

Parents' Involvement in Children's Learning in the United States and China: Implications for Children's Academic and Emotional Adjustment

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This research examined parents' involvement in children's learning in the United States and China. Beginning in seventh grade, 825 American and Chinese children (mean age = 12.74 years) reported on their parents' involvement in their learning as well as their parents' psychological control and autonomy support every 6 months until the end of 8th grade. Information on children's academic and emotional adjustment was obtained. American (vs. Chinese) parents' involvement was associated less with their control and more with their autonomy support. Despite these different associations, parents' heightened involvement predicted children's enhanced engagement and achievement similarly in the United States and China. However, it predicted enhanced perceptions of competence and positive emotional functioning more strongly in the United States than China.

For many children, their engagement in school declines as they enter adolescence (e.g., Fredricks & Eccles, 2002; Trautwein, Ludtke, Kastens, & Koller, 2006). Because this is often paralleled by a drop in achievement in school (e.g., Kenney-Benson, Pomerantz, Ryan, & Patrick, 2006; Pintrich, 2000), a key issue has been that of how to promote children's engagement in the academic context as they make the transition to adolescence (Wigfield & Wagner, 2005). There is much evidence that parents' involvement in children's learning during adolescence, as during other stages of development, facilitates children's engagement and achievement (e.g., Grolnick, Kurowski, Dunlap, & Hevey, 2000; Gutman & Eccles, 1999). However, this evidence comes almost entirely from research conducted in the United States. Although the effectiveness of parents' involvement is evident for American children from a variety of cultural backgrounds (e.g., Hill et al., 2004; Huntsinger, Jose, Larson, Balsink Krieg, & Shaligram, 2000), this is a serious lacuna. American ideologies of learning and parents' role in it may shape the nature of parents' involvement. It is thus unclear if parents'

involvement in children's learning operates similarly in countries where such ideologies differ from those of the United States.

The current research investigated parents' involvement in children's learning in not only the United States but also China where ideologies about learning and parents' role in it differ from those in the United States (Chao, 1994; Li, 2005; Tweed & Lehman, 2002). Two major goals guided the research. The first was to examine whether the nature of parents' involvement differs in the United States and China as children progress through early adolescence. In this context, the major focus was on the extent to which parents' involvement during this stage of children's development may be differentially accompanied by parents' control and autonomy support in the two countries. The second goal was to identify whether the effects of American and Chinese parents' involvement on children's adjustment during early adolescence are similar. We focused on children's engagement and achievement as well as their perceptions of competence and emotional functioning to explore the possibility that the similarity of the effects in the United States and China depends on the dimension of children's adjustment.

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Cultural Ideologies About Learning and Parents' Role in It in the United States and China

Given Socratic influences, Americans often view learning in a utilitarian light in which knowledge is gained primarily to understand the world, develop one's skills, and accomplish one's goals (Li, 2005; Tweed & Lehman, 2002). Learning is seen as involving the acquisition of knowledge through individual attributes, such as abilities, interest, and engagement (Li, 2003, 2005), which are considered to be relatively fixed (Heine et al., 2001). In China, in which Confucian teaching is central, learning is viewed by many as more than simply the pursuit of knowledge as in the United States—it is regarded as a moral endeavor (Li, 2002, 2005). Learning involves continual self-improvement to attain moral ideals such that diligence, persistence, and concentration, as well as enduring hardship, are considered essential. Notably, these different beliefs about learning are held in countries where access to education is quite different: A larger proportion of the population in the United States is able to attend high school and college than in China where performance on exams determines attendance (Pomerantz, Ng, & Wang, 2008; Tweed & Lehman, 2002).

Ideas about the role of parents in children's learning differ in the two countries as well. Perhaps because of the American cultural orientation toward independence (Markus & Kitayama, 1991), European American parents see cultivating a sense of autonomy in children as critical to children's learning (Chao, 1996). Many parents in the United States view intense academic training as inappropriate, and even detrimental, for children (Elkind, 1987; Hirsh-Pasek, 1991). Instead, there tends to be an emphasis on developing the "whole child"—that is, cultivating not just academic adjustment but also emotional and social adjustment (Chao, 1996; Parmar, Harkness, & Super, 2004). In China, children's learning is a major responsibility of parents; this is reflected in the Chinese notion of *guan*, which Chao (1994) has argued is the key to Chinese parenting. *Guan* entails meanings of "to love" and "to govern" such that children do not fall short of standards, particularly those in the academic arena (Chao, 1994; Tobin, Wu, & Davidson, 1989). Parents' heightened monitoring of children's activities is central to the concept of *guan* with such monitoring viewed as an act of love (Chao, 1994).

The Nature of Parents' Involvement in Children's Learning in the United States and China

The different cultural ideologies about learning and parents' role in it in the United States and China are likely to lead to differences between the two countries in the quantity and quality of parents' involvement in children's learning. In terms of quantity, because learning is viewed as less of a moral endeavor in the United States than China with parents being less responsible for it, American parents, particularly those of European descent who may be most likely to adopt mainstream American ideologies, may be less involved in children's learning than are Chinese parents (Chao, 2000; Stevenson et al., 1990). Indeed, there is a fair amount of evidence that parents of European descent spend less time with children on learning-related activities than do parents of Chinese descent (e.g., Chao, 2000; Chen & Stevenson, 1989). For example, laboratory observations indicate that European American mothers devote less attention than do Chinese mothers to working with elementary school children on cognitive tasks (Ng, Pomerantz, & Lam, 2007). Because the extant research has focused exclusively on the years prior to adolescence, it is unclear whether these differences continue as children move into adolescence.

The different cultural ideologies about learning and parents' role in it in the United States and China are also likely to lead to differences in the quality of American and Chinese parents' involvement in children's learning. The American emphasis on the role of autonomy in learning may lead parents, particularly those of European descent, to accompany their involvement with dampened control and heightened autonomy support. For example, American parents may not insist on checking over children's homework, allowing children to decide whether they want parents involved in such a manner. In contrast, given the notion of *guan*, along with the import of learning as a moral endeavor in China, Chinese parents may accompany their involvement in children's learning with heightened control. Chinese parents, for instance, may check children's homework over regardless of children's desires, letting children know that what they want children to do is best for children and should not be questioned. Consistent with such a proposal, American parents are less controlling and more autonomy supportive in general with their children during adolescence than are their Chinese

counterparts (e.g., Barber, Stolz, & Olsen, 2005; Wang, Pomerantz, & Chen, 2007). In the learning context specifically, European (vs. Chinese) American parents tend to use fewer directives and commands in assisting children during the preschool years (Huntsinger et al., 2000).

Although this has been interpreted as reflecting a tendency for American parents to provide less structure in the learning context than do their Chinese counterparts (Huntsinger et al., 2000), it is possible that it reflects American (vs. Chinese) parents' dampened control as manifest in not only less structure but also less *intrusiveness*. Indeed, the differences in the quality of American and Chinese parents' involvement in children's learning may lie in part in the extent to which they accompany it with psychological control—that is, “attempts to intrude on the psychological and emotional development of the child (e.g., thinking processes, self-expression, and attachment to the parent)” (Barber, 1996, p. 3296). Despite the relatively negative connotation of psychological control in the United States, particularly among European Americans, parents' shaming of children is believed to be an aspect of “good parenting” in China (Fung, 1999, 2006). Indeed, during early adolescence, American children report that their parents are less psychologically controlling in general than do Chinese children (e.g., Barber et al., 2005; Wang et al., 2007). However, it is unclear if American and Chinese parents *accompany* their involvement in children's learning differentially with such control—or for that matter with autonomy support (for a discussion on the distinctiveness of psychological control and autonomy support, see Barber, Bean, & Erickson, 2002; Silk, Morris, Kanaya, & Steinberg, 2003).

Implications of Parents' Involvement in Children's Learning in the United States and China

Given the potentially different nature of parents' involvement in children's learning in the United States, particularly among European Americans, and China, a key question is whether the role of such involvement in children's development differs in the two countries. This is of import given that in both the United States and China, parents' control (vs. autonomy support) is predictive of decrements in children's academic and emotional adjustment (for a review, see Pomerantz & Wang, 2009). Models of parents' involvement in children's learning posit that parents' involvement fosters achievement among children by developing their strategies and

skills (e.g., Baker & Stevenson, 1986; Senechal & LeFevre, 2002). It has also been argued to do so by highlighting the value of learning to children, which fosters their engagement (Grolnick & Slowiaczek, 1994; Hill & Taylor, 2004). In addition, the case has been made that parents' involvement has a validating function in that it provides children with support that conveys to children that they are competent and of worth, thereby enhancing their perceptions of competence (Grolnick & Slowiaczek, 1994) as well as emotional functioning (Pomerantz, Moorman, & Litwack, 2007; Pomerantz, Ng, & Wang, 2006). Indeed, there is much evidence that the more involved American parents are in children's learning, the better children's subsequent adjustment along multiple dimensions; it appears that via their involvement, American parents assist children in becoming engaged learners, while also enhancing their emotional functioning (for a review, see Pomerantz et al., 2007).

A critical issue is that of whether Chinese parents' involvement has such consequences given its potential to be accompanied by heightened control and dampened autonomy support compared with that of American parents. This may depend on the dimension of children's adjustment. Chinese parents' involvement in children's learning is likely to foster engagement and achievement among children similarly to that of American parents because these dimensions of adjustment can be developed in the face of control: Even when parents are controlling, they may teach children strategies and skills that are useful; they may also be able to convey through their involvement that learning is valuable. Consistent with this idea, European American and Chinese American parents' involvement—as manifest in their use of formal learning practices (e.g., providing additional learning materials and extending homework one step further)—when children are in preschool is predictive of achievement when children are in elementary school (Huntsinger et al., 2000). Parents may in essence create what deCharms (1968) referred to as “competent pawns”—that is, children who know how to go about doing well in school but are doing so because they feel compelled to do so. Because Chinese (vs. American) parents' involvement is accompanied by heightened control and dampened autonomy support, its validating function may not be as strong. As a consequence, Chinese parents' involvement may not facilitate positive perceptions of competence and emotional functioning among children to the same extent as that of American parents.

Overview

To extend the understanding of parents' involvement in children's learning beyond the United States, which has unique cultural ideologies about learning and parents' role in it, the current research investigated such involvement in the United States and China, with the American participants primarily, albeit not entirely, of European descent. Because parents' involvement may be of much import as children enter adolescence at which time many children's interest in learning declines in both the United States and China (e.g., Wang & Pomerantz, 2009), we focused on children during this stage of development. We began studying children upon their entry into seventh grade in schools situated near major cities in the two countries. Children reported on their parents' involvement in their learning as well as their parents' psychological control and autonomy support four times over the seventh and eighth grades. Because similarities in the effects of American and Chinese parents' involvement may depend on the dimension of children's adjustment, we examined multiple dimensions all of which have been examined among American and Chinese children in prior research (e.g., Stevenson et al., 1990; Wang & Pomerantz, 2009; Wang et al., 2007). We obtained information on children's engagement (i.e., investment in school, time spent on schoolwork outside of school, and use of self-regulated learning strategies) and achievement (i.e., grades). We also assessed children's perceptions of competence as well as their positive (i.e., positive emotions, self-esteem, and life satisfaction) and negative (i.e., negative emotions and anxiety symptoms) emotional functioning.

Our major goals were twofold. Our first was to examine differences in the nature of American and Chinese parents' involvement in children's learning as children enter adolescence. In terms of quantity of parents' involvement, based on prior research with younger children, we anticipated that American parents would be less involved than would Chinese parents. In terms of quality, American parents' involvement was expected to be accompanied less by psychological control and more by autonomy support than that of Chinese parents. Our second goal was to identify similarities and differences in the effects of parents' involvement on children's adjustment in the United States and China. Parents' heightened involvement was anticipated to predict enhanced adjustment along the dimensions of engagement and achievement similarly in both countries. However, the tendency observed in the

United States for parents' involvement to predict enhanced perceptions of competence and emotional functioning was anticipated to be weaker in China given that Chinese parents' involvement may be accompanied by control to a greater extent.

Given that children reported on their parents' involvement multiple times, we were able to treat it as dynamic. This is of import because although there is stability in parenting over time, there is also change (Holden & Miller, 1999). Indeed, in the United States, as children progress through elementary school and into adolescence, parents often decrease their involvement in children's learning (e.g., Vaden-Kiernan & McManus, 2005). This trend may continue as children enter adolescence. We examined two questions in regards to *changes* in parents' involvement. First, does parents' involvement change similarly in the United States and China as children enter early adolescence? On the one hand, it may because both American and Chinese parents may expect children to become more responsible for their learning during the adolescent years; in both countries, the structure of learning activities in middle schools, which children enter during adolescence, may also foster less involvement. On the other hand, American parents may decrease their involvement more than do Chinese parents given that, in the United States (vs. China), learning is seen as less of a moral endeavor for which parents are responsible. Second, what are the effects of such changes on children's adjustment in terms of their engagement and achievement as well as perceptions of competence and emotional functioning in the two countries? When parents decrease their involvement during early adolescence, both American and Chinese children may suffer because this is a time when they are particularly vulnerable to losing interest in school.

Method

Participants

The University of Illinois US-China Adolescence Study started when children entered a new school in seventh grade and concluded at the end of eighth grade in the United States and China (e.g., Pomerantz, Qin, Wang, & Chen, 2009; Qin, Pomerantz, & Wang, 2009). Participants were 374 American children (187 boys and 187 girls; mean age = 12.78 years, $SD = 0.34$ in the fall of seventh grade) and 451 Chinese children (240 boys and 211 girls; mean age = 12.69 years, $SD = 0.46$ in the fall of seventh grade). They were recruited from

average and above-average achieving schools located in working- and middle-class suburbs of major cities in the United States and China. The American children attended one of two public schools consisting of the seventh and eighth grades in the suburbs of Chicago. According to the 2000 U.S. Census, Chicago is a high-density city (12,750 people per square mile) with 30% of the population over the age of 25 having at least a 4-year college degree; the median yearly family gross income is \$61,182 (U.S. Census Bureau, 2007). The two selected suburbs have lower population densities (1,761 and 6,247 people per square mile) and educational attainment (21% and 26% of the population over 25 have at least a 4-year college degree), with median family gross incomes of \$60,057 and \$72,947 (U.S. Census Bureau, 2007). Reflecting the ethnic composition of the areas, participants were primarily European American (88%); the remaining participants were Hispanic American (9%), African American (2%), and Asian American (1%).

The Chinese children attended one of two public schools in the suburbs of Beijing; one school consisted of the 7th to 9th grades and the other of the 7th to 12th grades. Beijing is a high-density city (13,386 people per square mile) with 13% of the population over the age of 6 having at least a 4-year college degree; the annual discretionary (i.e., after-taxes) income per capita is 15,638 Renminbi (RMB; Beijing Municipal Bureau of Statistics, 2005). The two selected suburbs have lower population densities (904 and 11,070 people per square mile) with 9% and 28% of the population over the age of 6 having at least a 4-year college degree (Beijing Municipal Bureau of Statistics, 2005); the annual discretionary incomes per capita are 12,279 and 16,230 RMB (Beijing Chorography Editing Committee, 2005). Over 95% of the residents are of the *Han* ethnicity (Beijing Municipal Bureau of Statistics, 2005), which is slightly above the 92% for the country as a whole (China Population and Development Research Center, 2001). An opt-in consent procedure was used in which parents provided permission for children to participate. Participation rates were 64% in the United States and 59% in China.

Procedure

Data were collected at four time points approximately 6 months apart: fall of seventh grade (Wave 1), spring of seventh grade (Wave 2), fall of eighth grade (Wave 3), and spring of eighth grade (Wave 4). At each wave of data collection, children completed a set of questionnaires during two 45-min

sessions. Trained native research staff read the instructions and items aloud to children in their native language in the classroom. Children received a small gift (e.g., a calculator) as a token of appreciation at the end of each session. The average attrition rate over the entire study was 4% (2% in the United States and 6% in China). Over 80% of the children had data for all the analyses at all four waves of the study, with over 95% having data for all the analyses at two or more waves. Comparison at the first wave of the study of children who had complete data at all four waves and those who did not yielded 3 (out of a possible 10) differences: Children who had complete data were less prone to negative emotional functioning, had better grades, and had less psychologically controlling parents than did children who did not have complete data, $t_s > 2.60$, $p_s < .05$.

Measures

The measures were originally created in English. Standard translation and back-translation procedures (Brislin, 1980) were employed to ensure equivalence between the English and Chinese versions. Measures of the constructs under study used in prior research were comprehensively consulted. Those representing the most refined conceptualizations and operationalizations were chosen to constitute the item pool. Special efforts were made to ensure that the measures were relevant and meaningful in both the United States and China. Thus, in consultation with Chinese investigators, items from measures used in prior research that might be less relevant in China than in the United States were modified or excluded, and new items that were likely to be of particular relevance in China were created. For example, in compiling the measure of parents' involvement, items asking about volunteering at school were excluded, given that opportunities for such volunteering do not exist in China. An item about purchasing extra learning materials for children was added as this is a central manner in which Chinese parents often become involved. In assessing parents' psychological control, guilt induction, love withdrawal, and authority assertion were expected to be particularly relevant in China (Wang et al., 2007). Thus, items from measures used in prior research tapping these three forms were selected and new items elaborating them from perspectives of indigenous Chinese notions such as filial piety (Ho, 1996) were created (e.g., "My parents say, if I really loved them, I would do my best for the sake of the family").

Other issues were also taken into consideration so that the measures would be as equivalent as possible in the two countries. In choosing the items, an effort was made to ensure that characteristics of the American and Chinese school systems did not account for the findings. Thus, for instance, in assessing parents' involvement, instead of simply asking if parents assist with homework, we asked whether parents assist with homework *when* children ask for it, allowing us to rule out that the amount of homework assigned drives differences in American and Chinese parents' involvement. Linguistic factors were also taken into account to ensure that the measures were understandable to children in the two countries. For example, there were a few cases in which literal translation of the items from English to Chinese was awkward or ambiguous. In such cases, new items with similar meanings were created in English to replace the old items and then translated into Chinese (e.g., in assessing self-esteem, "I am happy with myself" was replaced with "I am satisfied with myself"). Prior reports of data from this study examining parents' psychological control and autonomy support as well as the multiple dimensions of children's adjustment in the United States and China provide evidence for the concurrent, discriminant, and predictive validity of these measures (e.g., Qin et al., 2009; Wang & Pomerantz, 2009; Wang et al., 2007).

Parenting

Parents' involvement in children's learning. Ten items used in prior research (Chao, 2000; Kerr & Stattin, 2000; Kohl, Lengua, McMahon, and The Conduct Problems Prevention Research Group, 2000; Stattin & Kerr, 2000) covering a range of parents' involvement practices (e.g., "My parents initiate a conversation with me about how my schoolwork is going" and "My parents try to get to know the teachers at my school") were adapted for use in the current research (see Appendix A). Children indicated (1 = *not at all true*, 5 = *very true*) the extent to which each item was true of their parents. The mean of the items was taken, with higher numbers reflecting greater involvement ($\alpha = .83-.85$ in the United States and $.77-.83$ in China).

Parents' psychological control. Parents' psychological control was assessed with 18 items adopted from prior research (Barber, 1996; Silk et al., 2003) or created for this research (Wang et al., 2007). Children indicated (1 = *not at all true*, 5 = *very true*) the extent to which their parents used psychologically

controlling practices (e.g., "My parents tell me that I should feel guilty when I do not meet their expectations" and "My parents act cold and unfriendly if I do something they do not like"). The mean of the items was taken, with higher numbers reflecting greater psychological control ($\alpha = .92-.95$ in the United States and $.89-.93$ in China).

Parents' autonomy support. Twelve items adopted from prior research were used to measure parents' autonomy support (McPartland & Epstein, 1977; Robbins, 1994; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Children indicated (1 = *not at all true*, 5 = *very true*) the extent to which their parents used autonomy-supportive practices (e.g., "My parents allow me to make choices whenever possible" and "My parents are usually willing to consider things from my point of view"). The mean of the items was taken, with higher numbers reflecting greater autonomy support ($\alpha = .87-.89$ in the United States and $.88-.89$ in China).

Child Adjustment

Achievement. School grades in four core subjects (language arts, math, science, and social studies in the United States; language arts, math, biology, and English in China) were obtained from schools. Grades in the American schools were originally in letters and were converted to numbers (F = 0 to A+ = 12). In the Chinese schools, grades were originally numerical, ranging from 0 to 100 in one school and from 0 to 120 in the other. In both the United States and China, grades were standardized within school to take into account differences in the grading systems of the schools. The mean across the four subjects was taken, with higher numbers reflecting better achievement.

Investment. Children's investment in school was assessed with a modified version of Pomerantz, Saxon, and Oishi's (2000) measure. For each of the four core subjects for which children received grades, children indicated (1 = *not at all important*, 7 = *very important*) how important it was for them to do well (e.g., "How important is it to you to do well in math?") and avoid doing poorly (e.g., "How important is it to you to avoid doing poorly in language arts?"). The eight items were combined, with higher numbers reflecting greater investment ($\alpha = .91-.94$ in the United States and $.88-.91$ in China).

Time on schoolwork. The amount of time children spent on schoolwork outside of school was assessed with a modified version of the scale used by Fuligni, Tseng, and Lam (1999). Children indi-

cated how much time they spent on their schoolwork outside of school on a typical weekday and weekend (1 = *less than 1 hr*, 6 = *more than 5 hr*). Their responses for a typical weekday were weighted by five and combined with those for each day of a typical weekend day weighted by two, with higher numbers reflecting more time spent on schoolwork outside of school ($r_s = .48-.64$ in the United States and $.41-.52$ in China).

Self-regulated learning strategies. The 30-item Dowson and McInerney (2004) Goal Orientation and Learning Strategies Survey was employed to assess children's metacognitive and cognitive strategies in regulating their learning. Three scales assess children's metacognitive strategies: Six items assess monitoring (e.g., "I check to see if I understand the things I am trying to learn"), six assess planning (e.g., "I try to plan out my schoolwork as best as I can"), and six assess regulating (e.g., "If I get confused about something at school, I go back and try to figure it out"). Two scales assess children's cognitive strategies: Six items assess rehearsal (e.g., "When I want to learn things for school, I practice repeating them to myself") and six assess elaboration (e.g., "I try to understand how the things I learn in school fit together with each other"). Children indicated the extent to which each of the 30 statements was true of them (1 = *not at all true*, 5 = *very true*). Given the strong associations between the metacognitive and cognitive strategies ($r_s = .56-.86$ in the United States and $.45-.80$ in China), the scales for the two were combined, with higher numbers representing greater school engagement ($\alpha_s = .96-.97$ in the United States and $.93-.96$ in China).

Perceived competence. Children's perceptions of competence in school were assessed following Wigfield, Eccles, MacIver, Reuman, and Midgley (1991). For each of the four core subjects, children indicated on a 7-point scale the extent to which they perceived themselves as competent (e.g., "How good at math are you?") and their relative competence in comparison to their peers (e.g., "If you were to rank all of the students in your class from the worst to the best in math, where would you put yourself?"). The eight items were combined, with higher numbers reflecting more positive perceptions of competence ($\alpha_s = .85-.90$ in the United States and $.78-.82$ in China).

Positive emotional functioning. Children's positive emotional functioning was assessed with three measures. Positive emotions were assessed with 16 items selected from scales used in prior research (Diener, Smith, & Fujita, 1995; Patrick, Skinner, &

Connell, 1993; Watson, Clark, & Tellegen, 1988), some being modified for use with children. Children indicated how often (1 = *never*, 5 = *very often*) they experienced each emotion (e.g., happy and loving) in the past week. The mean of the 16 items was taken, with higher numbers indicating greater positive emotions. Children's life satisfaction was assessed with the Student's Life Satisfaction Scale (Terry & Huebner, 1995) plus an item from the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). Children indicated how true (1 = *not at all true*, 5 = *very true*) each of eight statements was of them (e.g., "My life is going well"). After reverse scoring the relevant items, the mean of the eight items was taken, with higher numbers indicating greater life satisfaction. Children's self-esteem was assessed with 20 items based on measures used in prior research (Rosenberg, 1965; Tafarodi & Swann, 1995). Children indicated how true (1 = *not at all true*, 5 = *very true*) each statement was of them (e.g., "I feel good about myself"). The mean of the 20 items was taken (after reverse scoring the relevant items), with higher numbers indicating greater self-esteem. The three measures were considerably associated ($r_s = .55-.74$ in the United States and $.39-.55$ in China); thus, as in prior research (e.g., Pomerantz, Wang, & Ng, 2005; Wang et al., 2007), they were combined, with higher numbers reflecting greater positive emotional functioning ($\alpha_s = .95-.97$ in the United States and $.93-.95$ in China).

Negative emotional functioning. Two measures were used to assess children's negative emotional functioning. Negative emotions were assessed with 17 items selected from scales used in prior research (Diener et al., 1995; Patrick et al., 1993; Watson et al., 1988). Children indicated how often (1 = *never*, 5 = *very often*) they experienced each emotion (e.g., depressed, worried) in the past week. The mean of the 17 items was taken, with higher numbers indicating greater negative emotions. Children's anxiety symptoms were assessed with a modified version (Pomerantz & Rudolph, 2003) of the Revised Child Manifest Anxiety Scale (Reynolds & Richmond, 1978). Children rated (1 = *never*, 5 = *very often*) how often they experienced 25 anxiety symptoms (e.g., "I get nervous when things do not go the right way"). The mean was taken with higher numbers indicating greater anxiety. The two measures of children's negative emotional functioning were substantially associated ($r_s = .70-.73$ in the United States and $.66-.70$ in China); thus, they were combined (Wang et al., 2007), with higher numbers representing greater negative emotional

functioning ($\alpha = .95-.96$ in both the United States and China).

Results

We conducted four sets of analyses. In the first, which were preliminary, the aim was to establish the equivalence of the measures between the United States and China over the four waves of the research. In the second set, we examined the quantity of American and Chinese parents' involvement in children's learning during the fall of seventh grade and then over time as they moved through the seventh and eighth grades. The goal of the third set of analyses was to identify whether there are qualitative differences in American and Chinese parents' involvement by looking at the association with parents' control and autonomy support. In the fourth set, we investigated the effects of parents' involvement on children's adjustment over time, focusing on detecting similarities and differences between the United States and China across the multiple dimensions of adjustment.

The majority of the analyses were conducted in the context of structural equation modeling (SEM) using Amos 6.0 (Arbuckle, 2005). Amos employs full Information maximum likelihood estimation in the presence of missing data, which provides less biased analyses than other approaches to handling missing data (Arbuckle, 1996). In evaluating the fit of individual SEM models, three statistics are commonly viewed as informative (McDonald & Ho, 2002): The comparative fit index (CFI) and the Tucker-Lewis index (TLI), with values $> .95$ indicating a good fit and values $< .95$ but $> .90$ indicating an adequate fit; the root mean square error of approximation (RMSEA), with values smaller than $.05$ indicating a good fit and values $> .05$ but $< .08$ indicating an adequate fit.

Measurement Equivalence

A series of two-group confirmatory factor analyses (CFA) using SEM were conducted to examine the factorial and intercept invariance of the measures between the United States and China over the four waves of the study. Factorial and intercept invariance is essential and sufficient in making valid comparisons of the *associations* and the *means*, respectively (Little, 1997; Steenkamp & Baumgartner, 1998). In each set of CFA analyses, an unconstrained model was compared with constrained models (i.e., factorial and intercept invariance mod-

els). The unconstrained model consisted of the same latent construct repeatedly assessed over the four waves yielding a total of four latent constructs, allowed to correlate with one another. Each construct was represented by two to three indicators, based on conceptually identified parcels when possible, but otherwise randomly identified parcels. Errors of the same indicators over time were also allowed to correlate (Keith, 2006; McDonald & Ho, 2002) when suggested by modification indexes from the CFAs conducted on the sample with no missing data. The parameters in the unconstrained models were freely estimated without any across-time or between-country equality constraints. In the more parsimonious constrained models, which were each identical to their corresponding unconstrained models otherwise, the factor loadings and intercepts of the same indicators were forced to be equal across countries and waves.

For all the measures, the unconstrained and constrained models fit the data at least adequately, CFIs $> .95$, TLIs $> .91$, RMSEAs $< .08$. Moreover, using the criteria suggested by Little (1997), none of the unconstrained models fit substantially better than their corresponding more parsimonious constrained models: The decrease in TLI and increase in RMSEA from the unconstrained models to the corresponding constrained models were all $< .05$ (for prior reports of the measurement equivalence of some of the measures, see Wang & Pomerantz, 2009; Wang et al., 2007). The one exception was that the intercept equivalence model for negative emotional functioning did not fit as well as the unconstrained model, $\Delta\text{TLI} = .06$, $\Delta\text{RMSEA} = .06$. Thus, although comparisons between the United States and China can be made for the associations involving negative emotional functioning, they cannot be made for the means.

The Quantity of Parents' Involvement

The quantity of parents' involvement in children's learning as children progress through early adolescence in the United States and China was examined with sets of two-group SEM growth curve analyses. Each model consisted of two latent constructs that were allowed to correlate: one representing the intercept and the other the slope of a growth curve. The factor loadings of the intercept factor on the observed involvement scores at the four waves were fixed to 1, with those of the slope factor fixed to 0, 1, 2, and 3, respectively. By such specification, the intercept indicates parents' involvement in children's learning in the fall of

seventh grade at the first wave of the study, and the slope indicates the linear rate of change in parents' involvement over the seventh and eighth grades across the four waves of the study. In the baseline (unconstrained) model, all the parameters were estimated freely, yielding a model that fit the data at least adequately, CFI = .98, TLI = .95, RMSEA = .06. In the more parsimonious constrained models, the growth parameters (i.e., intercept and slope) for parents' involvement were constrained to be equal between countries one by one. A country difference was determined by a significant chi-square difference ($\Delta\chi^2$) between the baseline model and each of the constrained models.

The model constraining the intercept of parents' involvement to be equal between the United States and China fit worse than the baseline model, $\Delta\chi^2(1, N = 825) = 16.08, p < .001$. As shown in Table 1, consistent with prior research with younger children, at the beginning of seventh grade, American children reported their parents as less involved in their learning than did their Chinese counterparts. This difference continued into the end of eighth grade. Indeed, the model constraining the slope of parents' involvement between the United States and China fit the data as well as the baseline model, $\Delta\chi^2(1, N = 825) = 3.30, ns$, indicating that parents' involvement declined similarly in the two countries (slopes = -0.07 in the United States and China, $ps < .001$).

The Quality of Parents' Involvement

As shown in Table 2, as anticipated, in China, but not the United States, the more parents were involved in children's learning, the more psychologically controlling they were. Independent-correlation comparisons using Fisher's *r*-to-*z* transformations yielded differences between the two countries in the fall of seventh grade, fall of eighth grade, and spring of eighth grade, $zs > 2.70, ps < .001$. Moreover, in both the United States and

China, the more involved parents were, the more autonomy supportive they were, but this association was stronger in the United States than China in the fall of seventh grade, the spring of seventh grade, and the fall of eighth grade, $zs > 2.30, ps < .01$.

The differences in the nature of parents' involvement in children's learning were also evident when comparisons were made within the two countries. As revealed by dependent-correlation comparisons using Fisher's *r*-to-*z* transformations, in the United States, the association between parents' involvement and psychological control was smaller than that between their involvement and autonomy support at all four waves of the study, $zs > 3.65, ps < .001$. In contrast, in China, the association between parents' involvement and psychological control was similar in size to that between parents' involvement and autonomy support at all four waves, $zs < 1, ns$.

Effects of Parents' Involvement on Children's Adjustment

Given such differential associations, a key question was whether the effects of parents' involvement on children's adjustment differ in the United States and China. To examine this issue, a two-group structural model for each dimension of children's adjustment was tested. As shown in Figure 1, the intercept and slope of parents' involvement were used to predict children's adjustment at Wave 4 while adjusting for it at Wave 1. The parent involvement intercept and children's adjustment at Wave 1 were allowed to covary. To identify whether there were differences in the effects of parents' involvement in the United States and China, the baseline (unconstrained) model was compared to more parsimonious models with constraints of equal path coefficients imposed between the two countries on the longitudinal path between the parent involvement

Table 1
Means and Standard Deviations of Parents' Involvement, Psychological Control, and Autonomy Support

Wave	Involvement		Psychological control		Autonomy support	
	United States	China	United States	China	United States	China
Fall, seventh grade	3.61 (0.71)	3.79 (0.62)	2.57 (0.88)	2.77 (0.79)	3.42 (0.77)	3.39 (0.85)
Spring, seventh grade	3.44 (0.80)	3.69 (0.71)	2.51 (0.99)	2.92 (0.84)	3.35 (0.82)	3.32 (0.83)
Fall, eighth grade	3.42 (0.76)	3.67 (0.68)	2.47 (1.00)	2.95 (0.81)	3.38 (0.81)	3.37 (0.76)
Spring, eighth grade	3.37 (0.76)	3.64 (0.68)	2.53 (0.99)	2.92 (0.84)	3.33 (0.80)	3.41 (0.78)

intercept and children's adjustment at Wave 4 (i.e., the longitudinal intercept effect) and the path between the parent involvement slope and children's adjustment at Wave 4 (i.e., the slope effect); each constraint was imposed in a separate model. A significant difference ($\Delta\chi^2$) between the baseline model and each of the more parsimonious models indicates that the corresponding path differed by country.

The baseline models fit the data adequately, CFIs > .97, TLIs > .93, RMSEAs < .06. When the path of the longitudinal parent involvement intercept effect was constrained to be equal between the

United States and China, the parsimonious models fit the data as well as the baseline models for children's investment, time spent on schoolwork outside of school, self-regulated learning strategies, and achievement, $\Delta\chi^2s(1, N = 825) < 1$, indicating equivalence in the effects of parents' involvement on children's engagement and achievement over time in the United States and China. As shown in Table 3, consistent with expectations, both American and Chinese parents' involvement during the fall of seventh grade (Wave 1) predicted enhanced investment, time spent on schoolwork outside of school, self-regulated learning strategies, and achievement at the end of eighth grade (Wave 4). A comparable pattern emerged when the parent involvement slope effect was examined: In the United States and China, $\Delta\chi^2s(1, N = 825) < 2$, *ns*, the more parents maintained their involvement over the seventh and eighth grades, the better children's investment, time spent on schoolwork outside of school, and self-regulated learning strategies, but not necessarily achievement at the end of eighth grade (see Table 3).

As anticipated, parents' involvement in children's learning had more positive effects on children's perceptions of competence and emotional functioning in the United States than in China (see Table 4). American, but not Chinese, parents' involvement in children's learning at the beginning of seventh grade predicted more positive perceptions of competence among children at the end of eighth grade, $\Delta\chi^2(1, N = 825) = 4.16, p < .05$. Moreover, parents' involvement predicted enhanced positive emotional functioning among children

Table 2
Associations Between Parents' Involvement and Psychological Control and Autonomy Support

Wave	Association (<i>r</i>) between involvement and psychological control		Association (<i>r</i>) between involvement and autonomy support	
	United States	China	United States	China
Fall, seventh grade	-.10 _{a1}	.27 _{b1} ***	.48 _{a2} ***	.25 _{b1} ***
Spring, seventh grade	.10 _{a1}	.23 _{a1} ***	.43 _{a2} ***	.28 _{b1} ***
Fall, eighth grade	-.03 _{a1}	.20 _{b1} ***	.42 _{a2} ***	.26 _{b1} ***
Spring, eighth grade	-.05 _{a1}	.15 _{b1} ***	.29 _{a2} ***	.27 _{a1} ***

Note. Correlations in each row with different letter subscripts are different ($p < .05$) between countries; correlations in each row with different number subscripts are different within ($p < .01$) countries.
*** $p < .001$.

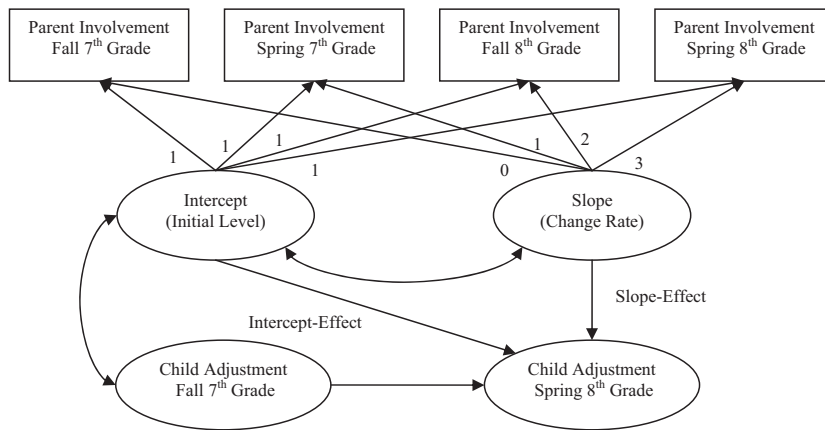


Figure 1. Schematic illustration of the structural equation models predicting children's adjustment from the intercept and slope of parents' involvement, adjusting for children's initial adjustment.

Note. With the exception of time on schoolwork and achievement, which were treated as observed constructs, each latent construct of children's adjustment was based on two to three conceptually determined indicators. For simplicity, these indicators and the error terms are not included.

Table 3
Effects of Parents' Involvement on Children's Engagement and Achievement

Child adjustment	United States			China		
	Std.	Unstd.	SE	Std.	Unstd.	SE
Investment						
Longitudinal intercept effect	0.24*** (0.20***)	0.51 (0.34)	0.10 (0.07)	0.21*** (0.21***)	0.51 (0.34)	0.10 (0.07)
Slope effect	0.27*** (0.18*)	2.55 (1.40)	0.66 (0.57)	0.26*** (0.19*)	2.55 (1.40)	0.66 (0.57)
Time on schoolwork						
Longitudinal intercept effect	0.15** (0.15**)	1.49 (1.07)	0.51 (0.39)	0.08** (0.08**)	1.49 (1.07)	0.51 (0.39)
Slope effect	0.17* (0.19*)	8.39 (8.20)	4.05 (3.72)	0.12* (0.17*)	8.39 (8.20)	4.05 (3.72)
Self-regulated learning strategies						
Longitudinal intercept effect	0.20*** (0.16***)	0.28 (0.18)	0.08 (0.05)	0.18*** (0.18***)	0.28 (0.18)	0.08 (0.05)
Slope effect	0.47*** (0.21**)	2.73 (0.80)	0.54 (0.28)	0.39*** (0.23**)	2.73 (0.80)	0.54 (0.28)
Achievement						
Longitudinal intercept effect	0.08** (0.06**)	0.13 (0.08)	0.04 (0.03)	0.07** (0.06**)	0.13 (0.08)	0.04 (0.03)
Slope effect	0.03 (0.07)	0.23 (0.41)	0.24 (0.24)	0.03 (0.07)	0.23 (0.41)	0.24 (0.24)

Note. Unstd. = unstandardized estimates; Std. = standardized estimates. Because there were no differences in the estimates between the United States and China, the effects (e.g., longitudinal intercept effect) on which the estimates are based were constrained to be equal between the two countries. Estimates in parentheses are adjusted for psychological control and autonomy support.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4
Effects of Parents' Involvement on Children's Perceptions of Competence and Emotional Functioning

Child adjustment	United States			China		
	Std.	Unstd.	SE	Std.	Unstd.	SE
Perceived competence						
Longitudinal intercept effect	0.23 _a ** (0.05)	0.45 (0.08)	0.14 (0.05)	0.05 _b (0.07)	0.11 (0.08)	0.11 (0.05)
Slope effect	0.37 _a ** (0.29 _a *)	3.67 (2.16)	1.65 (0.94)	0.08 _b (0.05 _b)	0.66 (0.26)	0.61 (0.46)
Positive emotional functioning						
Longitudinal intercept effect	0.29 _a *** (0.13***)	0.35 (0.12)	0.08 (0.03)	0.16 _b * (0.16***)	0.15 (0.12)	0.06 (0.03)
Slope effect	0.43 _a *** (0.35 _a **)	2.03 (1.34)	0.49 (0.47)	0.18 _b * (0.06 _b)	0.69 (0.19)	0.28 (0.27)
Negative emotional functioning						
Longitudinal intercept effect	-0.04 (-0.06)	-0.06 (-0.04)	0.05 (0.03)	-0.04 (-0.05)	-0.06 (-0.04)	0.05 (0.03)
Slope effect	0.05 (0.03)	0.35 (0.20)	0.37 (0.24)	0.06 (0.06)	0.35 (0.20)	0.37 (0.24)

Note. Unstd. = unstandardized estimates; Std. = standardized estimates. Standardized estimates in each row with different subscripts are different ($p < .05$) in the United States and China. When estimates differed between the two countries, the effects (e.g., the longitudinal intercept effect) on which they were based were left unconstrained between the two; otherwise, the effects on which the estimates were based were constrained to be equal. Estimates in parentheses are adjusted for psychological control and autonomy support.
* $p < .05$. ** $p < .01$. *** $p < .001$.

2 years later in both countries, but the effect was stronger in the United States than China, $\Delta\chi^2(1, N = 825) = 4.09, p < .05$. The pattern for the effects of the slopes of parents' involvement were similar: The more parents maintained their involvement in children's learning over the seventh and eighth grades, the more positive American, but not Chinese, children's perceptions of competence at the end of eighth grade, $\Delta\chi^2(1, N = 825) = 4.20, p < .05$. Parents' maintenance of their involvement also predicted enhanced subsequent positive emotional

functioning more strongly among children in the United States than China, $\Delta\chi^2(1, N = 825) = 7.38, p < .01$. There was no effect of parents' involvement—either the intercept or slope—on children's negative emotional functioning in the United States or China, $\Delta\chi^2(1, N = 825) < 1.30, ns$.

Parents' psychological control and autonomy support predicted children's adjustment along most of the dimensions we examined (see Appendix B). These effects were similar in the United States and China, $\Delta\chi^2(1, N = 825) < 3.35, ns$, with the

exception of the intercept effect of parents' psychological control on children's positive emotional functioning and the slope effect of parents' psychological control on children's achievement and perceptions of competence; these effects were *weaker* in the United States than China, $\Delta\chi^2_s(1, N = 825) > 4.25, ps < .05$. Given the effects of psychological control and autonomy support on children's adjustment, analyses were conducted to identify whether the effects (or lack of effects) of parents' involvement were due to parents' psychological control and autonomy support. Adding the intercepts and slopes of parents' psychological control and autonomy support to the model depicted in Figure 1 would have created an overly complex model with power limitations. Thus, we used a residual-score approach in which parents' involvement was regressed on their psychological control and autonomy support simultaneously at each wave; this yielded a residual score at each wave for each participant reflecting the unique variance in parents' involvement above and beyond their psychological control and autonomy support. We replaced the indicators of the growth components of parents' involvement with the residual scores of parents' involvement. The positive effects of the longitudinal intercept and slope of parents' involvement on children's investment, time spent on schoolwork outside of school, self-regulated learning, and achievement remained (see estimates in parentheses in Table 3). Moreover, these effects continued to be similar in the United States and China, $\Delta\chi^2_s(1, N = 825) < 3.40, ns$. Thus, parents' involvement predicted these dimensions of children's adjustment over time above and beyond parents' psychological control and autonomy support.

However, there was a substantial reduction of the effects of parents' involvement on children's perceptions of competence and emotional functioning, with the differences between the United States and China substantially reduced (see estimates in parentheses in Table 4). Although the longitudinal intercept effect of parents' involvement on children's perceptions of competence and positive emotional functioning remained evident in the United States, it was considerably reduced so that it no longer differed from that in China, $\Delta\chi^2_s(1, N = 825) < 3, ns$. Adjusting for parents' psychological control and autonomy support led to a reduction in the slope effects of parents' involvement on children's perceptions of competence and positive emotional functioning in both countries; consequently, the effects remained in the United States, but not China, continuing to be stronger in the

United States, $\Delta\chi^2_s(1, N = 825) > 4.50, ps < .05$. Thus, the effects of parents' involvement on children's perceptions of competence and positive emotional functioning were due in part to parents' psychological control and autonomy support, with differences in these effects in the United States and China reflecting to some extent differences in the association of parents' involvement with these dimensions of parenting.

Discussion

The current research extends the understanding of parents' involvement in children's learning beyond the United States to China where cultural ideologies about learning and parents' role in it are different from those in the United States. As anticipated, American (primarily of European descent) parents' involvement was associated less with their control and more with their autonomy support than was Chinese (primarily of *Han* descent) parents' involvement. Despite these different associations, parents' heightened involvement predicted children's enhanced engagement and achievement over time similarly in the two countries. However, it predicted positive perceptions of competence and emotional functioning among children more strongly in the United States (vs. China). This differential pattern was reduced once the associations between parents' involvement and their control and autonomy support were taken into account. Thus, even if it is accompanied by heightened control and dampened autonomy support, parents' involvement appears to facilitate children's engagement and achievement, but not necessarily their perceptions of competence and positive emotional functioning.

The Nature of Parents' Involvement in Children's Learning

Consistent with cultural ideologies about learning and parents' role in it in the United States and China, as well as prior research on the years before adolescence (e.g., Chen & Stevenson, 1989; Ng et al., 2007), American parents were less involved than were Chinese parents in their children's learning across the seventh and eighth grades—according to children's reports. Despite these differences in the quantity of American and Chinese parents' involvement, there were not differences in how their involvement changed as children progressed through the seventh and eighth grades. In both the

United States and China, parents' involvement declined over the seventh and eighth grades. This may reflect a tendency for both American and Chinese parents to expect children to become more responsible for their learning during the adolescent years; there may also be changes in the structure of learning activities in the two countries that lead parents to be less involved. However, it is also possible that the decline is in response to different changes in the United States and China. For example, American parents may decrease their involvement because children push them away as they desire more independence, but Chinese parents may do so because children, consistent with parents' expectations, are becoming more responsible for their learning. Indeed, Chinese children remain more engaged (e.g., spend more time on their schoolwork outside of school and use more self-regulated learning strategies) in school than do their American counterparts during early adolescence (Wang & Pomerantz, 2009).

The nature of American and Chinese parents' involvement in children's learning also differed in terms of the quality. According to children's reports, American parents' heightened involvement was not necessarily associated with heightened psychological control, but it was associated with heightened autonomy support. In contrast, the more involved Chinese parents were, the more psychologically controlling they were, suggesting that their involvement is characterized not only by heightened structure (Huntsinger et al., 2000) but also by heightened intrusiveness. Notably, Chinese parents' heightened involvement was also accompanied by heightened autonomy support, but to a lesser extent than that of American parents. Taken as a whole, the quantitative and qualitative differences in parents' involvement in children's learning are in line with differences in American and Chinese ideologies about learning and parents' role in it (Chao, 1994; Li, 2005; Tweed & Lehman, 2002). However, because we did not assess such ideologies, it is possible that other factors are at play—for example, the fact that Chinese children take an exam in ninth grade that determines whether and where they will go to high school may lead Chinese parents to accompany their involvement with heightened psychological control and dampened autonomy support compared to their American counterparts. The current rapid economic development in China may also drive the pattern observed (for a discussion of the role of economic development in children's development, see Greenfield, 2009).

The positive association between parents' involvement and their autonomy support in China was surprising given Chinese ideologies about learning and parents' role in it; although smaller than the association in the United States, it was similar in size to the positive association between parents' involvement and control in China. It may be that given the moral nature of learning and the central role of parents in fostering it in China, parents use multiple approaches to optimize their children's learning. In fact, Chinese parents may use a combination of psychological control and autonomy support in an attempt to ensure that children act responsibly on their own to meet parents' expectations. For example, parents may be controlling in terms of communicating their expectations to children (e.g., using love withdrawal when children fail to meet their expectations), but autonomy supportive in letting children make decisions about how to meet these expectations.

The Implications of Parents' Involvement in Children's Learning

Despite the differences in the nature of American and Chinese parents' involvement in children's learning, the more involved both American and Chinese parents were at the beginning of seventh grade when children had just made the transition to a new school, the better children's engagement (i.e., investment, time spent on schoolwork outside of school, and use of self-regulated learning strategies) and achievement (i.e., grades) at the end of eighth grade. Moreover, when parents were able to maintain their involvement over the seventh and eighth grades, children's engagement, but not necessarily achievement, benefited over time. Even when parents' control and autonomy support, which were linked to children's motivation and achievement fairly similarly in the United States and China (d'Ailly, 2003; Grolnick & Ryan, 1989; Wang et al., 2007), was taken into account, these effects remained similar in the two countries. Thus, the effects of parents' involvement on children's engagement and achievement may operate largely independent of their control and autonomy support. However, parents whose involvement is accompanied by heightened control may create what deCharms (1968) referred to as "competent pawns"—that is, children who know how to go about doing well in school, but are doing so because they feel compelled to do so by their parents.

Indeed, the quality of parents' involvement in children's learning was of import in facilitating children's perceptions of competence and positive emotional functioning. American parents' heightened involvement at the beginning of seventh grade as well as their maintenance of their involvement over the seventh and eighth grades predicted these two dimensions of children's adjustment at the end of eighth grade to a greater extent than that of Chinese parents' involvement. This difference in the effects of American and Chinese parents' involvement was due in part to differences in the nature of parents' involvement as reflected in the extent to which it was accompanied by parents' control and autonomy support. The heightened autonomy support accompanying American parents' involvement likely boosts the validating function of their involvement; conversely, the heightened control (and dampened autonomy compared to the United States) associated with Chinese parents' involvement likely detracts from such a function. Surprisingly, in both the United States and China, parents' involvement was not associated with children's negative emotional functioning. Although it is unclear precisely why parents' involvement would play a role in children's positive, but not negative, emotional functioning, research conducted in the United States focusing on the quality of parents' involvement has generally found a similar pattern (Pomerantz et al., 2005, 2006).

The pattern of adjustment among children that ensues from parents' involvement in each country is in line with not only the cultural ideologies about learning of each but also the cultural socialization goals. In the United States, the tendency for parents' involvement to foreshadow enhanced engagement and achievement along with perceptions of competence and positive emotional functioning is consistent with the American idea that the key to promoting learning is enjoyment (Chao, 1996); it is also consistent with the import placed on developing the "whole child" and enhancing children's self-esteem (Chao, 1996; Miller, Wiley, Fung, & Liang, 1997). The tendency in China for parents' involvement to foreshadow enhanced engagement and performance but not necessarily perceptions of competence and positive emotional functioning is in line with the emphasis in Confucian philosophy on continual persistence toward self-improvement (Li, 2002, 2005); such persistence may be undermined if children feel too satisfied with themselves. Moreover, social harmony, which is of particular significance in interdependence-oriented cultures such as China (Markus & Kitayama, 1991), may

also be impaired if children appear too confident as they may not, for example, show deference to teachers and parents. Even in the United States, although positive perceptions of competence appear to enhance children's adjustment (e.g., Guay, Marsh, & Boivin, 2003; Roeser, Eccles, & Sameroff, 1998), there is also evidence that perceptions that overestimate competence can create problems over the long term (e.g., Robins & Beers, 2001).

Limitations and Future Directions

The samples used in the current research do not represent the diversity of the United States and China given that the majority (88%) of the American sample was of European descent and the Chinese sample came from areas that were almost entirely (95%) of *Han* descent. Thus, questions remain concerning variations within each country in parents' involvement in children's learning. First, the current research was guided by the assumption that American cultural ideologies about learning and parents' role in it shape parents' involvement given that American values are widely promoted through public representations (Sperber, 1996) such as those found on television and in schools (Heyman, Fu, & Lee, 2008). However, there is also evidence that within the United States cultural heritage plays a role in how parents become involved in children's learning, with some evidence that it shapes the effects of parents' involvement on children (e.g., Hill & Craft, 2003; Lareau, 1987). For example, Hill et al. (2004) find that African American parents' involvement is more predictive of children's academic aspirations during adolescence than is that of European American parents.

Second, we did not examine the role of socioeconomic status or parents' educational attainment. In prior research conducted in the United States, although these factors do not account for the effects of parents' involvement, they do appear to shape its nature as well as effects (e.g., Englund, Luckner, Whaley, & Egeland, 2004; Hill et al., 2004). Studying low-income American families, Dearing, Kreider, Simpkins, and Weiss (2006) found, for instance, that the lower parents' educational attainment, the more predictive their involvement was of children's achievement. Third, given that urban areas, such as Beijing, in China have been increasingly exposed to Western values in the past few decades, it is unclear to what extent the findings are generalizable to less urban, often poorer, areas

in which the majority of the Chinese population reside. Future research examining children and parents from a variety of cultural and geographical as well as socioeconomic and educational backgrounds in both the United States and China would be fruitful in understanding between- and within-culture variations in the nature of parents' involvement and its effects.

The current research is also characterized by limitations in the assessment of parenting. First, following much prior research (e.g., Barber et al., 2005; Grolnick & Slowiaczek, 1994; Steinberg et al., 1992), we relied on children's reports of parenting. We did so because children may be less biased than parents in reporting socially undesirable parenting (e.g., Gonzales, Cauce, & Mason, 1996) such as psychological control. Moreover, children's reports of parenting are substantially consistent with observers' reports (e.g., Sessa, Avenevoli, Steinberg, & Morris, 2001), indicating that children are able to report accurately. However, with the exception of their achievement, children also reported on the other dimensions of adjustment we assessed. Thus, it might be argued that the associations we documented simply reflect a reporter bias on the part of children. We addressed this issue to a large extent by taking children's earlier adjustment, as well as other aspects of parenting, into account in our analyses. However, future research employing observations will be important in providing further understanding of the controlling and autonomy-supportive nature of parents' involvement in the academic arena in the two countries.

Second, fathers' and mothers' involvement in children's learning was not distinguished. Ho (1987) argues that the stereotypical belief in the differential roles of parents as "strict father, kind mother" is evident in Chinese families such that fathers usually take on a more disciplinarian role whereas mothers are more affectionate. Although recent developments in China (e.g., the Chinese "open-door policy" permitting cultural influences from the West) may have weakened the traditional role differentiation between mothers and fathers, future research distinguishing the effects of fathers' and mothers' involvement in the United States, where fathers' role remains understudied (for exceptions, Goldman, 2005; McBride, Schoppe-Sullivan, & Ho, 2005), as well as China is of import.

Conclusions

Despite these limitations, the current research makes significant inroads to understanding par-

ents' involvement in children's learning in the United States as well as China. The findings indicate that the nature of parents' involvement differs in the two countries in terms of not only the quantity but also the quality—that is, the extent to which it is accompanied by control and autonomy support. Moreover, although differences in the quality of parents' involvement do not appear to matter for children's engagement and achievement, they do appear to matter for their perceptions of competence and positive emotional functioning. As such, the research suggests that one reason that American children may be less engaged in school, often achieving less, than their Chinese counterparts, while at the same time more positive in their perceptions of competence and emotional functioning (for a review, see Pomerantz et al., 2008), may be due in part to the quantity and quality of their parents' involvement. Beyond issues of culture, the findings enhance the understanding of how parents' involvement fosters children's adjustment, suggesting that its effects on children's engagement and achievement are unique in that they are evident over and above the effects of parents' control and autonomy support.

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Appendix A

Parents' Involvement in Children's Learning

1. My parents try to get to know the teachers at my school
2. My parents know how I am doing in school
3. My parents talk to me about things related to what I am studying in school
4. My parents ask me to tell them what happens in school
5. My parents help me with my homework when I ask
6. My parents go to parent-teacher conferences
7. My parents spend time with me on things related to my schoolwork
8. My parents check my homework when I ask
9. My parents purchase extra workbooks or outside materials related to school for me
10. My parents initiate a conversation with me about how my schoolwork is going

Appendix B

Standardized effects of Parents' Psychological Control and Autonomy Support on Children's Adjustment

Child adjustment	Psychological control		Autonomy support	
	United States	China	United States	China
Investment				
Longitudinal intercept effect	-.12**	-.11**	.17***	.23***
Slope effect	-.02	-.02	.25***	.36***
Time on schoolwork				
Longitudinal intercept effect	-.00	-.00	.00	.00
Slope effect	-.06	-.03	-.13	-.07
Self-regulated learning strategies				
Longitudinal intercept effect	-.04	-.04	.22***	.27***
Slope effect	.15**	.14**	.40***	.44***
Achievement				
Longitudinal intercept effect	-.01	-.01	.05*	.05*
Slope effect	-.04 _a	-.16 _b ***	-.00	-.00
Perceived competence				
Longitudinal intercept effect	-.06	-.07	.14***	.18***
Slope effect	.00 _a	-.20 _b **	.19***	.24***
Positive emotional functioning				
Longitudinal intercept effect	-.13 _a *	-.34 _b ***	.33***	.42***
Slope effect	-.24***	-.30***	.42***	.54***
Negative emotional functioning				
Longitudinal intercept effect	.10*	.09*	-.08*	-.09*
Slope effect	.34***	.31***	-.12	-.10

Note. Estimates in each row with different subscripts are different ($p < .05$) in the United States and China. When estimates differed between the two countries, the effects (e.g., the longitudinal intercept effect) on which they were based were left unconstrained between the two; otherwise, the effects on which the estimates were based were constrained to be equal.

* $p < .05$. ** $p < .01$. *** $p < .001$.

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