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Work ethic, motivation, and parental influences in Chinese and North American children learning to play the piano

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Abstract

This study compared 50 Chinese and 100 North American Caucasian children aged 6 to 17 who were learning piano, in terms of their work ethic, motivation, and parental influences. Compared to North American Caucasians, Chinese children and parents believed more strongly that musical ability requires hard work, and Chinese children were more interested in working hard at piano practice, and practiced nearly twice as much. We also found differences in autonomous motivation, as defined by Self-Determination Theory: compared to Caucasians, Chinese children identified more with playing the piano, found it more intrinsically enjoyable, and pressured themselves less by shame or guilt, though they were more motivated by a desire to please their teachers and parents. Furthermore, Chinese parents more frequently sat in on their child's piano lessons. These findings suggest several reasons that may contribute to the success of Chinese musicians.

Keywords

Chinese, cross-cultural differences, motivation, music instrumental pedagogy, parent–child relations, piano pedagogy, self-determination theory, work ethic

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Cultural differences have been investigated in many educational contexts, but rarely with young music students. In the music domain, the difference between Asians and non-Asians is particularly of interest, because of the remarkable achievements that Asians have manifested in recent decades. Asian musicians are very successful in international competitions, are performing with world-class orchestras, and are appearing in prestigious concert halls in record numbers (Yang, 2009). In recent years, the Central Conservatory of Music in Beijing has become part of 'China's huge export machine churning out musical virtuosos' (Kahn & Waking, 2007). Asians have been identified as 'model students' (Wong, 1980), universities and conservatories are doing everything they can to recruit music students from Asia (Brand, 2001) and Asians and Asian Americans have outnumbered Caucasian students in many well-known conservatories (Yang, 2009).

This paper examines some possible explanations for the striking success of Chinese in the realm of music, focusing on children who are taking piano lessons in the context of learning to play western classical music. Specifically, we compare two groups – Chinese living in China, and North American Caucasians – in terms of potential differences in the child's and parent's work ethic, the child's motivation, and parental involvement in the child's music education.

Work ethic

Little research has been conducted on cultural differences in work ethic among children learning to play the piano. However, there is a considerable body of literature in the domain of academic learning, and there is a small amount of data on teachers in the music education domain, and these findings can guide us in developing hypotheses for the present study. Stevenson and Stigler (1992) argued that Asian students adhere to an effort model of learning, while American students adhere to an ability model of learning. The research evidence supports this distinction. Through various investigations, Li (2002a, 2002b, 2004) demonstrated that the Chinese view learning as a moral process of self-perfection which stresses 'seeking knowledge and cultivating a passion for lifelong learning, fostering diligence, enduring hardship, persistence, concentration, "studying hard" regardless of obstacles, and feeling "shame-guilt" for lack of desire to learn' (Li, 2002a, p. 248). For example, Li (2002b) invited American and Chinese adults to identify words and phrases that they associated with learning; words like effort, hard work and persistence were largely absent from the American list, while they were abundant in the Chinese list. Other studies have produced similar results. Hau and Salili (1991) found that Chinese students perceived effort and interest in studying as internal, controllable and stable causes of academic performance. Stevenson and Lee (1990) found that Chinese and Japanese mothers explained their children's academic success by stressing the importance of hard work while American mothers gave greater importance to innate ability. Hess, Chih-Mei, and McDevitt (1987) found that mothers in China believed that a lack of effort was the major cause of low performance in mathematics, while Caucasian-American mothers did not emphasize this element. Chen (2001) found that Chinese parents believed their children could excel at science if they worked hard enough, whereas American parents simply had lower expectations regarding their children's science performance. Interviews conducted by Hess and his colleagues (1987) showed that when their child was successful, 66% of Chinese mothers would raise the bar by setting higher standards, while 24% of Chinese Americans and only 6% of Americans would have a similar response.

A handful of studies on cultural differences in work ethic exist specifically in the music education domain. Wong (1999) studied the beliefs and practices of elementary music teachers in Vancouver and Hong Kong by conducting in-depth interviews and classroom observation. Results indicated that music teachers from both groups pursued similar goals, but had different views on how to implement these goals: Vancouver teachers emphasized enjoyment, while Hong Kong

teachers emphasized skills training, discipline and concentration. Power (1990) investigated parent and teacher attitudes toward children's piano learning in the United States and Japan. While the study showed that Japanese students had higher levels of achievement than the American students, the American mothers were more satisfied with their children's piano learning than were the Japanese mothers; the author suggested that the lower satisfaction of the Japanese mothers may in fact account for their children's higher achievement, as it may lead the mothers to keep asking the child to work harder. And Schneider and Lee (1990) conducted interviews with children in grades six and seven and found that East Asian American children practiced their instrument on average 5.4 hours per week, whereas Anglo-American children practiced only 3.5 hours per week.

The above studies lead us to predict that, relative to the North American Caucasians in our study, the Chinese would evidence a stronger work ethic. We planned to assess the children's work ethic in a number of ways: with two attitude questions, one assessing the degree to which the child believes that their success at the piano is a matter of hard work rather than innate ability, and one assessing the degree to which the child believes that they need to work harder than others to succeed at the piano (we also planned to assess parents' attitudes regarding their child's success at the piano with two questions that paralleled the questions given to the children); using a multi-item scale inquiring about the child's interest in working hard at piano practice (e.g. repeating a bar that needs practice, practicing scales, playing with a metronome); and by asking their parents how much the child practices each week.

Motivation

Self-Determination Theory. Self-Determination Theory (SDT) proposes that it is important to study not only a person's degree of motivation, but also their type of motivation, i.e. how autonomous versus controlled the motivation is. The autonomous kinds of motivation are self-authored, governed by values, goals, interest and enjoyment – the source of motivation is within the person. Autonomous forms of motivation have been associated with a variety of positive outcomes, including greater persistence (Ryan & La Guardia, 2000; Vallerand & Bissonnette, 1992), higher quality of engagement (Ryan & Deci, 2000a; Connell & Wellborn, 1990), willingness to work harder to improve skills (Wigfield, Guthrie, Tonks, & Perencevich, 2004), better learning outcomes (Ryan & Deci, 2009), and better performance (Ryan & La Guardia, 2000; Miserandino, 1996). Autonomous motivation also produces more positive self-perceptions and greater well-being (Ryan & Deci, 2009). Autonomous motivation includes *identification/integration* (being motivated for an activity because you truly believe in it, it fits with your values and goals, and you have embraced it as a part of your identity), and *intrinsic motivation* (being motivated for an activity out of pure interest and enjoyment, and because you see it as an end in itself rather than a means to some other end).

Controlled kinds of motivation are governed by influences that are to some degree external to the self. Research shows that the more students feel controlled, the less they show interest and effort (Ryan & Deci, 2000b) or well-being (Ryan & Deci, 2009). Controlled motivation includes *external regulation* (being motivated for an activity because someone *else* wants you to do it or because someone else will give you something for doing it), and *introjection* (being motivated for an activity because of pressures you put on yourself such as guilt, anxiety, or believing you 'ought' to do it, or because your self-esteem depends on it). The absence of any source of motivation is referred to as *amotivation*. Below we outline the predictions we had regarding three of these forms of motivation – identification, external regulation, and introjection (our approach to studying the other forms of motivation was exploratory). To date, the types of motivation proposed by Self-Determination Theory have not been studied cross-culturally in the music domain.

Identification. At a time when North America and Europe are witnessing a decline of interest for Western classical music, Chinese enthusiasm is growing. *The New Yorker* (Ross, 2008) reports that 'for the last fifteen or twenty years, classical music has been very à la mode in China … classical music is exploding.' According to the *New York Times* (Kahn & Waking, 2007), 'European classical music has a charge of pop-culture frisson in China' as young people fill concert halls and conservatories are bulging – nearly 200,000 students try auditions for top conservatories every year. The *BBC News* (Trelawny, 2008) reported that 'an outbreak of piano fever has struck China' and an estimated 30 million individuals are taking piano lessons.

Successful musicians are highly regarded in the People's Republic of China. The *Times* (Kluger, 2008) reported that pianist Lang Lang, for example, has 'become China's Elvis –only bigger'. He is treated much the same way in China as pop stars are treated in North America (e.g. Yan Cui, 2010; Ming Zhao, 2011). He was even featured at the opening ceremonies of the Summer Olympic Games in Beijing. A Chinese business newspaper (Ming Yao, 2011) reports that parents refer to Lang Lang as a role model to motivate their children to play an instrument. In our study, therefore, we expected the Chinese children to have higher identified motivation for playing the piano than would the Caucasian children – that is, we expected the Chinese children to see piano playing as a part of who they are and who they will become.

External regulation. Another form of motivation for which we had a prediction was external regulation – we expected Chinese children to score higher on this variable than would Caucasian children. Compared to North Americans, Asians place greater emphasis on filial obligation (Wang, 2003), interdependence (Markus & Kitayama, 1991; Menon & Morris, 2001), and collectivism (Wang & Ollendick, 2001). Wang and Ollendick (2001) conducted a cross-cultural study on the development of self-esteem and explained that, in Chinese culture, the concept of the individual self is 'socially situated, defined and shaped in a relational context' (p. 260), and that behavior is seen as reflecting culturally directed norms (p. 261). Markus and Kitayama (1991) explain how many Asian cultures 'insist on the fundamental relatedness of individuals to each other. The emphasis is on attending to others, fitting in, and harmonious interdependence with them' (p. 224).

In fact, there appears to be a close relationship between the Asian emphasis on work ethic and the emphasis on social obligation. Salili (1996) reviewed the empirical literature and concluded that Asians view education as a filial duty – achievements are for the benefit of the entire family, and children are socialized to see education as a duty towards their parents. Similarly, Stevenson, Smith and Mao (1985) reported that academic success can be a source of pride for the whole family, while academic failure would be understood as letting one's family down. Wang's (2003) cross-cultural comparison of the parenting styles of Asian-Americans and European-Americans suggested that Asian parenting is largely family-based, motivated by the welfare of the family rather than the individual's needs; thus, Asian parents emphasize school success in the context of filial obligation, while European-American parents emphasize self-esteem, and do so in the context of self-expression. Holloway (1988) similarly showed that Chinese and Japanese parents value putting effort into learning because achievement is for the sake of one's family, peers, and community.

While we expected Chinese children to exhibit higher external regulation, it is worth noting that this would not automatically translate into lower autonomy on other forms of motivation proposed by Self-Determination Theory. As discussed by Zhou, Ma and Deci (2009), the theory's perspective on autonomy does not mean that an individual has to act independently from others or from environmental influences and that 'it is the degree of subjective endorsement and ownership of the norms that determines whether the conformity constitutes authenticity and self-determination versus alienation and coercion' (p. 493). In other words, autonomous motivation can still play a major role in cultures that are collectivistic. Ryan and Deci (2009) explain that 'having more

fully internalized either collectivism or individualism, and thus being more autonomous, yielded positive well-being outcomes, whereas having merely introjected either collectivism or individualism resulted in more negative outcomes' (p. 190). Such results have been found with children in rural China (Zhou, Ma, & Deci, 2009), with young Chinese adults (Vansteenkiste, Zhou, Lens, & Soenens, 2005), with fifth-grade Japanese students (Yamauchi and Tanaka, 1998), with South Korean college students (Chirkov, Ryan, Kim, & Kaplan, 2003) and with high school South Korean students (Jang, Reeve, Ryan, & Kim, 2009).

Introjection. Finally, of the different types of motivation, we also had a prediction regarding introjection. Ho (1981) has shown that parents rarely praise their children in Asian culture, whereas punishment – in the form of shaming the child – is quite frequent. And Li (2002a), as reported above, characterized the Asian model of learning as one that prescribes feelings of shame and guilt if the individual should be unwilling to learn. We therefore expected the children in the Chinese sample of our study to report higher levels of introjected motivation than would the Caucasian children.

Parental involvement

Finally, we wished to examine several parental behaviors that may influence the success of Chinese musicians: the frequency with which the parent sat in on their child's lessons, and the frequency with which the parent helped the child with home piano practice.

In the academic domain, there is evidence that Asian parents generally take greater personal responsibility for their child's education. When studying parents' attitudes toward the cause of children's low performance in mathematics, Hess, Chih-Mei, and McDevitt (1987) found that Chinese and Chinese-Americans mothers put more emphasis on lack of training at home than lack of training at school, while for Caucasian mothers, the emphasis was reversed. When investigating the home environment of East Asian American students and Anglo-American students, Schneider and Lee (1990) found that 22 out of 37 East Asian parents reported having spent time teaching their pre-school child to read, write and do arithmetic while only 4 out to 24 Anglo-American parents had invested in similar activities. East Asian parents continued to feel a strong sense of responsibility as their children started school, often reporting that teachers did not give enough homework in the primary grades and thus they compensate by giving extra homework problems from workbooks purchased outside of school. Consequently, 80% of East Asian parents, compared to 13% of Anglo-American parents, reported that their children studied at home for at least an hour a day in the primary grades. Stevenson and Lee (1990) conducted a large investigation with first and fifth graders in Taiwan, Japan and the United States. Interviews with the children and their mothers revealed that the everyday lives of East Asian children were much more focused on academic achievement than were the lives of American children. In fact, the Chinese and Japanese mothers viewed academic achievement as their child's most important pursuit.

Studies have also shown that Asian parents are more involved in their child's education in concrete ways. Chen (2001) compared American, Chinese American, and Chinese parents in terms of how much they supported their child's science education, and found that Chinese parents spent more time helping their child learn science at home, checked their child's homework more frequently, and bought more books or equipment on science for their child. The study by Stevenson and Lee (1990) comparing East Asian American and Anglo-American sixth and seventh grade students found that 47% of East Asian American parents, compared to 7% for Anglo-American parents, were carefully structuring their children's time so that, even out of school, they would focus on academic-related skills through private lessons in music, computer science, martial arts or

languages. In a comparative investigation of American minorities, Peng and Wright (1994) found that, compared to all other American minority groups, Asian American parents provided more learning opportunities, via additional exposure to art, music, dance lessons, and visits to libraries and museums.

Based on these findings, we predicted that the Chinese parents in our study would more frequently help their child with piano practice and sit in on the child's lessons. Recent work by Comeau, Huta, Liu, and Smith (2012) suggests that such high involvement of parents in their children's music education is associated with the child's musical success. Studying a North American sample, it was found that the frequency with which a parent sits in on their child's piano lessons was positively associated with the child's interest in creativity and performance at the piano, the child's sense of competence at the piano, and the amount of time the child practices; and the frequency with which the parent helps the child with home piano practice was associated with the child's interest in being creative at the piano, the child's degree of piano practice, and the child's results on a piano exam.

Summary of hypotheses

Below we summarize the general patterns we expected to find across the outcomes in this study:

Work ethic:

1. Chinese students and parents will show a stronger work ethic

Motivation:

2. Chinese students will show higher identification
3. Chinese students will show higher external regulation
4. Chinese students will show higher introjection

Parental influences:

5. Chinese parents will spend more time sitting in on their child's lessons and helping the child with home piano practice

Method

Participants

Participants were 150 children who met the following criteria: they were aged 6 to 17, were currently taking piano lessons, and had at least one year of piano learning experience. Participants were recruited by approaching their music teachers. Of the participants, 50 were Chinese living in the People's Republic of China (students of seven piano teachers from Henan University, Kaifeng); and 100 were Caucasian living in North America (the majority were from Ontario, with some from Quebec and various east coast American states, and they came from different piano teachers). More detail regarding the North American sample appears in Comeau and colleagues (2012), where the North American students were initially studied.

Table 1 provides basic descriptive statistics regarding both cultural groups studied here, along with t tests and chi-squared tests to indicate whether there were any significant group differences.

Table 1. Basic Descriptive Statistics.

Child Characteristic	Chinese	North American Caucasian	T test or χ^2 test
Mean Current Age	10.44	10.78	t = .83, p = .408
Mean Age of Starting Piano Lessons	6.18	5.95	t = .77, p = .443
Mean Years of Piano Lessons to Date	4.13	4.83	t = 1.86, p = .065
Percent Female	70%	57%	χ^2 = 2.44, p = .118
Has Ever Taken a Piano Exam	42%	47%	χ^2 = .84, p = .659
Has Ever Taken a Group Lesson	0%	28%	No statistic applicable

The most important conclusion from Table 1 is that there were few differences between the groups on the descriptive variables, except for the fact that some North American children had received group lessons whereas the Chinese children had all been taught individually. Across the groups, there was consistency in the gender distribution (around 60–70% female), current age (around 10–11 years old), age of starting lessons (around age 6), years of piano lessons to date (around 4–5 years), and percentage ever having taken a piano exam (around 40–50%). The similarity across groups in terms of such basic characteristics was not only informative but also reassuring, since it indicated that these characteristics were not likely to confound the analyses we planned to run on work ethic, motivation, and parental involvement.

Procedure

To obtain data for this research, we used the Survey of Musical Interests (SMI) developed by the Piano Pedagogy Research Laboratory at the University of Ottawa (Desrochers, Comeau, Jardaneh, & Green-Demers, 2006), which is discussed in detail by Comeau and colleagues (2012). This self-report questionnaire has two components – one completed by the child and the other completed by one of the child's parents.

North American participants were tested with the original English version of the questionnaire. For Chinese participants, the instrument underwent translation and back-translation (Brislin, 1970). First, the questionnaire was translated into Chinese by one of the investigators in this study who was a doctoral student in piano pedagogy; then a Chinese-speaking psychology professor reviewed the translation and made a revised version; then a language professor teaching Chinese performed the back-translation into English; finally, the back-translated English version was approved by one of the creators of the original questionnaire, confirming that it contained the same concepts as the original.

North American participants were assessed by a trained assistant from the Piano Pedagogy Research Laboratory, either individually (the younger ones) or in small groups (the older ones). The participants in China were assessed individually by a Chinese Master's student from the Piano Pedagogy Research Laboratory. In order to obtain the most authentic responses from children, their parents were not present while the children completed the questionnaire; instead, the parents filled out the parent portion of the questionnaire in another room. At the beginning of each child's assessment, the trained assistant provided both written and verbal instructions about the items on the questionnaire. The children were encouraged to raise any questions, concerns or difficulties they had at any time during the interview. With the younger children, the assistants explained items one by one and let the participants answer before moving to the next item. The children were assured that neither their parents nor their piano teachers would have access to their completed

questionnaires. All participants were informed that there were no right or wrong answers; they were asked to simply to express their own views by circling the appropriate numbers.

Outcome measures

Work ethic. Here we asked children several questions related to a work ethic. We assessed the child's attitude by asking 'In my opinion musical ability is _____', where the response options were 'something I'm born with' (coded as 1), 'something I can develop by working on it' (coded as 3), or 'both of the above' (coded as 2). The second question assessing attitude was 'To succeed in music I need _____', where the response options were 'to work harder and practice more than most students' (coded 3), 'to work and practice about the same as most students' (coded 2), or 'to work less and practice less than most students' (coded 1). We used these coding schemes so that higher scores would reflect a stronger work ethic. On the parental component of the questionnaire, we asked two parallel questions: 'In your opinion musical ability is _____', where the response options were 'Something we are born with', 'Something we can develop by working on it', and 'Both of the above'; and 'In your opinion to succeed in music, your child needs _____', where the response options were the same as above.

We assessed the child's interest in working hard at practicing the piano by using a scale developed by Comeau and colleagues (2012). The 8-item scale inquires about the child's degree of interest in the following activities: 'working on a hard piece of music', 'repeating a certain bar that needs practicing', 'practicing a piece I already know', 'practicing a piece slowly', 'practicing scales', 'playing with a metronome', 'counting out loud when I play', and 'sight reading'. The items are rated from 1 (not interesting at all) to 7 (very interesting); the alpha is .80.

We also assessed the child's degree of piano practice by asking their parent two questions: 'On average, how many days a week does your child practice the piano?' and 'On average, how long are her/his practice sessions?'. To obtain the total minutes of practice per week, we multiplied the answers to these two questions after converting the second answer to minutes.

Motivation – Piano Autonomous Motivation Scale (PAMS). As detailed by Comeau and colleagues (2012), the PAMS is based on Self-Determination Theory (Ryan & Deci, 2000b) and measures the child's self-reported motivation for learning to play the piano. There are five subscales: *intrinsic motivation* (5 items, alpha .77 – note that alpha, which can range from 0 to 1, reflects the degree to which the items on a scale all represent the same concept, and is the most widely used measure of scale quality), e.g. 'because I enjoy learning new things about music'; *identification/integration* (3 items, alpha .82), e.g. 'because I see myself as a musician'; *introjection* (2 items, alpha .63), e.g. 'because I would be ashamed if I stopped playing'; *external regulation* (4 items, alpha .65), e.g. 'because my parents would be disappointed if I stopped playing'; and *amotivation* (6 items, alpha .81), e.g. 'but I don't see the point of learning to play the piano'. The items are rated from 1 (not at all like me) to 7 (perfectly like me).

Parental involvement. Here we had two items, asking how often the parent sits in on the child's piano lessons, and how often the parent helps the child with piano practice. Both items were rated as 1 (never), 2 (seldom), 3 (sometimes), 4 (often), or 5 (always).

Results

Table 2 presents our findings on cultural differences in work ethic, motivation, and parental influences. As there were multiple analyses, we will only discuss differences significant at $p < .01$. (The

Table 2. Mean Scores on Work Ethic, Motivation, and Parental Influences.

	Chinese	North American Caucasian	T Test
Child's and Parent's Work Ethic Regarding Piano Playing			
Child believes musical ability takes work rather than being inborn	2.71	2.35	t = 2.84, p = .005
Parent believes musical ability takes work rather than being inborn	2.60	2.05	t = 4.29, p = .000
Child believes they need to work harder than others to succeed at piano	2.82	2.36	t = 5.96, p = .000
Parent believes child needs to work harder than others to succeed at piano	2.70	2.15	t = 6.17, p = .000
Child is interested in challenging aspects of piano practice	4.53	3.87	t = 3.78, p = .000
Child's minutes of weekly piano practice	295.26	159.29	t = 5.60, p = .000
Child's Motivation for Piano Playing			
Intrinsic motivation	5.67	5.14	t = 2.60, p = .010
Identification/integration	5.05	4.34	t = 2.68, p = .008
Introjection	3.16	4.19	t = –3.57, p = .000
External regulation	4.09	3.17	t = 3.45, p = .001
Amotivation	2.58	2.13	t = 2.23, p = .028
Parent's Influence on Child's Piano Education			
Parent sits in on child's piano lessons	4.30	3.49	t = 4.04, p = .000
Parent helps child with piano practice	3.30	3.18	t = 0.56, p = .580

one finding significant at $p < .05$, regarding amotivation, suggests an additional tentative finding that is worth revisiting in future research).

The first section of Table 2 addresses cultural differences in work ethic. As predicted, the Chinese students and parents consistently evidenced a stronger work ethic than the Caucasian participants. The Chinese children and parents scored higher on believing that musical ability takes work rather than being inborn, and believing that the child needs to work harder than others to succeed at the piano. The Chinese children also expressed greater interest in working hard at the challenging aspects of piano practice. And perhaps the most striking finding was that they practice nearly twice as much as the North American Caucasians. The second section of Table 2 addresses the child's motivation for learning piano. The Chinese piano students scored higher on identification/integration and external regulation than did the Caucasian children, as we had predicted. Contrary to our expectations, though, the Chinese children did not score higher on introjection – they actually scored significantly lower. In addition, we found that the Chinese children scored higher on intrinsic motivation. The last section of Table 2 shows our results for the two parental influences. For one of these variables, our predictions were confirmed: the Chinese parents were more likely than the Caucasian parents to sit in on the child's piano lessons. However, our prediction that Chinese parents would also score higher on helping their children with piano practice was not supported: we did not find any differences in this behavior between the cultural groups.

Discussion

Using the Survey of Musical Interests, a self-report questionnaire for piano students and their parents, this paper compared Chinese and North American Caucasians in terms of work ethic, motivation and parental influences. Our aim was to identify reasons why Chinese musicians are so remarkably successful.

Work ethic

Our findings suggest several reasons for this success. First and foremost, the Chinese participants had a stronger work ethic with regards to piano practice than did the North American Caucasians, and this manifested itself in attitudes toward hard work and also more concretely in the amount of home practice. To be successful as a musician, it is absolutely essential to work hard at it, regardless of one's abilities. It seems that Asian cultures already have a philosophy towards learning that puts primary emphasis on intensive work, and this gives them an edge over North Americans when it comes to musical success.

Motivation

There is also presently a trend in China such that musicians are elevated to the status of role models and even icons. We therefore expected, and found, higher identified/integrated motivation for learning to play the piano among the Chinese children than the Caucasian children – they saw music as a part of their identity and future selves. As an autonomous form of motivation, identification/integration can be a powerful motivator.

Based on the fact that Asian culture is collectivistic, we expected, and found, that the Chinese children were more likely to be motivated by wanting to avoid upsetting their parents and teacher. It is important to note, however, that this kind of motivation is not necessarily detrimental in Asian cultures. As long as the person subjectively endorses these collectivistic concerns, they can still be autonomous and experience the variety of benefits of autonomous motivation (Zhou, Ma, & Deci, 2009).

In fact, we found that the Chinese children showed greater intrinsic motivation, indicating authentic interest and enjoyment with regards to playing the piano. And the Chinese children even evidenced lower introjection, indicating that they were less motivated by avoiding feelings of shame or 'feeling bad'. This latter finding was contrary to our predictions. We had expected introjection to be higher among the Chinese children because of the Asian model of learning which prescribes feelings of shame and guilt if one should be unwilling to learn. Perhaps the high level of identification among Chinese students left very little room for shame or guilt. From an educational point of view, it is worth pointing out that the Chinese students showed healthy levels of identified, intrinsic, and introjected motivation even in the context of a culture that favors hard work. This suggests that a strong work ethic does not necessarily have a negative impact on a student's interest in piano learning and piano playing, and lends further support to the value of educating students in all cultures about the importance of investing the time and effort in practicing.

Parental influences

The parents of young Chinese musicians may also contribute to their children's success. We found that the Chinese parents more frequently sat in on their child's piano lessons than did the Caucasian parents. As shown by Comeau and colleagues (2012), when parents sit in on the child's lessons, the

child practices more, is more interested in piano performance and creativity, and feels more competent at playing the piano. When a parent sits in on the lessons, it likely gives the child the message that the parent truly believes in the value of piano playing, and encourages deeper engagement on the part of the child.

Though we also expected the Chinese parents to more frequently help their children with piano practice, we found no difference between the cultural groups. In retrospect, this may be simply because Chinese parents are no more likely to know how to play the piano than are North American parents. While Asian parents may help their children a lot with school-related learning, they may not have the experience required to help a lot with piano learning.

Future directions

In future work, we would like to see higher internal consistencies for the motivation subscales. Alpha values above .70 are considered adequate and two of our scales – introjection and external regulation – fell in the .60–.69 range. Low alpha values can be corrected by adding more items and/or changing the items so that they more directly reflect the concept they are intended to measure. We have recently created an expanded and revised version of the motivation questionnaire and are collecting data regarding its properties. We would also like to see how children living in North America who have one or two Asian parents compare with those living in an Asian country and those living in North America who have two Caucasian parents, to determine the degree of influence of the North American host culture. It would further be valuable to explore additional possible reasons for the success of Asian musicians. For example, it is possible that Asian parents place a higher stake in music education and performance and provide more musical enrichment for their children outside of lessons, such as playing recordings for them at home, taking them to concerts, or buying additional music books.

Conclusion

In conclusion, this study helps us to better understand the work ethic, motivation, and parental support of Chinese piano students, which can contribute to explaining the success of Asian musicians. It is particularly interesting to see how, despite an educational approach that favors hard work, Chinese piano students are in some ways more autonomously motivated than their American counterparts. Our research findings suggest a number of avenues that parents and music educators everywhere might use to enhance the musical engagement and performance of children. First, it may be important to adopt a philosophy whereby musical success is seen largely as a matter of the time and effort invested. Secondly, the role of the parent's involvement should not be underestimated. Rather than simply dropping the child off at piano lessons, our findings suggest that it would be valuable for the parent to participate more actively by sitting in on the child's lessons. Finally, it would be valuable for parents and teachers to create an atmosphere where music is seen as an integral and enjoyable part of the child's life.

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