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Author(s): Yiyuan Xu, Jo Ann M. Farver, Lei Chang, Zengxiu Zhang and Lidong Yu

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## Moving Away or Fitting In?

### Understanding Shyness in Chinese Children

Yiyuan Xu *University of Hawaii at Manoa*

Jo Ann M. Farver *University of Southern California*

Lei Chang *Chinese University of Hong Kong*

Zengxiu Zhang *East China Normal University*

Lidong Yu *Jiangsu University of Science and Technology*

This paper reports on three studies of shy behavior in Mainland Chinese children. In Study 1 ( $N = 107$ ,  $M$  age = 10.05), a Chinese Shyness Scale (CSS) was developed based on Chinese teachers' open-ended descriptions of children's shy behavior. In Study 2 ( $N = 388$ ,  $M$  age = 10.80) and Study 3 ( $N = 198$ ,  $M$  age = 10.20), the construct validity of the two forms of shyness that emerged in Study 1 (i.e., anxious shyness and regulated shyness) were examined in relation to children's social preference, temperament, and psychosocial adjustment. A distinct pattern of results was found for anxious shyness and regulated shyness. The findings highlight the role of culture in shaping expression of children's shy behavior.

Shyness has been of considerable interest to developmental, personality, and social psychologists for decades. In North American contexts, shy children have been described as inhibited, anxious, and limited in their social contacts (Rubin & Asendorpf, 1993), a style of interaction referred to as "moving away from the world" (Caspi, Elder, & Bem, 1988, p. 824). In general, these children are considered at risk for being neglected or rejected by peers, which may lead to low self-esteem, depression, and other adjustment problems (Rubin & Asendorpf, 1993).

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Yiyuan Xu, Department of Psychology; Jo Ann M. Farver, Department of Psychology; Lei Chang, Department of Educational Psychology; Zengxiu Zhang, Department of Psychology; Lidong Yu, University Counseling Center.

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Correspondence should be addressed to Yiyuan Xu, PhD, Department of Psychology, Gartley 110, University of Hawaii at Manoa, Honolulu, HI 96822. Phone: (808) 956-6268. Fax: (808) 956-4700. E-mail: yiyuan@hawaii.edu.

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However, in recent studies with Chinese children, shy behavior has been associated with different patterns of psychosocial outcomes. Chen and his colleagues (Chen, Rubin, & Li, 1995; Chen, Rubin, & Sun, 1992) found that shyness/sensitivity, defined and measured as someone who is very shy, usually sad, and whose feelings get hurt easily, was associated with peer acceptance and positive school adjustment in Chinese school-age children. In contrast, Schwartz, Chang, and Farver (2001) found that Chinese fourth to sixth graders who were timid and shy and avoided social contacts were disliked and victimized by peers. Likewise, Hart et al. (2000) found that social reticence, defined as a type of “being alone” behavior reflective of fear and anxiety in social contexts, predicted low peer acceptance among Mainland Chinese preschoolers. In a more recent study, Chen, Cen, Li, and He (2005) also identified a negative rather than a positive association between shyness/sensitivity and Chinese children’s school adjustment.

Despite these inconsistent findings, few studies have paid attention to how shyness is understood or defined in non-Western settings. This is of particular importance for two reasons. First, cultural beliefs and values shape the environment in which children’s behavioral styles are expressed and understood (Farver, 1999). As such, the perception and expression of children’s shyness can be expected to vary in relation to a culture’s values and socialization goals. As Pines and Zimbardo (1978) suggest, cultural differences in the relative advantage or disadvantage of shy behavior may be the result of the different ways shyness is perceived. For example, in their comparative study Pines and Zimbardo (1978) found that Americans tended to view shyness as social incompetence, whereas Israelis considered shyness to be disgraceful and shameful, possibly due to the strong emphasis both cultures place on developing self-confidence and a sense of personal worth. Second, Chen et al. (1992) suggested that children’s inhibition or shyness (*hai xiu* in Mandarin) reflects self-control and maturity in Chinese culture. This notion is at odds with what is commonly referred to as shyness in North American settings. It is possible that the term *hai xiu* encompasses behaviors that are not included within the common North American definition of shyness. Accordingly, we designed and carried out three studies to explore and validate Chinese notions of childhood shyness.

### **Cultural Variations in the Conception of Childhood Shyness**

In studies of North American children, shyness has been defined as “an anxious reaction to stressful novel situations or social evaluations” (Rubin, 1998, p. 612). In Mandarin Chinese, the term shyness (*hai xiu*) not only refers to passive and anxious social restraint as defined by Rubin (1998) but

also seems to include a self-controlled form of social restraint that may be motivated by a desire to fit in with others. For instance, informal interviews carried out with Mainland Chinese mothers about their perceptions of shyness revealed that the term *hai xiu* was also used to describe children who do not brag about their good grades and those who back off when facing potential conflict with peers, behaviors that seem to be associated with the need to maintain harmonious social interactions (Xu & Farver, 2005).

### *Anxious Shyness*

Following the notion of *hai xiu*, we suggest that there are at least two forms of shyness that may be identified in Chinese children. The first form is anxious shyness, which is characterized by a passive form of social restraint whereby a child feels anxious or fearful in social situations and avoids social contact. Anxious shyness resembles the North American definition of childhood shyness. Anxiously shy children are likely to be sensitive to negative social evaluation (Asendorpf, 1990a), which may produce a conflict between their approach and avoidance motivations (Asendorpf, 1990b; Coplan, Prakash, O'Neil, & Armer, 2004): they want to participate in group activities but are afraid to join in with others. This high approach-avoidance motivational conflict may increase anxiously shy children's difficulty in coping with stressful social situations that require interpersonal competence (Eisenberg, Shepard, Fabes, Murphy, & Guthrie 1998) and eventually leads to an avoidance of social contact.

### *Regulated Shyness*

The second form of shyness that we propose is regulated shyness, defined as a form of self-controlled social restraint characterized by nonassertive and unassuming behavior. Although regulated shyness does not fit the common North American notion of childhood shyness, which often considers shyness to be equivalent to anxious shyness as referred to here, it may be particularly salient in cultures such as Mainland China where social harmony and interdependence are encouraged (Ho, 1986). In line with Chinese cultural values that view individuals' behavior as inextricably linked to a responsibility for the group and their relative status in the social hierarchy (Wu, 1996), regulated shy children may be motivated by a desire to fit in with others rather than by an approach-avoidance motivational conflict apparent in anxiously shy children. Regulated shy children may control their personal expression and monitor their appearance, opinions, and mannerisms to be socially unobtrusive and to not stick out in their peer group.

These children tend to be modest, polite, attentive to the needs of others, and inclined to concede and/or reconcile when faced with peer conflict or confrontation.

It appears likely that Schwartz et al. (2001) and Hart et al. (2000) assessed anxious shyness. In contrast, shyness/sensitivity measured in Chen et al. (1992, 1995) focused on aspects such as having sensitive feelings and being prone to sadness. While sensitivity may be conducive to peer group functioning and exemplify regulated shyness, being prone to the negative emotion of sadness may characterize anxious shyness. Moreover, since it is only recently that being usually sad has been viewed as a childhood psychological problem in Mainland China (Dai, 2003), the association between shyness/sensitivity and children's psychosocial outcomes has been found to be negative (Chen et al., 2005), whereas it was positive in earlier studies (Chen et al., 1992, 1995).

### *Anxious Shyness, Regulated Shyness, Social Preference, and Children's Psychosocial Adjustment*

Given the distinctive behaviors that characterize the various forms of shyness, anxious and regulated shyness may be evaluated differently by peers and lead to divergent psychosocial outcomes. Anxious shyness may be associated with low social preference and a negative perception of social situations. Social preference refers to the collective attitude of the peer group toward a particular child (Bukowski & Hoza, 1989). In the Chinese culture where interpersonal relationships are highly valued, anxiously shy children's inability to appropriately participate in group activities may be viewed as *bu he qu* (cannot get along with others) and result in low social preference. In most settings, low social preference reflects negative peer group attitudes and may be manifested in anxiously shy children's subsequent social experiences. That is, anxiously shy children infer how well they get along with others and over time may develop a negative perception of social situations and feel socially anxious and lonely (Boivin, Hymel, & Bukowski, 1995).

In contrast to anxious shyness, regulated shyness may be associated with high social preference and positive adjustment in the Chinese context. Regulated shy children may be able to control their assertive behavior that is potentially harmful to group functioning. Based on peer group experiences, these children develop an understanding of themselves in relation to others' evaluation (i.e., modesty), learn to attenuate their individual needs and autonomous behavior, and behave with discretion in social contexts. Thus, regulated shy children are often well liked by their peers, which may

reduce the likelihood of developing a negative perception of social situations and the accompanying feelings of social anxiety and loneliness.

### *Anxious Shyness, Regulated Shyness, and Children's Temperament*

While cultural values and beliefs to some degree determine the evaluation and relative occurrence of particular forms of shyness, biological predispositions such as temperament may explain individual variations of shyness within a culture in a probabilistic sense. That is, children who are prone to certain temperamental characteristics may be more likely than others to display a particular form of shyness. Thus, Chinese children's behavioral expression of anxious and regulated shyness may be susceptible to temperamental aspects, such as negative affectivity, effortful control, and temperamental shyness (Eisenberg et al., 1998). Children who are prone to negative emotions, a manifestation of temperamental negative affectivity, are likely to display fear or anxiety when anticipating negative social evaluations as shown in anxious shyness. In addition, previous North American findings have suggested that anxiously shy children may be characterized by low levels of self-regulation or effortful control (Eisenberg et al., 1998). These children lack the capacity to modulate negative emotions toward social stimuli either by shifting their attention away or taking action to modify the source of the problem and thus have difficulty in managing their social behavior appropriately.

On the other hand, regulated shyness may be related to high levels of self-regulation or effortful control. Kopp (1989) has suggested that the essence of self-regulation is to achieve optimum physiological functioning and psychological integration in the direction of social acceptability within a particular culture. Temperamental self-regulation may be mediated by the cultural context, which shapes children's behavior with respect to levels of social participation (Chen, 2000). Thus, sufficiently developed effortful control may foster regulated shyness in Chinese children, which serves to promote the culturally desirable goal of maintaining social harmony. In addition, given high levels of effortful control, regulated shy children may be able to modulate their emotional arousal and are less likely than anxiously shy children to display negative emotions.

Both anxious and regulated shyness may be related to temperamental shyness, or social inhibition toward the unfamiliar (Kagan, 1997). Previous studies have shown that many children who were inhibited toward novel situations also tended to anxiously withdraw from their peers or were anxiously shy (Asendorpf, 1990a). However, it is likely that some children who are shy toward strangers, particularly in the Chinese context, will behave in

a regulated shy manner—that is, being modest and unassuming with their peers such that their social initiations are not challenged by others—and are able to achieve some success in their limited bouts of social interaction.

### *Anxious Shyness, Regulated Shyness, and Children's Prosocial and Asocial Behavior*

Anxious shyness and regulated shyness may be differentially associated with prosocial behavior. Anxiously shy children's constant concern about negative social evaluation often leads to undue emotional arousal or distress, which may impede them from sharing with or helping others (Valiente, Eisenberg, Fabes, et al., 2004). In contrast, regulated shy children, despite their inclination to be socially inconspicuous, do participate in group activities when necessary, which helps to maintain peer group harmony. They may also be able to behave prosocially by helping and sharing due to their high levels of effortful control and a desire to fit in with peers.

However, regardless of the behavioral differences mentioned above, anxiously shy and regulated shy children are both characterized by social restraint (either anxious/passive or self-controlled) or an asocial behavioral style but possibly for different reasons. Children's asocial behavior refers to a type of solitude whereby children, when in the company of peers, prefer to be alone or play alone (Ladd & Profilet, 1996). Anxiously shy children are likely to have excessive concern about the possible negative consequences of their social initiations, which may eventually push them away from social interaction to become solitary loners. Regulated shy children, on the other hand, may keep a low profile in social interactions and tend to adopt a cautious approach that is socially safe. Their tendency to be low-key and to avoid social conflict or confrontation may lead to a further effort to limit their social contacts or to be asocial, which to a large extent lessens the possibility of being socially conspicuous.

### *Gender Differences*

Some researchers have suggested that in North American societies, being shy may be a greater risk factor for boys than for girls. For example, studies reported that parents responded more negatively to shy boys than to shy girls (Engfer, 1993). In middle childhood, shy or withdrawn boys reported feeling more lonely than girls and were less socially competent than their nonshy peers (Rubin, Burgess, & Coplan, 2002). These differences were attributed to North American gender roles whereby boys are expected to be more assertive and sociable than girls (Rubin et al., 2002). To some extent, in Chinese culture regulated shyness may be encouraged for all children.



But it may be more common among girls because they are traditionally expected to behave in a modest, polite, and unassuming manner. On the other hand, anxious shyness is considered undesirable for both boys and girls. Therefore, the psychosocial outcomes associated with anxious shyness and regulated shyness (i.e., covariations between the two forms of shyness and children's psychological functioning) may be similar for both genders, but Chinese girls may be more regulated shy (i.e., have higher mean levels of regulated shyness) than boys.

### The Present Studies

The current paper reports on three studies. The purpose of Study 1 was to explore Chinese notions of shyness and develop an indigenous measure of childhood shyness. Based on the traditional Chinese value system and the cultural notion of *hai xiu*, we expected that there would be at least two forms of shyness: anxious and regulated.

Study 2 and Study 3 examined the construct validity of the two forms of shyness—anxious and regulated shyness—that emerged from Study 1. In particular, the discriminant validity of anxious and regulated shyness was examined via their relation to social preference and psychosocial adjustment as measured by self-reported loneliness and social anxiety. Previous studies have suggested that children's social behavior may predict their adjustment through the mediation or partial mediation of social preference (Boivin et al., 1995; Schwartz et al., 2001). Accordingly, the mediating role of social preference was examined in the relation between children's anxious and regulated shyness and their loneliness and social anxiety. Specifically, we expected that (1) anxious shyness would be negatively associated with social preference and positively associated with loneliness and social anxiety, (2) a reverse pattern of findings was expected for regulated shyness, and (3) the relation between the two forms of shyness and children's psychosocial adjustment was expected to be mediated or partially mediated by social preference.

Study 3 further examined the construct validity of anxious and regulated shyness. Specifically, the two forms of shyness were examined in relation to a series of criterion variables: three dimensions of temperament that have been associated with shyness in previous studies: negative affectivity, effortful control, and temperamental shyness (Eisenberg et al., 1998) and children's prosocial and asocial behavior. It was expected that (1) anxious shyness would be positively associated with negative affectivity and temperamental shyness and negatively associated with effortful control, (2) regulated shyness would be positively associated with temperamental shyness and effortful control, (3) anxious shyness would be positively associated with asocial behavior but negatively associated with prosocial behavior, and (4) regulated shyness would be



positively associated with both asocial and prosocial behavior. The three studies were conducted with Chinese elementary school children because anxious shyness and regulated shyness are likely to be prominent in middle childhood as peer relations and social comparisons become increasingly significant and the sense of self diversifies (Harter, 1983).

## Study 1 Method

### *Participants*

Nineteen teachers were recruited from three elementary schools in Shanghai, China. A sample of 107 fourth and fifth graders (50 boys,  $M$  age = 10.05) were obtained from one elementary school that had three fourth-grade classes and three fifth-grade classes, with approximately 50 students per class. Teachers contacted parents to provide information about the study and to obtain consent. No parent or children refused consent.

### *Procedure*

Study 1 had two phases. In the first phase, Chinese teachers were asked to provide open-ended descriptions of childhood shyness. Consistent with Kohnstamm, Halverson, Mervielde, and Havill (1998), who used open-ended descriptions in studies of personality traits across cultures, we expected that Chinese teachers would spontaneously and frequently mention behavioral characteristics that they think are most important or salient.

Head teachers of seven fourth-, seven fifth-, and five sixth-grade classrooms were individually given the following instructions: "Please write down the most salient behavioral characteristics of shy children. If you are not clear about the wording, you can also write down concrete behavioral examples." Teachers' responses were entered into a database, and the frequencies of words and phrases were tabulated.

In the second phase, behavioral items were developed based on high-frequency descriptions of children's shyness. These items were then administered twice, across a two-week span, with 107 fourth- and fifth-grade children in a peer-nomination format.

## Study 1 Results

### *Teachers' Open-Ended Descriptions of Children's Shyness*

In the first phase, teachers generated 138 behavioral descriptions ( $M = 7.26$ ). A quartile cutoff (i.e., five teachers) was imposed as the minimum number of

cross-informant responses for item inclusion. Thirteen behavioral characteristics mentioned by five or more teachers were categorized as follows: afraid to play with peers (13), does not argue with others/avoids conflict (12), blushes (9), is timid/scared (9), does not act boldly/is polite/has a good demeanor (8), is afraid to invite others to work together (7), self-isolated/alone during class breaks (7), sad/not happy (6), modest (6), quiet (6), not showy/not personally expressive in dress or mannerism (5), hides in public/behaves nervously in front of peers (5), and withdraws or compromises in peer confrontations (5). Clearly bizarre (e.g., does not like/is picky about the food in school) or rare behavioral descriptions were discarded. The thirteen descriptions were examined and reworded to be easily understood by fourth to sixth graders, and to fit to the peer-nomination format. "Blushes" was not included as a pilot test item for its lack of discriminant validity; blushing signals one's awareness of the self as an object of attention (Crozier, 2001) and may be apparent in both regulated and anxious shyness. Among the remaining 12 descriptors, six items—"afraid to join or approach peer play groups," "isolates him/herself from others," "timid and fearful," "does not initiate peer contact," "anxious and nervous when speaking in front of peers," and "not happy"—may capture anxious shyness, whereas the other six items—"behaves modestly," "avoids conflict with peers," "does not show off," "compromises or negotiates in confrontations with peers," "has a polite demeanor," and "quiet"—seem to tap the notion of regulated shyness.

### *Peer Nominations of Children's Shyness*

In the second phase, a peer-nomination measure that contained 12 items developed in the first phase was group administered with one fourth-grade class and one fifth-grade class ( $N = 107$ ) by two trained assistants. Each child was given a booklet in which the behavioral descriptors and the names of all students in the class were printed on each page. Children were told that the researchers were interested in "how they think about the behavior of their classmates" and were instructed to cross their own names off the list so that they did not nominate themselves. As an administrator read each behavioral descriptor aloud (e.g., "please circle up to three kids who behave modestly with peers"), children circled the names of three classmates who best fit each behavioral descriptor. When all children completed their nominations, they turned to the next item until all were completed. Children's total nominations for each item were summed and standardized within each class.

*Exploratory factor analysis.* An exploratory factor analysis (EFA) using principle axis factoring and oblique rotation was conducted to examine the

**Table 1.** Factor Analysis of the Chinese Shyness Scale ( $N = 107$ )

Items	Factor	
	Regulated Shyness	Anxious Shyness
1. Behaves modestly	.61	.26
2. Avoids conflict with peers	.77	.22
3. Does not show off	.85	.10
4. Compromises or negotiates in confrontations with peers	.71	.26
5. Has a polite demeanor	.63	.04
6. Is afraid to join or approach peer play groups	.09	.65
7. Isolates him/herself from others	.21	.67
8. Is timid and fearful	.08	.79
9. Does not initiate peer contact	.18	.68
10. Is anxious and nervous when speaking in front of peers	.16	.61
11. Is quiet*	.29	.36
12. Is not happy*	.21	.20
Variance explained by each factor (%)	26.74	17.17

Note: Items marked with an asterisk were not included in Study 2 and Study 3.

measurement structure and item-factor loadings. The EFA revealed two factors with eigenvalues higher than 1 (Table 1), namely anxious shyness (5 items) and regulated shyness (5 items). Two items (i.e., “quiet” and “not happy”) had small or cross-loadings and were not included in the following analyses.

*Psychometric properties of anxious and regulated shyness subscales.* Means, standard deviations, skewness, and kurtosis were calculated for each item and for the two subscales. Although item scores were generally skewed, the subscale scores had sufficient variability to discriminate among children with respect to content. In addition, the EFA with log transformed data had reduced skewness, yielding similar item-factor patterns. The untransformed data were used to calculate reliability of each subscale. The internal consistency was .84 for anxious shyness and .82 for regulated shyness. The two forms of shyness were also correlated with each other ( $r = .25, p < .01$ ). A test-retest procedure was applied to the same sample two weeks later. The test-retest reliability was .92 for anxious shyness and .88 for regulated shyness.

## Study 1 Discussion

The results of Study 1 showed that Chinese teachers provided a range of behavioral descriptions of children's shyness. Some descriptions, such as "modesty," "not showing-off," etc., have not been included in the North American definition of childhood shyness. Based on the shyness descriptors provided by the teachers, a factor analysis was conducted and revealed two forms of shyness—*anxious* and *regulated shyness*—that seemed to fit the Chinese notion of *hai xiu*. There was also a positive correlation between *anxious* and *regulated shyness*, suggesting that the two forms may co-occur in Chinese children.

Study 1 had several limitations. First, the sample was relatively small. Second, the discriminant validity of *anxious* and *regulated shyness* required further examination, and we were particularly interested as to whether *anxious* and *regulated shyness* would be associated with distinctive psychosocial outcomes in Chinese children. Third, it was unclear whether the cluster of behaviors we labeled as *regulated shyness* represented an additional form of shyness in Chinese children. In Study 1, peers were not asked to think about shy children when evaluating items, and it was uncertain whether their responses actually differentiated the behavior of shy children. To address these limitations, the construct validity of *anxious shyness* and *regulated shyness* was examined in Study 2 and Study 3.

## Study 2

Study 2 was conducted to address the first two limitations of Study 1. Specifically, a confirmatory factor analysis was conducted to test whether the two factors identified in Study 1 would be replicated with a larger sample. In addition, the discriminant validity of *anxious* and *regulated shyness* was examined via their relations to children's psychosocial adjustment.

## Study 2 Method

### *Participants*

Three hundred eighty-eight children (186 boys, *M* age = 10.80) were recruited from an elementary school in Shanghai, China. The school had three fourth-grade, three fifth-grade, and three sixth-grade classes, with approximately 40–50 students per class. Five children were absent during the questionnaire administration and did not take part. No parent or children refused consent.

Data were collected using a peer-nomination inventory to assess peer acceptance/rejection, two self-report questionnaires measuring loneliness and social anxiety, and two teacher-rated peer acceptance/rejection items. All English measures were translated and back translated by two Chinese psychology graduate students. The CSS measure developed in Study 1 was used to measure anxious and regulated shyness. The CSS has a total of 10 items: the two items that had unsatisfactory psychometric properties were not used in Study 2.

### *Measures*

*Anxious and regulated shyness.* The CSS was group administered to children in their classrooms using the same procedure described in Study 1. Nominations received from all classmates for each item were used to compute the item scores for each child. The item scores were standardized within the class and were averaged to form the peer nominations of anxious shyness ( $\alpha = .88$ ) and regulated shyness ( $\alpha = .92$ ).

*Social preference.* Children's peer acceptance/rejection was assessed using a sociometric procedure whereby children nominated three peers whom they liked most and three peers whom they liked least. The total nominations each child received for these two items was calculated and standardized within class. A peer nomination of social preference score was generated from the standardized difference between the liked most and liked least scores.

Teachers also rated the children in their classes on two social preference items: this child is well liked or disliked by peers (reverse coded) on a 5-point scale (1 = almost never true, 5 = almost always true). A teacher rating of children's social preference was generated from the average of the liked and disliked scores. Evidence for concurrent validity of peer nomination and teachers' rating of social preference has been shown in previous studies of Chinese children in which aggression was consistently correlated with low social preference, whereas prosocial behavior was correlated with high social preference (e.g., Schwartz et al., 2001).

*Self-reported loneliness and social anxiety.* Children's loneliness at school was assessed using Asher and Wheeler's (1985) Loneliness Scale. Children rated 16 statements (e.g., I have nobody to talk to) on a 5-point scale (1 = not at all true, 5 = always true about me). Children's responses were summed to form self-reported loneliness ( $\alpha = .90$ ). This measure has shown high internal consistency in studies of American (Asher & Wheeler, 1985) and Chinese children (Chen et al., 2004) and was consistently correlated with children's self-reported experience of peer harassment (e.g., Juvonen, Nishina, & Graham, 2000).

Parkhurst and Asher's (1992) Interpersonal Concern Scale (ICS) was used to assess children's social anxiety. The subscale measuring the social anxiety associated with not being liked or being rejected by peers was used in the current study (e.g., "How often are you concerned with whether other kids like you?"). Children rated each item on a 5-point scale (1 = never, 5 = almost all the time). Responses were summed to form self-reported social anxiety ( $\alpha = .71$ ). The social anxiety subscale had satisfactory internal consistency and was correlated with self-reported loneliness and peer rejection in previous studies of U.S. children (e.g., Parkhurst & Asher, 1992).

## Study 2 Results

### *Correlation Analyses*

Although there were no missing values in the peer-nomination variables, two children missed their teachers' ratings of peer acceptance/rejection, and 13 children missed one to three item ratings in self-reports. To avoid biased results, we applied multiple imputations to compute the missing values (Schafer, 1997). We used LISREL 8.70, which utilizes EM algorithm and the method of generating random draws from probability distributions via Markov chains (Du Toit & Du Toit, 2001). Only one imputation was executed due to the minimal missing information (Little & Rubin, 1987). The following results are based on the imputed data.

As shown in Table 2, regulated shyness was positively correlated with peers' and teachers' ratings of social preference and negatively correlated with loneliness. The correlations were in a reverse direction for anxious shyness and social preference and loneliness. Anxious shyness was positively correlated with social anxiety, whereas regulated shyness was not. There was a negative correlation between gender (0 = girl, 1 = boy) and regulated shyness, indicating that girls were rated more regulated shy than were boys. Contrary to Study 1, regulated shyness was not significantly correlated with anxious shyness ( $r = .05, p > .05$ ).

### *Confirmatory Factor Analyses*

To examine whether the two-factor structure of the CSS identified in Study 1 would emerge in Study 2, we carried out a confirmatory factor analysis (CFA). In the CFA and the structural equation modeling discussed below, the error terms for any pair of items were assumed to be uncorrelated (i.e., the error variance-covariance matrix was assumed to be diagonal). Although Bentler and Chou (1987) remarked that model specification that forces all error terms to be uncorrelated is not necessary, we chose not to estimate error

**Table 2.** Correlations among the Variables in Study 2 ( $N = 388$ )

	1	2	3	4	5	6	7
1. Regulated shyness	—						
2. Anxious shyness	.05	—					
3. Peer preference	.51*	-.31*	—				
4. Teacher rated social preference	.30*	-.28*	.39*	—			
5. Self-reported loneliness	-.18*	.33*	-.35*	-.38*	—		
6. Self-reported social anxiety	-.09	.23*	-.21*	-.13*	.35*	—	
7. Gender	-.15*	-.08	-.03	-.05	.04	-.03	—
8. Age	.01	.02	-.01	.03	.03	-.02	.08

\*  $p < .01$ .

covariances to be consistent with the EFA used in Study 1, which assumed that error terms within items were not correlated. In addition, to reduce the skewness of the peer-nomination data, all variables were log transformed. The CFA results based on log-transformed data were similar to those based on the original data. Therefore, the results were reported with the untransformed data. The results showed that the two-factor shyness model fit the data reasonably well ( $\chi^2 [34] = 61.96, p < .01$ ; CFA = .98, GFI = .97, RMSEA = .05, SRMR = .04). In the following analyses, chi-square statistics and four model fit indices (SRMR, RMSEA, GFI, and CFI) were reported for three reasons. All four indices have been widely used in the literature. Compared to other fit indices such as NFI, CFI and GFI are less likely to be affected by the large sample size of this study (Kline, 1998). These four indices represent a spectrum of model fit measures that not only describe the overall proportion of explained variance by the model (e.g., GFI) but also estimate the discrepancy between the observed and predicted covariance (e.g., SRMR). Typically, a good model fit will have GFI and CFI close to .95, SRMR less than .08, and RMSEA less than .06 (Hu & Bentler, 1999).

### *Measurement Invariance of the Chinese Shyness Scale by Gender*

To examine whether the psychometric adequacy of the CSS represented both boys and girls, a multigroup confirmatory factor analysis (MCFA) was conducted (Kline, 1998). In particular, we examined whether the two-factor shyness structure applied similarly to boys and girls and whether an invariant pattern of the CSS item loadings held for both boys and girls.

The test of equivalent number of factors for the CSS scale (Model A in Table 3) revealed that the two-factor shyness model satisfactorily repre-



sented the data, indicated by a reasonable overall goodness of fit ( $\chi^2 [70] = 117.91, p < .01, CFI = .96, GFI = .94, RMSEA = .06, SRMR = .06$ ). When we fixed the item loadings to be equal for both genders, the model (Model B) still yielded a reasonable fit ( $\chi^2 [78] = 123.09, p < .01, CFI = .96, GFI = .94, RMSEA = .06, SRMR = .06$ ). The chi-square difference between the initial model (Model A) and the model with equal constraints on item loadings (Model B) was not significant ( $\Delta\chi^2 [8] = 5.18, p > .05$ ). Therefore, the hypothesis of an invariant pattern of item loadings held for both genders.

### *The Relations among Anxious Shyness, Regulated Shyness, Children's Social Preference, Social Anxiety, and Loneliness*

We examined how anxious and regulated shyness were associated with children's social preference and psychosocial adjustment as measured by their social anxiety and loneliness using structural equation modeling (Figure 1). We also explored the mediating role of social preference using criteria specified by Baron and Kenny (1986). Specifically, we required the mediator to be associated with the predictor and the outcome and required the predictor to be associated with the outcome, and the presence of the mediator would significantly reduce the strength of the association between the predictor and the outcome. We first tested the relation between different forms of shyness and children's psychosocial adjustment without considering social preference (Table 4). Model 1 displayed in Table 4 yielded  $\chi^2 (51) = 87.78, p < .01, CFI = .98, GFI = .96, RMSEA = .04, SRMR = .03$ , indicating that the predictors were associated with the outcomes.

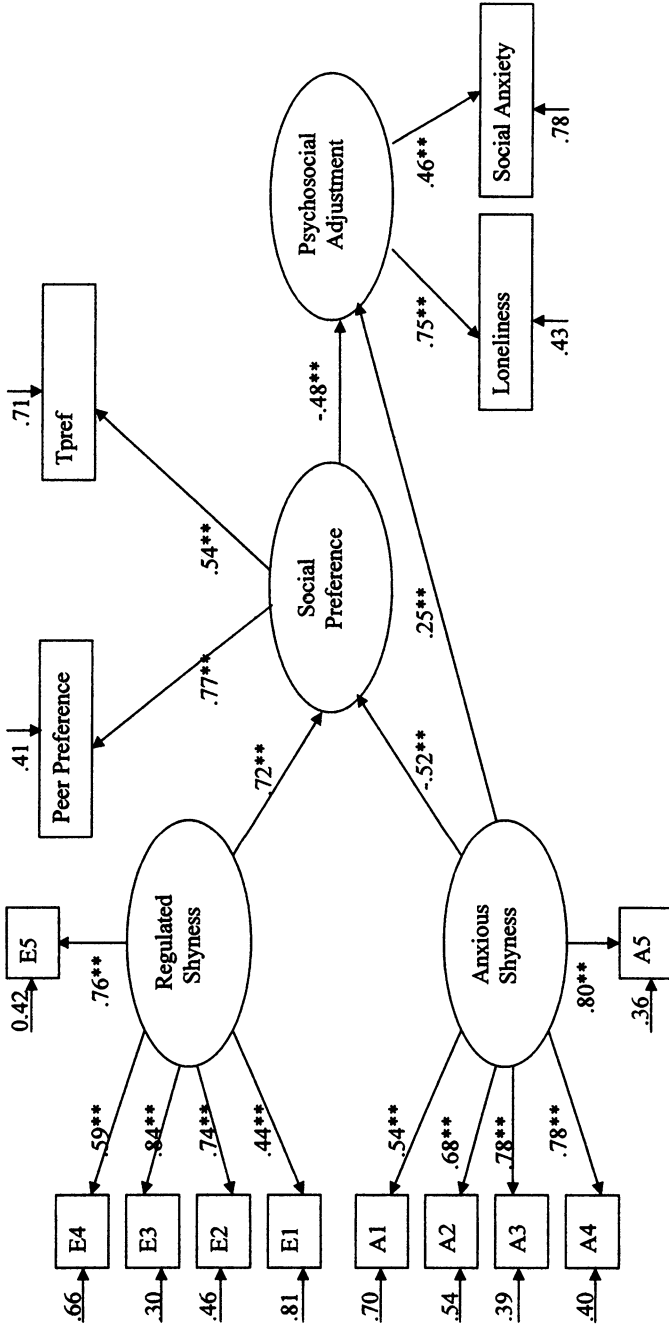
Next, we entered social preference as a mediator into the model (i.e., Model 2 in Table 4). The Model 2 (i.e., the full model) yielded an acceptable fit ( $\chi^2 [71] = 169.36, p < .01, CFI = .97, GFI = .94, RMSEA = .06, SRMR = .04$ ), suggesting a possible a mediating role of social preference between anxious/regulated shyness and children's psychosocial adjustment.

Finally, we tested two competing models: the full mediation model (Model 3) and the partial mediation model (Model 4) in relation to the full model. Although both models yielded reasonable fit ( $\chi^2 [73] = 181.02, p < .01$ , for full mediation model;  $\chi^2 [72] = 171.35, p < .01$ , for partial mediation model), the partial mediation model fit the data better than the full mediation model. The chi-square difference test showed the full mediation model fit the data worse than the full model ( $\Delta\chi^2 [2] = 11.66, p < .01$ ), whereas the partial mediation model did not ( $\Delta\chi^2 [1] = 1.99, p > .05$ ). These results suggested that regulated shyness was positively associated with social preference, whereas anxious shyness was negatively associated with social preference and positively associated with psychosocial adjustment.

**Table 3.** The Results of Factorial Invariance by Gender (N = 388)

Model	$\chi^2$	df	$\Delta\chi^2$	CFI	GFI	RMSEA	SRMR
A: Two-factor shyness measurement model with equal constraints on the number of factors	117.91*	70	—	.96	.94	.06	.06
B: Two-factor shyness measurement model with equal constraints on the item loadings	123.09*	78	5.18	.96	.94	.06	.06
C: Structural model without equal constraints on the structural paths	272.30*	159	—	.96	.90	.06	.08
D: Structural model with equal constraints on the structural paths <sup>a</sup>	276.81*	162	4.51	.96	.90	.06	.08

\*  $p < 0.01$ .<sup>a</sup> Consistent with the baseline models, the structural path from anxious shyness to psychosocial adjustment was not constrained to be equal for boys and girls.



**Figure 1.** The relations among regulated shyness, anxious shyness, social preference, and psychosocial adjustment (N = 388).

**Table 4.** The Relations between Anxious Shyness, Regulated Shyness, Social Preference, and Psychosocial Adjustment (N = 388)

Model	$\chi^2$	df	$\Delta\chi^2$ <sup>e</sup>	CFI	GFI	RMSEA	SRMR
1: Direct Effect Model <sup>a</sup>	87.78**	51	—	.98	.96	.04	.03
2: Full Model <sup>b</sup>	169.36*	71	—	.97	.94	.06	.04
3: Full Mediation Model <sup>c</sup>	181.02*	73	11.66*	.96	.94	.06	.05
4: Partial Mediation Model <sup>d</sup>	171.35*	72	1.99	.97	.94	.06	.04

\*  $p < 0.01$ .

<sup>a</sup> Model included only the direct effects from regulated/anxious shyness to psychosocial adjustment.

<sup>b</sup> Model included both direct effects from regulated/anxious shyness to psychosocial adjustment and indirect effects as mediating through social preference.

<sup>c</sup> Model included indirect effects only, with social preference mediating between regulated/anxious shyness and psychosocial adjustment.

<sup>d</sup> Model included indirect effects and the direct effect from anxious shyness to psychosocial adjustment.

<sup>e</sup>  $\Delta\chi^2$  was computed based on the  $\chi^2$  difference between the full model (Model 2) and the mediation Models (model 3 and 4).

*Factorial Invariance by Gender*

To examine whether the two forms of shyness were similarly associated with social preference and psychosocial adjustment by gender, we conducted the test for invariance of the structural relations. Prior to testing for factorial invariance, the baseline models were established separately for boys and girls. We found that the partial mediation model satisfactorily represented the data for each gender (boys:  $\chi^2 [72] = 109.93$ ,  $p < .01$ , CFI = .97, GFI = .92, RMSEA = .05, SRMR = .06; girls:  $\chi^2 [72] = 151.06$ ,  $p < .01$ , CFI = .95, GFI = .90, RMSEA = .07, SRMR = .06), with the exception that the structural path from anxious shyness to psychosocial adjustment problems was not significant for boys ( $t = 1.51$ ,  $p > .05$ ). Following Byrne (1998), the partial mediation model was used as the baseline model for girls, whereas the similar model without the path from anxious shyness to psychosocial adjustment was established as the baseline model for boys ( $\chi^2 [73] = 112.49$ ,  $p < .01$ , CFI = .97, GFI = .92, RMSEA = .05, SRMR = .06).

Finally, to examine the factorial invariance by gender, the structural paths were set up to be equal in the two groups (Model D in Table 3). As shown in Table 3, Model D acceptably fit the data ( $\chi^2 [162] = 276.81$ ,  $p < .01$ ). In addition, the chi-square difference between Model D and the model without equal constraints on the structural paths (Model C) was not significant ( $\Delta\chi^2 [3] = 4.51$ ,  $p > .05$ ). Thus, the hypothesis of invariant structural relations by gender was partially supported (except the path from anxious shyness to psychosocial adjustment).

## Study 2 Discussion

The findings of Study 2 provided some evidence for the differentiation of anxious and regulated shyness. The confirmatory factor analysis replicated the two-factor structure of the CSS. This two-factor model was relatively robust for gender. Consistent with Schwartz et al. (2001), anxious shyness was negatively associated with social preference but was positively associated with children's reports of loneliness and social anxiety. Generally, anxiously shy children are viewed by their peers as undesirable playmates and socially immature, possibly because their behavior is at odds with the interdependent group orientation that is valued in Chinese culture. The peer rejection that these children experience may also contribute to negative feelings about themselves and may become manifested as loneliness and social anxiety.

In contrast, regulated shyness was positively associated with social preference and negatively associated with children's loneliness and social

anxiety. Regulated shyness, which is comprised of modest and unassuming behavior, seems to be accepted by peers and teachers, as indicated by the high social preference ratings that the regulated shy children received from others. High social preference may in turn foster a positive perception of social interaction in regulated shy children and lessen their likelihood of experiencing loneliness and social anxiety.

The test of the mediating role of social preference favored a partial mediator model. This finding supports other work that proposed that links between children's behavioral styles and their psychosocial adjustment are likely mediated or partially mediated by social preference (Boivin et al., 1995). Regulated shyness was positively evaluated by peers and teachers, which seemed to contribute to children's positive psychological functioning (i.e., the lack of social anxiety and loneliness). On the other hand, anxiously shy behavior was negatively perceived by peers, which may have increased children's subjective experiences of loneliness and social anxiety.

Contrary to the results of Study 1, there was no significant correlation between anxious shyness and regulated shyness in Study 2. One difference between Study 1 and Study 2 was that Study 2 examined the two forms of shyness within a sample that included sixth graders. Accordingly, we recomputed the correlations between the two forms of shyness separately for fourth, fifth, and sixth graders. The correlations were significant for fourth and fifth graders ( $r = .18$  and  $.16$ ,  $ps < .05$ , respectively) but were not significant for sixth graders ( $r = .03$ ,  $p > .05$ ). These findings could be attributed to the age of the informants. The two forms of shyness may be less likely to co-occur in older children. Alternatively, in contrast to younger children, older children may be more likely to distinguish regulated shyness from anxious shyness due to their increased understanding of the social nature of the two forms of shyness.

The results showed that Chinese girls were more regulated shy than were boys. The relation between regulated shyness and anxious shyness and children's outcomes was similar for both genders except for the path from anxious shyness to psychosocial adjustment, which was significant for girls but not for boys. This result is consistent with Boivin and Hymel's (1997) finding that the direct contribution of shy or withdrawn behavior (or anxious shyness referred to here) to loneliness, controlling for low social preference, was stronger for girls than for boys. One explanation is that anxious shyness may be co-morbid with internalizing problems for girls, whereas for boys it may be associated with a negative perception of social situations when these boys are also rejected by their peers (Boivin & Hymel, 1997). Therefore, anxious shyness itself may be indicative of internalizing problems for Chinese girls but not for boys.

Although Study 2 provided some support for the discriminant validity of the two forms of shyness, further evidence was needed for construct validity of anxious and regulated shyness. First, it was important to explore whether regulated shy children were limited in their peer contacts or if they behaved in an asocial manner that seems to characterize all forms of shyness. Second, because Study 1 and Study 2 were carried out with children in the metropolitan areas of Shanghai, our findings may not be representative of the greater Mainland Chinese population. Study 3 was conducted to address these limitations.

### **Study 3**

Study 3 further examined construct validity of anxious and regulated shyness in a sample from the nonmetropolitan area of Mainland China. Specifically, the two forms of shyness were examined in relation to a series of related or unrelated criterion variables including aspects of children's temperament and their asocial and prosocial behavior.

### **Study 3 Method**

#### *Participants*

One hundred ninety-eight children (89 boys,  $M$  age = 10.20) were recruited from an elementary school in Zhenjiang, China. Zhenjiang is a middle-sized city located in eastern China with a population of about 1 million. Zhenjiang is considered to be more representative of a Chinese city than are the megametropolitan areas of Beijing or Shanghai because the local residents have similar levels of education and income as most other Chinese cities. Children were recruited from a school containing six grades with three classes of approximately 40–50 children per class. Two classes from the fourth and fifth grades participated. Research assistants contacted the parents in advance to provide introductory information about the study and to obtain their oral consent. Parents' written consent was obtained when the data collection began. No parent or children refused consent. Seven children were absent during the questionnaire administration.

#### *Procedure*

A multi-informant approach was adopted to control for possible shared method variance. Specifically, children's anxious shyness and regulated shyness were assessed using peer nominations. Teachers rated children's



prosocial and asocial behavior. Mothers rated children's negative affectivity, effortful control, and temperamental shyness.

### *Measures*

*Maternal ratings of children's temperament.* Each mother completed a Chinese version (Xu, Farver, Yu, Zhang, & Cai, 2004) of the Early Adolescent Temperament Questionnaire (EATQ) (Ellis & Rothbart, 2001). The Chinese EATQ contains 48 items rated on a 5-point scale (1 = almost always untrue, 5 = almost always true). The five subscales relevant to negative affectivity (i.e., the fear subscale), effortful control (i.e., the inhibitory control, attention, and activation control subscales), and temperamental shyness were used in the current study.

The fear subscale contains five items (e.g., feels scared when entering a darkened room at night;  $\alpha = .79$ ). The inhibitory control subscale measures children's capacity to plan and to suppress responses that satisfy immediate needs and contains three items (e.g., has a hard time waiting his or her turn to speak when excited [reverse coded];  $\alpha = .64$ ). The attention subscale, which assesses children's capacity to shift or focus attention, has six items (e.g., finds it easy to really concentrate on a problem when interrupted or distracted;  $\alpha = .60$ ). The activation control subscale, which assesses children's capacity to perform an action when there is a strong tendency to avoid it, consists of seven items (e.g., usually finishes her/his homework before it's due;  $\alpha = .77$ ). The 5-item temperamental shyness subscale assesses shyness with strangers (e.g., my child is afraid of meeting new people;  $\alpha = .72$ ). Mothers' responses were averaged across items within each subscale. The item mean for each subscale provided an index of mothers' ratings of their children's negative affectivity, inhibitory control, attention focusing/shifting, activation control, and temperamental shyness. A composite variable of effortful control was derived from the average of the scores of attention focusing/shifting, activation control, and inhibitory control ( $r$  ranged from .22 to .54,  $ps < .01$ ) and used in the following analyses. The EATQ subscales had satisfactory internal consistencies (Xu et al., 2004). In addition, negative affectivity has been found to be positively correlated with self-reported depressive mood, whereas effortful control was negatively correlated with peer-nominated aggression (Xu et al., 2004).

*Peer nominations of children's anxious and regulated shyness.* The CSS was used to assess children's anxious ( $\alpha = .93$ ) and regulated shyness ( $\alpha = .93$ ) using the same procedure described in Study 1 and Study 2. The item scores were standardized within the class and were averaged to form the variables: peer-nominated anxious shyness and regulated shyness.

*Teachers' ratings of children's asocial behavior and prosocial behavior.* Subscales adopted from the Child Behavior Scale (CBS) (Ladd & Profilet, 1996) were used to assess children's asocial behavior (6 items; e.g., keeps peers at distance, is solitary;  $\alpha = .88$ ) and prosocial behavior (7 items; e.g., kind toward peers, cooperative toward peers;  $\alpha = .92$ ). Teachers were asked to rate each item on a 3-point scale (1 = seldom displays the behavior, 3 = often displays the behavior). The CBS has shown high internal consistency, test-retest reliability, and strong construct validity in previous studies (Ladd & Profilet, 1996).

### Study 3 Results

#### *Correlation Analyses*

Although there were no missing data for the peer-nomination measures and teachers' ratings, nine children had missing values for mothers' ratings. The same imputation procedure used in Study 1 was carried out to replace missing values prior to data analyses. The correlation analyses (Table 5) indicated that regulated shyness was positively correlated with anxious shyness and temperamental shyness and with mothers' ratings of attention shifting/focusing, activation control, inhibitory control and negatively correlated with negative affectivity. Anxious shyness was positively correlated with temperamental shyness and negative affectivity. In addition, regulated and anxious shyness were both positively correlated with children's asocial behavior. Prosocial behavior was positively correlated with regulated shyness but negatively correlated with anxious shyness. Gender (1 = boy, 0 = girl) was negatively correlated with regulated shyness, negative affectivity, attention shifting/focusing, activation control, and inhibitory control, indicating that girls had higher ratings than boys on these variables.

#### *The Relations among Children's Temperament, Asocial and Prosocial Behavior, and Regulated Shyness and Anxious Shyness*

To examine how children's temperament and their asocial and prosocial behavior were related to their regulated and anxious shyness, we conducted a series of hierarchical regression analyses. Regulated and anxious shyness were treated as criterion variables. In each regression model, children's age, gender, and temperament variables were entered in the first step, followed by their asocial and prosocial behavior in the second step. The results showed that children's regulated shyness was positively associated with effortful control ( $\beta = .20, p < .01$ ), temperamental shyness ( $\beta = .15, p < .05$ ),

**Table 5.** Correlations among the Variables in Study 3 (*N* = 191)

	1	2	3	4	5	6	7	8	9	10
1. PN: Regulated shyness	—									
2. PN: Anxious shyness	.19*	—								
3. MR: Temperamental shyness	.18*	.15*	—							
4. MR: Negative affectivity	-.17*	.23**	.16*	—						
5. MR: Attention	.18*	-.13	.18*	-.21**	—					
6. MR: Activation control	.19*	.08	.09	-.29**	.22**	—				
7. MR: Inhibitory control	.22**	.07	.13	-.18*	.53**	.30**	—			
8. TR: Prosocial behavior	.22**	-.18*	.05	-.24**	.59**	.19**	.57**	—		
9. TR: Asocial behavior	.21**	.25**	.14	.14	.05	.04	.04	-.16*	—	
10. Gender	-.18*	.00	-.11	-.16*	-.23**	-.18**	-.24**	-.13	-.13	—
11. Age	-.04	.01	-.03	-.04	.07	.00	.06	.01	.04	.14

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

asocial behavior ( $\beta = .22, p < .01$ ), and prosocial behavior ( $\beta = .17, p < .05$ ), whereas anxious shyness was positively associated with negative affectivity ( $\beta = .23, p < .01$ ), temperamental shyness ( $\beta = .15, p < .05$ ), and asocial behavior ( $\beta = .18, p < .05$ ) and negatively associated with prosocial behavior ( $\beta = -.15, p < .05$ ).

### Study 3 Discussion

The findings of Study 3 provided some evidence for the construct validity of regulated and anxious shyness in Chinese children. First, the two forms of shyness were associated with teachers' ratings of asocial behavior and mothers' ratings of temperamental shyness. Therefore, to some extent both regulated and anxiously shy children were rated by teachers as having limited peer contacts and being relatively solitary and were rated by mothers as being inhibited toward strangers. Consistent with the results of Study 1 and Study 2, regulated shyness was correlated with anxious shyness among the fourth and fifth graders ( $r = .19, p < .05$ ). These results suggest that both regulated and anxiously shy children may be behaviorally inhibited in their social interaction.

The association between anxious shyness and temperamental shyness can be explained by the two-factor model of social inhibition put forth by Asendorpf (1990a), who argued that social inhibition is activated by two types of stimuli—novelty or punishment/nonreward cues—via the mediation of the Behavior Inhibition System (BIS) (Gray, 1982). Thus, temperamental shyness may reflect children's responses to novel stimuli (e.g., strangers), whereas anxious shyness seems to be related to children's inhibition associated with punishment/nonreward cues (i.e., experiences of peer rejection or neglect). Given that the BIS supports both types of social inhibition, some association between temperamental and anxious shyness can be expected.

The positive association between regulated shyness and temperamental shyness is consistent with Asendorpf and Nunner-Winkler's (1992) finding that temperamental shyness predicted children's avoidance of conflict or confrontation (a characteristic of regulated shyness) when they were required to share limited resources with their peers. Possibly, temperamental shyness in children who are biologically slow to warm up functions as a brake on the spontaneous transgression of peer group norms and provides an opportunity for children to reflect on the consequences of their behavior on others, which promotes relatively modest and unassuming behavior characteristic of regulated shyness. That is, a child who is temperamentally shy may be more likely to develop a regulated shy behavioral profile in the Mainland Chinese culture.

Consistent with North American findings, anxious shyness was positively associated with children's negative affectivity and inversely associated with effortful control. These results suggested that anxiously shy children have low thresholds for emotional arousal in response to negative feedback from peers and are unable or fail to voluntarily control their levels of negative emotion. This may explain the results in Study 2 where anxiously shy children had high social anxiety and loneliness ratings. In contrast, regulated shyness was positively associated with effortful control. Perhaps regulated shy children are adept at controlling their emotions and behavior, which serves to maintain social harmony and helps them to fit in with others. Inasmuch as culture may shape the expression of regulated shyness, children with certain temperamental characteristics may be more likely than others to behave in a regulated shy manner.

### General Discussion

Our findings suggest that Chinese children's shyness may take varying forms that have distinctive psychological meanings. The results imply that it is regulated shyness that is valued in Chinese children. Regulated shyness is different from anxious shyness, which has been frequently studied in the Western literature. Regulated shyness may describe the essence of self-controlled social restraint that is consistent with Chinese cultural norms. In line with most Western studies, anxious shyness predicted negative outcomes in the Chinese children. Therefore, our findings point to a similarity in children's socialization experiences across cultures.

Our results suggest that regulated and anxious shyness differ in at least two ways. First, anxious shyness refers to a passive form of social restraint, whereas regulated shyness represents a form of self-controlled social restraint. While both may be associated with asocial behavior and temperamental shyness, regulated shy children may be more likely to behave prosocially, possibly due to their higher levels of effortful control. Second, anxiously shy children may be prone to or are overwhelmed by negative emotions that prevent them from behaving appropriately in social contexts. In contrast, regulated shy children, who effortfully control their behavior and expression of emotion, may be able to behave in a modest and unassuming manner.

The current studies represent an initial step in understanding the social behavior of children in different cultural communities. However, several limitations should be mentioned. First, the construct of regulated shyness should be further validated. Because the concept of regulated shyness was derived from teachers' understanding of shyness while the CSS is a peer-

nomination measure, future studies are needed to examine children's notion of shyness. Second, the results of Study 2 suggest that the association between anxious and regulated shyness may be dependent on children's age. Whether this age difference was due to age-related perception of shy or withdrawn behavior or age-related changes in shy behavior should be further explored. Finally, although we speculated that regulated shyness is motivated by a desire to fit in with others, no data were gathered on the motivations behind shy children's actions in the current studies. It is also of interest why regulated shy children rather than anxiously shy children would feel the cultural imperative to fit in with others. Perhaps only regulated shy children are able to control their behavior and their levels of emotional arousal, which enables them to respond to the cultural expectations. To fully understand regulated shyness and the motives behind regulated shyness, a longitudinal study is needed to examine how regulated shyness emerges and develops in Chinese children's peer groups.

### References

- Asendorpf, J. B. (1990a). The development of inhibition during childhood: Evidence for a two-factor model. *Developmental Psychology, 26*, 721–730.
- Asendorpf, J. B. (1990b). Beyond social withdrawal: Shyness, unsociability, and peer avoidance. *Human Development, 33*, 250–259.
- Asendorpf, J. B., & Nunner-Winkler, G. (1992). Children's moral motive strength and temperamental inhibition reduce their immoral behavior in real moral conflicts. *Child Development, 63*, 1223–1235.
- Asher, S. R., Wheeler, V. A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. *Journal of Consulting & Clinical Psychology, 53*, 500–505.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Social Psychology, 51*, 1173–1182.
- Bentler, P. M., & Chou, C. (1987). Practical issues in structural modeling. *Sociological Methods and Research, 6*, 78–117.
- Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology, 33*, 135–145.
- Boivin, M., Hymel, S., & Bukowski, W. M. (1995). The roles of social withdrawal, peer rejection, and victimization by peers in predicting loneliness and depressed mood in childhood. *Development and Psychopathology, 7*, 765–785.
- Bukowski, W. M., & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement, and outcome. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 15–45). New York: Wiley.

- Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Erlbaum.
- Caspi, A., Elder, G. H., & Bem, D. J. (1988). Moving away from the world: Life-course patterns of shy children. *Developmental Psychology, 24*, 824–831.
- Chen, X. (2000). Social and emotional development in Chinese children and adolescents: A contextual cross-cultural perspective. In F. Columbus (Ed.), *Advances in psychology research: Vol. 1* (pp. 229–251). Huntington, NY: Nova Science Publishers.
- Chen, X., Cen, G., Li, D., & He, Y. (2005). Social functioning and adjustment in Chinese children: The imprint of historical time. *Child Development, 76*, 182–195.
- Chen, X., He, Y., De Oliveira, A. M., Lo Coco, A., Zappulla, C., Kaspar, V., Schneider, B., Valdivia, I. A., Tse, C. H., & DeSouza, A. (2004). Loneliness and social adaptation in Brazilian, Canadian, Chinese and Italian children. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 45*, 1373–1384.
- Chen, X., Rubin, K. H., & Li, Z. (1995). Social functioning and adjustment in Chinese children: A longitudinal study. *Developmental Psychology, 31*, 531–539.
- Chen, X., Rubin, K. H., & Sun, Y. (1992). Social reputation and peer relationships in Chinese and Canadian children: A cross-cultural study. *Child Development, 63*, 1336–1343.
- Coplan, R. J., Prakash, K., O'Neil, K., & Armer, M. (2004). Do you “want” to play? Distinguishing between conflicted shyness and social disinterest in early childhood. *Developmental Psychology, 40*, 244–258.
- Crozier, W. R. (2001). Blushing and the exposed self: Darwin revisited. *Journal for the Theory of Social Behavior, 31*, 61–72.
- Dai, J. (2003, March). Negative emotions and mental health problems. *Chinese Youth Daily*.
- Du Toit, S., & Du Toit, M. (2001). *Interactive Lisrel User's Guide*. Chicago: Scientific Software International.
- Eisenberg, N., Shepard, S. A., Fabes, R. A., Murphy, B. C., & Guthrie, I. K. (1998). Shyness and children's emotionality, regulation, and coping: Contemporaneous, longitudinal, and across-context relations. *Child Development, 69*, 767–790.
- Ellis, L., & Rothbart, M. (2001, April). Revision of the Early Adolescent Temperament Questionnaire. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Minneapolis, MN.
- Engfer, A. (1993). Antecedents and consequences of shyness in boys and girls: A 6-year longitudinal study. In K. H. Rubin and J. B. Asendorpf (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 49–80). Hillsdale, NJ: Erlbaum.



- Farver, J. M. (1999). Activity setting analysis: A model for examining the role of culture in development. In A. Goncu (Ed.), *Children's engagement in the world: Sociocultural perspectives* (pp. 99–127). New York: Cambridge University Press.
- Gray, J. A. (1982). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system*. New York: Clarendon and Oxford University Press.
- Hart, C. H., Yang, C., Nelson, L. J., Robinson, C. C., Olsen, J. A., Nelson, D. A., Porter, C. L., Jin, S., Olsen, S. F., & Wu, P. (2000). Peer acceptance in early childhood and subtypes of socially withdrawn behaviour in China, Russia and the United States. *International Journal of Behavioral Development, 24*, 73–81.
- Harter, S. (1983). Developmental perspectives on the self-system. In P. H. Mussen (Ed.), *Handbook of child psychology: Vol. 4* (pp. 275–385). New York: Wiley.
- Ho, D. Y. F. (1986). Chinese pattern of socialization: A critical review. In M. H. Bond (Ed.), *The psychology of the Chinese people* (pp. 1–37). New York: Oxford University Press.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.
- Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology, 92*, 349–359.
- Kagan, J. (1997). Temperament and the reactions to unfamiliarity. *Child Development, 68*, 139–143.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford.
- Kohnstamm, G. A., Halverson, C. F., Mervielde, I., & Havill, V. L. (1998). *Parental descriptions of child personality: Developmental antecedents of the Big Five?* London: Erlbaum.
- Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental Psychology, 25*, 343–354.
- Ladd, G. W., & Profilet, S. M. (1996). The Child Behavior Scale: A teacher-report measure of young children's aggressive, withdrawn, and prosocial behavior. *Developmental Psychology, 32*, 1008–1024.
- Little, R. J. A., & Rubin, D. B. (1987). *Statistical Analysis with Missing Data*. New York: Wiley.
- Parkhurst, J. T., & Asher, S. R. (1992). Peer rejection in middle school: Subgroup differences in behavior, loneliness, and interpersonal concerns. *Developmental Psychology, 28*, 231–241.

- Pines, A., & Zimbardo, P. G. (1978). The personal and cultural dynamics of shyness: A comparison between Israelis, American Jews and Americans. *Journal of Psychology and Judaism*, 3, 81–101.
- Rubin, K. H. (1998). Social and emotional development from a cultural perspective. *Developmental Psychology*, 34, 611–615.
- Rubin, K. H., & Asendorpf, J. B. (1993). *Social Withdrawal, inhibition, and shyness in childhood*. Hillsdale, NJ: Erlbaum.
- Rubin, K. H., Burgess, K. B., & Coplan, R. J. (2002). Social withdrawal and shyness. In P. K. Smith & C. H. Hart (Eds.), *Blackwell handbook of childhood social development* (pp. 330–352). Malden, MA: Blackwell.
- Schaffer, J. L. (1997). Analysis of incomplete multivariate data. *Monographs on Statistics and Applied Probability*, 72. London: Chapman & Hall/CRC.
- Schwartz, D., Chang, L., & Farver, J. M. (2001). Correlates of victimization in Chinese children's peer groups. *Developmental Psychology*, 37, 520–532.
- Wu, D. Y. H. (1996). Chinese childhood socialization. In M. H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 143–154). London: Oxford University Press.
- Valiente, C., Eisenberg, N., Fabes, R. A., Shepard, S. A., Cumberland, A., & Losoya, S. H. (2004). Prediction of children's empathy-related responding from their effortful control and parents' expressivity. *Developmental Psychology*, 40, 911–926.
- Xu, Y., & Farver, J. M. (2005, May). The many faces of shyness in Chinese children. Paper presented at the Annual Meeting of the American Psychological Society, Los Angeles, CA.
- Xu, Y., Farver, J. M., Yu, L., Zhang, Z., & Cai, B. (2004, July). Validation of the Early Adolescent Temperament Questionnaire (EATQ) with Mainland Chinese adolescents. Poster presented at the Biennial Meetings of the International Society for the Study of Behavioral Development, Ghent, Belgium.