lau & McBride-Chang, 2005; Nord, Lennon, Liu, & Chandler, 1999). Although many books for preschoolers have text, preschool children vary considerably in their abilities to read (Nord et al., 1999). Therefore, we focused on the affective content of storybook pictures rather than text, reasoning that regardless of reading proficiency, children would be influenced by the affective content of pictures. Moreover, pictures may be more effective in conveying affect than text (Bainbridge & Pantaleo, 1999). As mentioned earlier, we chose to examine best-selling storybooks in the United States and Taiwan because they are by definition the most widely distributed and, therefore, are the storybooks that preschool children are most likely to be exposed to, either in the classroom and/or at home. We predicted that bestsellers in the United States (American bestsellers) would contain more excited (vs. calm) affective content than would bestsellers in Taiwan (Taiwanese bestsellers). Specifically, we predicted that paralleling Study 1 findings, pictures in American bestsellers would contain more excited (vs. calm) expressions, bigger smiles, and more arousing activities than would pictures in Taiwanese bestsellers.

## Method

### Procedure

**Storybook selection.** At the beginning of 2005 (January-February), we identified the top 10 best-selling storybooks for children between 4 and 8 years of age in

the United States through Amazon.com and the top 10 best-selling storybooks for children between 4 and 8 years of age in Taiwan through Eslitebooks.com (books are listed in Appendix B).<sup>5</sup> Both Amazon.com and Eslitebooks.com are popular ways in which Americans and Taiwanese Chinese, respectively, purchase books. Whereas all of the best-selling storybooks in the United States were by Western (e.g., American, French) authors, the best-selling storybooks in Taiwan were by Chinese and Western authors, with only the text translated into Mandarin Chinese in the latter cases. To assess whether observed differences in affective content were stable over time, we also compared the affective content of 10 best-selling storybooks for children between 4 and 8 years of age in the United States and in Taiwan in November 2005. Thus, we coded a total of 20 American bestsellers (10 from the beginning of 2005, 10 from the end of 2005) and 20 Taiwanese bestsellers (10 from the beginning of 2005, 10 from the end of 2005).

*Coding of emotional expressions.* To compare the overall affective content of the storybooks, each character (animal or human) whose face was visible was coded using a version of the Facial Action Coding System (Ekman & Friesen, 1978) adapted for drawings. For each face, coders marked which “action units” (AU; i.e., facial muscles, as shown in Table 1) were present. Coders overlapped on 20% of the cases; Cohen’s  $\kappa$  reliabilities ranged from 0.7 to 1 ( $M = .83$ ,  $SD = .23$ ). Excited expressions were open eyes and open mouth smiles (AU 12 + AU 27); calm expressions were closed eyes and closed mouth smiles (AU 12 + AU 45).<sup>6</sup> For each book, we calculated the percentage of total emotional expressions that were comprised of each AU, excited expressions, and calm expressions. We then subtracted the percentage of calm expressions from the percentage of excited expressions to create a difference score. Positive values indicate greater excited (vs. calm) expressions; negative values indicate greater calm (vs. excited) expressions.

*Smile size.* To control for face size, we calculated the ratio of the width of the mouth relative to the entire face by dividing the width from one corner of the mouth to the other (the width line) by the width from ear to ear. Similarly, we calculated the ratio of the depth of the mouth relative to the entire face by dividing the depth from the width line to the deepest point of the mouth by the depth from the nose to the chin. Intraclass correlation coefficients ranged from 0.90 to 1.00 ( $M = .97$ ,  $SD = .04$ ).

*Activity coding.* The activity of each character was also recorded and coded in terms of arousal. Low arousal activities included sleeping and sitting, moderate arousal activities included walking and hanging, and high arousal

activities included running and jumping. Cohen’s  $\kappa$  was .73. To create an overall arousal activity score that was comparable to the other measures of ideal affect, for each storybook, we calculated the percentage of total activities that were low, moderate, and high arousal. We then multiplied the percentage of low arousal activities by 1, the percentage of moderate arousal activities by 2, and the percentage of high arousal activities by 3 and then summed the three scores. Higher values indicate greater arousal levels.

## Data Analyses and Results

Across the 40 books, a total of 2,610 faces were coded. For each of the aforementioned measures, we calculated the mean for each storybook (so that the storybooks were equally weighted), and then we compared the average of the means for American bestsellers with the average of the means for Taiwanese bestsellers. In other words, books were the unit of analysis and therefore were treated as “subjects.”

We conducted a  $2 \times 2$  (Country of Storybook [United States, Taiwan]  $\times$  Time of Year [Beginning, End]) analysis of variance (ANOVA) on the mean number of faces included in each book. There were no significant main effects or interactions involving country of storybook or time of year. On average, American bestsellers contained 53.05 faces ( $SE = 20.76$ ), and Taiwanese bestsellers contained 60.14 faces ( $SE = 10.76$ ).

Prior to testing our hypotheses, we examined whether there were differences in the overall affective content of the storybooks. Specifically, we focused on the occurrence of positive (AU 12) and negative (AU 1 + 4, AU 4 alone, AU 14, AU 15) expressions. As illustrated in Table 1, there were no significant main effects or interactions involving country of storybook in the occurrence of these positive or negative expressions; however, American storybooks contained more AU 5s (eyes wide open) and AU 43s (eyes almost closed) than did Taiwanese storybooks.<sup>7</sup>

## Hypothesis Testing

In our initial analyses, we conducted  $2 \times 2$  (Country of Storybook  $\times$  Time of Year) ANOVAs on the dependent variables; however, because there were no significant main effects or interactions involving time of year, we dropped this variable from the final analyses.

*Excited (vs. calm) expressions.* To test the hypothesis that American bestsellers would have a greater proportion of excited (vs. calm) expressions, we conducted a one-way ANOVA on the difference score. As predicted, the main effect of country of storybook was significant,

**TABLE 1.** Action Units (AU) Coded in Study 2 and Percentages By Country of Storybook

AU	Description	Sample	Average Percentage (SE)		F(1,18) * <i>p</i> < .05
			American	Taiwan	
1+2	Eyebrows raised and horizontal		1.9 (.01)	4.3 (.01)	2.65
1+4	Eyebrows raised and knit inwards		13.3 (.03)	10.71 (.03)	0.49
4 alone	Eyebrows knit inwards		20.5 (.04)	19.4 (.04)	0.04
5	Eyes wide open		14.0 (.03)	6.0 (.03)	4.01*
6+7	Arched eyes		7.6 (.02)	5.2 (.02)	0.52
12	Corners of mouth up		42.3 (.06)	41.4 (.06)	0.014
Unilateral 14	One side of mouth up with dimple		1.00 (.01)	0.3 (.01)	0.69
15	Corners of mouth down		18.6 (.03)	14.1 (.03)	1.1
25	Lips parted, teeth may be showing		20.1 (.02)	16.3 (.02)	1.2
27	Jaw drop		14.30 (.03)	13.2 (.03)	0.06
43	Eyes (almost or fully) closed		7.7 (.02)	3.1 (.02)	4.61*
45	Eyes closed		7.8 (.02)	12.8 (.02)	2.51
12+27	"Excited face"		7.3 (.02)	5.9 (.02)	0.16
12+45	"Calm face"		2.9 (.02)	11.4 (.02)	9.70**

\**p* < .05, \*\**p* < .01.

$F(1, 38) = 10.71$ , Cohen's  $d = 1.03$ ,  $p < .01$ . As shown in Figure 2 (top), American best-selling storybooks contained more excited (vs. calm) expressions than did Taiwanese best-selling storybooks.<sup>8</sup>

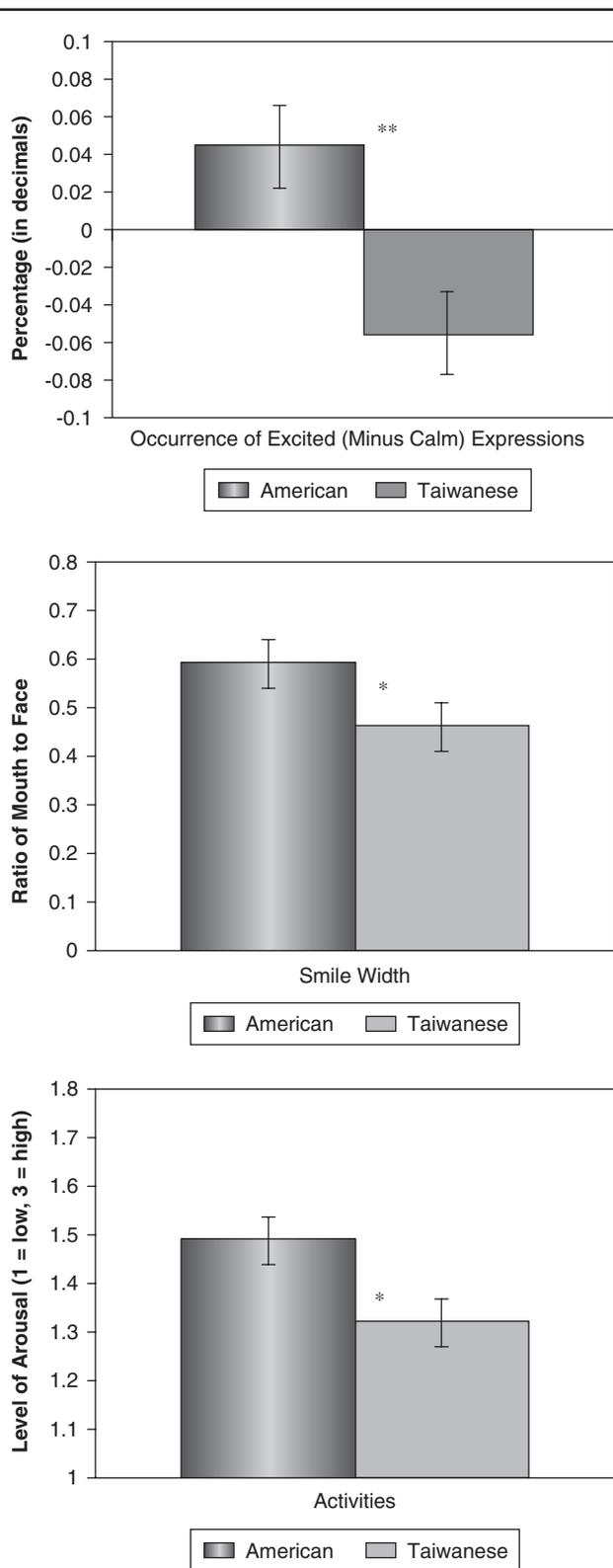
*Smile size.* A one-way ANOVA revealed that as predicted, American bestsellers contained wider,  $F(1, 38) = 3.91$ ,  $p = .055$ , Cohen's  $d = .63$ , smiles than did Taiwanese bestsellers (see Figure 2, middle). There were no significant differences in smile depth,  $F(1, 38) = 1.11$ , *ns*.

*Overall activity arousal level.* For both American and Taiwanese storybooks, the most common low, moderate,

and high arousal activities were standing, walking, and running, respectively. However, as predicted and shown in Figure 2 (bottom), a one-way ANOVA revealed that American bestsellers had higher overall arousal activity levels than did Taiwanese bestsellers,  $F(1, 38) = 5.97$ , Cohen's  $d = .77$ ,  $p < .05$ .<sup>9,10</sup>

### Study 2 Summary and Discussion

In summary, compared to Taiwanese best-selling storybooks, American best-selling storybooks had more excited (vs. calm) expressions, wider smiles, and more arousing activities. The differences in excited (vs. calm)



**Figure 2** Results from Study 2. NOTE: Occurrence of excited (vs. calm) expressions (top), average smile width (middle), and average activity arousal level (bottom) by country of storybook (bottom). \* $p < .05$ .

expressions and smile width emerged against a backdrop of no differences in the overall occurrence of smiles. Thus, although positive emotional expressions were equally prevalent in Taiwan and American bestsellers, the type of positive emotional expression differed. These differences held for bestsellers at the beginning of the year and bestsellers at the end of the year, suggesting that the differences are stable over time.

Studies 1 and 2 support the hypothesis that differences in ideal affect are culturally transmitted and learned through exposure to storybooks. However, these studies do not demonstrate that exposure to storybook content alters ideal affect, and neither do the studies rule out other possible sources of variation in ideal affect, such as temperament. We conducted Study 3 to address these issues.

### STUDY 3: MANIPULATING IDEAL AFFECT THROUGH EXPOSURE TO STORYBOOKS

In Study 3, we read children a story either about an excited character or a calm character. We then examined their affective preferences using similar tasks as those used in Study 1. We hypothesized that across cultures, children who were read the exciting story would prefer more excited (vs. calm) smiles and activities than would children who were read the calm story. We also predicted that children who were read the exciting story would be more likely to perceive the excited (vs. calm) smile as happier than would those who were read the calm story. Consistent with Study 1, we predicted that EA children would prefer more excited (vs. calm) smiles and activities and would view the excited (vs. calm) smile as happier than would TC children, with AA children falling in between the groups.

We obtained teacher ratings of children's temperament to ensure that group differences were not due to temperamental factors. Although we were aware that our design could not tell us about the effects of chronic exposure on children's ideal affect, we reasoned that it would at least tell us whether temporary exposure to specific affective content had any effect on momentary ideal affect.

#### Method

##### Participants

In Study 3, 30 EA (15 girls, 15 boys,  $M = 4.02$  years,  $SE = .09$ ), 22 AA (12 girls, 10 boys,  $M = 3.87$  years,  $SE = .10$ ), and 25 TC (13 girls, 12 boys,  $M = 5.07$  years,  $SE = .10$ ) children participated. Children attended the same university preschools in the United States and Taiwan as in Study 1. The cultural criteria used in Study 1 were applied to participants in this study. There were no

significant group differences in gender distribution. As in Study 1, there was a significant group difference in age,  $F(2, 71) = 45.43, p < .001$ , with TC being significantly older than the other two groups ( $p < .05$ ).

### *Instruments/Tasks/Measures*

As in Study 1, for TC, instruments were translated into Mandarin Chinese using standard translation and back-translation techniques.

*Stories.* We created two illustrated stories (see Appendix C for text; pictures available upon request). In the exciting story, the character had a big, open mouth smile and was shown splashing in the pool, running, swinging high and fast, drumming loudly and rapidly, and painting with bright yellow, orange, and red colors (colors associated with excitement; Boyatzis & Varghese, 1994). In the calm story, the character had a small, closed mouth smile and was shown floating in the pool, walking, swinging low and slow, drumming softly and slowly, and painting with soft blue, green, and purple colors (colors associated with calm; Boyatzis & Varghese, 1994). In both stories, characters were positively reinforced for their behaviors by their mothers ("His mommy says, 'Good swimming'"), and characters were described as happy ("See how happy he is?"). The character was the same sex as the participant and was of ambiguous race (i.e., looked either Caucasian or Asian) to increase the likelihood that participants would identify with the character. Children were read either the exciting or the calm story based on random assignment.

*Smile task.* The task was the same as in Study 1 with one exception. To incorporate other features of excited and calm smiles and to accentuate the differences between the smiles, the excited face had big eyes and a big open mouth smile (width = 2.24" and depth = 1.42"), and the calm face had small eyes and a small closed smile (width = 1.06" and depth = .24").

*Activity task.* Children were presented with a blank piece of paper that represented their "perfect playground." Children were then shown pictures of different activities, some that overlapped with the storybook activities (e.g., swings, drums, painting) and others that did not (e.g., climbing structure, trampoline vs. beanbag, music). For each activity, there was an exciting/more arousing version and a calming/less arousing version; children were asked to choose the version they wanted to put in their playground. For instance, children were given the choice between "a drum that you play fast, BOOM-BOOM-BOOM!" or "a drum that you play slow and soft, tap-tap-tap."

*Temperament.* The teacher who was the most familiar with each child rated his or her temperament using the 23-item short form of the Teacher Temperament Questionnaire (TTQ-SF; Keogh, Pullis, & Cadwell, 1982) and several items from the original Teacher Temperament Questionnaire (TTQ; Thomas & Chess, 1977). The TTQ-SF was based on the three factors that accounted for the greatest variance among the 64 items of the TTQ. These factors were (a) Task Orientation (persistence, distractibility, and activity level; e.g., "Child starts an activity and does not finish it;" reverse coded), (b) Personal-Social Flexibility (adaptability, approach/ withdrawal, and positive mood; e.g., "Child is bashful when meeting new children"), and (c) Reactivity (intensity, threshold of response, and negative mood; e.g., "Child overreacts [becomes very upset] in a stressful situation"). We added 7 items from the original TTQ because we were also interested in capturing children's physical activity levels (e.g., "In outdoor play, child is active and energetic, rough and tumble, compared to other children"). Teachers rated children's behavior using a 6-point scale from 1 = *hardly ever* to 6 = *almost always*. Internal consistency estimates for task orientation, personal/social flexibility, reactivity, and physical activity were .75, .92, .87, and .88 for EA; .85, .87, .84, and .84 for AA; and .88, .94, .91, and .77 for TC, respectively.

### *Procedure*

Children were run individually in a research room at the preschool and were randomly assigned to exciting ( $N = 40$ ; 17 EA, 10 AA, 13 TC) or calm ( $N = 37$ ; 13 EA, 12 AA, 12 TC) conditions. Participants in the exciting condition were read the story about the excited character; participants in the calm condition were read the story about the calm character. The experimenter spent time on each page to ensure that the child was exposed to the pictures on the page. The experimenter administered the activity preference task, followed by the smile preference task.

### *Data Analyses and Results*

As in Study 1, in our initial analyses, age was treated as a covariate and gender was treated as a between-subjects factor. Because the results did not change when these factors were included in our analyses, we dropped them from our final analyses.

As in Study 2, we conducted hierarchical logistic regression analyses, entering group (0 = EA, 1 = AA, and 2 = TC) and condition (0 = calm, 1 = exciting) at the first step and the Group  $\times$  Condition interaction at the second step, on the smile preference and perceptions of happiness data because these variables were dichotomous (0 = calm smile, 1 = excited smile). In no case did

the interaction contribute to the model, and neither was it a significant predictor; therefore, we do not discuss it further. Because the activity preference data were continuous, we conducted ANOVAs, treating group and condition as between-subjects factors.

We first examined whether there were differences by condition or group in the percentage of children who identified the big smile as excited (vs. calm). This model was significant,  $\chi^2(3) = 9.86, p < .05$ . The condition main effect was not significant; however, unlike Study 1, the main effect of group approached significance (Wald = 5.59,  $p = .06$ ). EA children were 13.00 times (odds ratio) more likely to identify the big smile as excited compared to AA children ( $B = 2.57, SE = 1.12, Wald = 5.26, p < .05$ ). There were no differences between EA and TC or between AA and TC. Despite this group difference, the majority of children from all groups perceived the big smile as excited (EA = 96.7%, AA = 68.2%, TC = 84.0%). As in Study 1, children who did not identify the big smile as excited and the small smile as calm either did not understand the difference between excited and calm, did not understand the instructions because they were still learning English (if they were AA), or were not paying attention to the experimenter. As in Study 1, we dropped these children from the remainder of the analyses.

### Temperament Ratings

To examine whether there were any group or condition differences in temperament, we conducted  $2 \times 2$  (Group [EA, AA]  $\times$  Condition [Calm, Exciting]) ANOVAs on each temperamental factor (task orientation, personal/social flexibility, reactivity, and physical activity). Analyses revealed no significant main effects or interactions involving condition for any of the temperamental factors. There were also no significant main effects or interactions involving group for personal/social flexibility or physical activity. However, there was a significant main effect of group for reactivity, EA = 2.82,  $SE = .23$ ; AA = 2.38,  $SE = .26$ ; TC = 3.83,  $SE = .25$ ;  $F(2, 72) = 8.68, p < .001$ ; and task orientation, EA = 4.27,  $SE = .23$ ; AA = 4.69,  $SE = .26$ ; TC = 3.29,  $SE = .25$ ;  $F(2, 72) = 8.29, p = .001$ . According to their teachers, TC children were higher on reactivity but lower on task orientation than were AA and EA children. Our results, however, did not change when we controlled for these differences, and therefore, our findings could not be attributed to temperamental factors.

### Hypothesis Testing

*Smile preferences.* We first examined whether there were group and/or condition differences in smile preferences. The model fit was significant,  $\chi^2(3) = 7.58, p = .05$ . Contrary to hypotheses, the main effect of condition

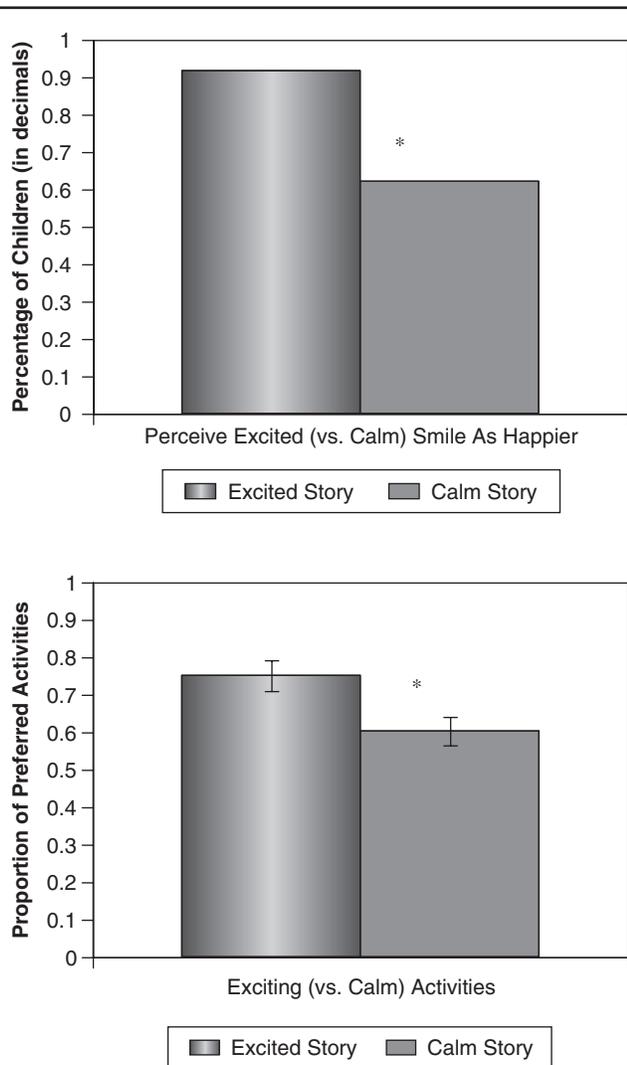
was not significant. The main effect of group, however, was significant (Wald = 6.27,  $p < .05$ ). As predicted and consistent with Study 1, EA were 4.06 times more likely to prefer the excited (vs. calm) smile than were AA ( $B = 1.40, SE = .73, Wald = 3.67, p = .055$ ; EA = 55.2%, AA = 26.7%) and 3.95 times more likely to prefer the excited (vs. calm) smile than were TC ( $B = 1.37, SE = .63, Wald = 4.68, p < .05$ ; EA = 55.2%, TC = 23.8%).

*Perceptions of happiness.* Next, we examined children's perceptions of which smile was happier. The model was significant,  $\chi^2(3) = 10.60, p < .05$ . As predicted, the main effect of condition was significant, with children in the exciting condition being 7.60 times (odds ratio) more likely to perceive the excited (vs. calm) smile as happier than children in the calm condition ( $B = 2.03, SE = .73, Wald = 7.68, p < .01$ ). To illustrate this difference, Figure 3 (top) shows the percentage of children who viewed the excited (vs. calm) smile as happier by condition. The main effect of group was not significant, although the means were in the predicted direction (EA = 80%, AA = 77.3%, TC = 64%).

*Activity preferences.* Analyses revealed significant effects of condition,  $F(1, 59) = 7.02, p = .01$ , and group,  $F(2, 59) = 4.86, p < .05$ . The Group  $\times$  Condition interaction however was not significant,  $F(2, 59) = .31, ns$ . As predicted, across groups, children in the exciting condition chose more exciting (vs. calm) activities than did those in the calm condition (Cohen's  $d = .66$ ; see Figure 3, bottom). Also as predicted, EA children chose more exciting (vs. calm) activities than did AA, EA = .79 (.04), AA = .59 (.06), Cohen's  $d = .89, p < .01$ , and TC children, EA = .79 (.04), TC = .66 (.05), Cohen's  $d = .69, p < .05$ . These differences held for activities that were depicted in the storybooks and those that were not.

### Study 3 Discussion

In summary, across cultures, being exposed to a story about an excited character increased preferences for exciting (vs. calm) activities and perceptions of excited (vs. calm) smiles as happier compared to being exposed to a story about a calm character. These findings suggest that exposure to specific affective pictures can influence children's preferences for those states. Smile preferences, however, were not influenced by the manipulation. It is possible that because smile preferences were not explicitly mentioned in the storybooks (whereas activities and "happy" smiles were), children did not learn what smiles they should prefer. Alternatively, smile preferences may require greater exposure to storybooks than provided in our study.



**Figure 3** Results from Study 3.  
NOTE: Perceptions of happiness (top) and activities preferences (bottom) by condition. \* $p < .05$ .

Consistent with findings from Study 1, EA children preferred exciting (vs. calm) activities and smiles more and perceived excited (vs. calm) smiles as happier than did TC children, although the latter difference was not significant. With the exception of activities, AA fell in between the two groups. None of these differences were due to temperament.

## GENERAL DISCUSSION

Previously, we observed that European American undergraduates valued excitement states more and calm states less than did their Hong Kong Chinese counterparts (Tsai, Knutson, et al., 2006). In the present study, we

found that these differences generalized to preschool children. European American preschoolers preferred excited (vs. calm) smiles and activities more and perceived an excited (vs. calm) smile as happier than did Taiwanese Chinese preschoolers. Asian American children who were oriented to both American and East Asian cultures demonstrated affective preferences that overall fell in between those of European American and Taiwanese Chinese children. To assess whether these differences were due to exposure to cultural products, we compared the affective content of best-selling storybooks in the United States and in Taiwan. As predicted, American bestsellers contained significantly more excited (vs. calm) expressions, wider smiles, and more arousing activities than did Taiwanese bestsellers. When we directly exposed American and Taiwanese children to exciting versus calm storybooks, we observed that across cultures, children who were exposed to the exciting storybook were more likely to prefer exciting (vs. calm) activities for their ideal playgrounds and were more likely to perceive an excited (vs. calm) smile as happier than were children exposed to the calm storybook. These findings not only demonstrate that cultural differences in ideal affect emerge early in life but also identify a specific pathway through which affective values are culturally transmitted and learned.

## Limitations and Future Directions

These studies have a number of limitations that generate directions for future research. First, we focused on exposure to storybooks as a pathway of socialization; obviously this is only one of many ways in which children may learn to value specific affective states. Future studies should examine the other socialization pathways that promote ideal affect (e.g., parent-child interaction, peer interaction, religion) as well as what children do when the cultural messages they receive from these pathways diverge. For instance, although Asian American children may be primarily exposed to exciting books in school, they may also be exposed to calm books at home. Similarly, whereas American teachers may encourage Asian Americans to value excitement, their Asian parents may teach them to value calm. Such studies may explain why despite living in the United States, in several ways, Asian American children more closely resembled their Taiwanese Chinese than their European American counterparts.

Second, in the final study, children were exposed to stories for a relatively short period of time. In future studies, it would be important to assess the effects of chronic exposure to these stories. Third, although the relative group differences in ideal affect were consistent across studies, there was less consistency across the different measures of ideal affect within cultural groups.

For instance, in Study 1, whereas an equal percentage of Taiwanese Chinese children preferred the excited and calm smiles, in Study 3, most Taiwanese Chinese children preferred the calm to the excited smiles. Similarly, for some measures of ideal affect, although the relative group differences supported our hypotheses, the absolute values did not. For example, approximately 60% of Taiwanese Chinese perceived the excited (vs. calm) smile as happier in Studies 1 and 3. Although this percentage was significantly less than that for European American children (80% to 93%), it was still larger than expected. It is possible that these inconsistencies reflect the properties of the stimuli we used or the samples that we studied. Future studies that use different methods of measuring ideal affect and that include different samples should shed light on this issue.

Fourth, there was considerable variability in ideal affect within each cultural group. Future research should examine whether acculturation, enculturation, or other factors can account for this variability. For example, the TC children who preferred excited (vs. calm) smiles may be children who have not yet been fully enculturated to Taiwanese Chinese culture. Future studies might also examine how recent immigrant children's ideal affect changes with increased exposure to American practices, products, and institutions.

Finally, the present studies did not examine the functional significance of differences in ideal affect in preschool children. We have demonstrated that among adults, discrepancies between actual and ideal affect are associated with depression (Tsai, Knutson, et al., 2006). Future studies should examine whether this relationship holds for children and whether cultural differences in ideal affect influence the development of other emotional processes such as emotion knowledge, understanding, and regulation.

In summary, our findings suggest that cultural differences in ideal affect exist among young children and may be transmitted through exposure to storybooks. These findings support the hypothesis that differences in ideal affect are culturally learned.

#### APPENDIX A

This story is about the perfect day that two friends, Alex and Andy (or Abby and Ashley), have. This is Alex (experimenter holds up picture of character) and he has a yellow shirt on. This is Andy (experimenter holds up picture of character) and he has a blue shirt on. Even though they are friends, they are very different and like to do different things.

On their perfect day, Alex and Andy go on the swings. Do you like the swings? Andy likes to just sit and swing on the swings. BUT Alex likes to twist on the swings. Are you more like Andy? Or more like Alex?

Then, the two friends go to the swimming pool. Do you like going to the swimming pool? Andy likes to sit and float using his inner tube in the swimming pool. BUT Alex likes to jump and splash in the swimming pool. Are you more like Andy? Or more like Alex?

Next they play with some drums. Do you like to play with the drums? Andy likes to go "tap-tap-tap" slowly and quietly on the drums. BUT Alex likes to go "TAPTAP-TAPPITYTAP-TAPTAP" quickly and loudly. Are you more like Andy? Or more like Alex?

And finally, to finish their perfect day, these friends do some paintings. Do you like to paint? Andy likes to paint with dark colors. BUT Alex likes to paint with bright colors. Are you more like Andy? Or more like Alex?

What a good day they had! The end.

#### APPENDIX B

#### CHILDREN'S BOOKS

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## APPENDIX C

### EXCITING STORY

This is a story about Alex's (or Ashley's) perfect day.

First, he gets to go to the swimming pool. There, he likes to jump in doing a cannon ball! He also splashes in the pool. Splash splash! His mommy says, "Good splashing!" Look at his smile, see how happy he is?

Then he goes to the park. Here he likes to run as fast as he can on the grass field. Run run! His mommy says, "Good running!" Look at his smile, see how happy he is?

Also at the park are swings. He likes to swing up high and fast. Swing swing! His mommy says, "Good swinging!" Look at his smile, see how happy he is?

Then he goes home where he has some drums to play with. He likes to bang loudly and fast on the drums. BOOM BOOM! His mommy says, "Good drumming!" Look at his smile, see how happy he is?

Then he paints a picture for his mommy. He likes to use these colors (experimenter points to colors on page) and moves his brush really fast across the canvas. Brush brush! His mommy says, "Good painting! Thank you for the picture! I love you Alex." Look at his smile, see how happy he is?

The end.

### CALM STORY

This is a story about Andy's (or Abby's) perfect day.

First, he gets to go to the swimming pool. There, he likes to sit in his inner tube. He also floats around the pool. Float float. His mommy says, "Good floating." Look at his smile, see how happy he is?

Then he goes to the park. Here he likes to walk slowly around the grass field. Walk walk. His mommy says, "Good walking." Look at his smile, see how happy he is?

Also at the park are swings. He likes to swing low to the ground and slowly. Swing swing. His mommy says, "Good swinging." Look at his smile, see how happy he is?

Then he goes home where he has some drums to play with. He likes to bang softly and slowly on the drums. Tap tap. His mommy says, "Good drumming." Look at his smile, see how happy he is?

Then he paints a picture for his mommy. He likes to use these colors (experimenter points to colors on page) and moves his brush really slowly across the canvas. Brush brush. His mommy says, "Good painting. Thank you for the picture! I love you, Andy." Look at his smile, see how happy he is?

The end.

## NOTES

1. Most of the existing cross-cultural research has focused on what children believe and understand about their emotions (e.g., Cole, Bruschi, & Tamang, 2002; Cole & Tamang, 1998) or how children respond to various emotional stimuli (e.g., Camras, Chen, Bakeman, Norris, & Cain, in press).

2. There were not enough children of any one East Asian group to allow comparisons across specific East Asian groups.

3. We tried to obtain parents' ratings of children's levels of acculturation, but response rates were too low to allow meaningful comparisons.

4. We also asked a sample of college students (29 European American, 28 Asian American, 39 Taiwanese Chinese) to rate how much the smiles (presented with other faces) depicted a variety of emotions, using a scale from 1 = *not at all* to 5 = *extremely*. As predicted, the bigger smile elicited significantly greater reports of excitement, big smile = 2.69, *SE* = .09; small smile = 2.45, *SE* = .08;  $t(96) = -3.43$ ,  $p = .001$ ; and lesser reports of calm than did the small smile, big smile = 2.06, *SE* = .08; small smile = 2.20, *SE* = .09,  $t(95) = 1.51$ , *ns*, although the differences in reports of calm were not significant. These findings held across cultures.

5. Amazon and Eslitebooks did not list bestsellers for preschoolers younger than 4 years old.

6. The same sample of college students as described in note 4 rated how much the excited and calm expressions depicted various emotions. As predicted, the excited face elicited significantly greater reports of excitement, excited face = 4.23, *SE* = .08; calm face = 1.34, *SE* = .07,  $t(96) = -25.67$ ,  $p < .001$ ; and lesser reports of calm than did the calm face, excited face = 1.56, *SE* = .07; calm face = 2.80, *SE* = .09,  $t(97) = 12.23$ ,  $p < .001$ . These findings held across cultures.

7. There was a significant main effect of time of year for AU 4,  $F(1, 38) = 4.41$ ,  $p < .05$ , and AU 15,  $F(1, 36) = 3.95$ ,  $p = .05$ . Across both cultures, storybooks that were bestsellers at the end of the year had more AU 4s and AU 15s, which are associated with negative emotion, than did storybooks that were bestsellers at the beginning of the year.

8. We also conducted separate one-way ANOVAs on excited and calm expressions. Analyses revealed that American bestsellers had a smaller proportion of calm expressions,  $F(1, 38) = 9.70$ ,  $p < .01$ , Cohen's  $d = .98$ , and a greater proportion of excited expressions,  $F(1, 38) = .16$ , *ns*, than did Taiwanese bestsellers, although the latter difference was not significant. Means are provided in Table 1.

9. One-way ANOVAs conducted on the mean percentage of total activities for each arousal level revealed that American bestsellers contained a significantly greater percentage of high arousal activities, American bestsellers = .08 (*SE* = .02), Taiwanese bestsellers = .02 (*SE* = .01);  $F(1, 38) = 7.13$ ,  $p < .05$ , Cohen's  $d = .84$ ; and a significantly lower percentage of low arousal activities on average, American bestsellers = .59 (*SE* = .04), Taiwanese bestsellers = .70 (*SE* = .03);  $F(1, 38) = 4.47$ ,  $p < .05$ , Cohen's  $d = .67$ , compared to Taiwanese bestsellers. Although American bestsellers also contained a greater percentage of moderate arousal activities than did Taiwanese bestsellers, this difference was not significant, American bestsellers = .33 (*SE* = .03), Taiwanese bestsellers = .27 (*SE* = .03),  $F(1, 38) = 1.71$ , *ns*.

10. Three of the Taiwanese bestsellers were written by Taiwanese authors; the rest were written by Western authors. To ensure that the three Taiwanese bestsellers did not drive the observed differences in

storybook content, we compared the Western-authored American bestsellers with the Western-authored Taiwanese bestsellers. Our results held: Western-authored American bestsellers had more excited (vs. calm) expressions, wider smiles, and higher arousal activities than did Western-authored Taiwanese bestsellers.

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