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Cultural Values, Parents' Beliefs, and Children's Achievement in the United States and China¹

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Key Words. Academic achievement · China · Elementary-school children · Parents' beliefs · Cultural contexts of education

Abstract. This paper describes traditional and modern Chinese cultural values regarding educational achievement and how they are reflected in the beliefs of parents and children. Chinese philosophy traditionally has emphasized human malleability and the value of self-improvement. Chinese parents set higher standards and work more often with their children on homework than their American counterparts, and Chinese cultural values help to ensure that children work diligently. These factors may help to explain the superior performance of Chinese children in cross-national comparisons of mathematics achievement.

American educators, government officials, and business executives have become increasingly concerned with the relatively poor performance of American children in cross-national comparisons of children's scholastic achievement. The performance of Asian children has received particular attention; Chinese and Japanese children are con-

sistently among the highest achievers in international comparisons of mathematics and science achievement [Comber and Keeves, 1973; Garden, 1987; Husen, 1967; Stevenson et al., 1986].

Research has been initiated to determine possible causes of the superior performance of Asian children. Although differences in curricula and instructional methods are important, researchers emphasize that children's school achievement must be considered within the cultural contexts in which it occurs [Hess, et al. 1987; Lee, 1987; Lee et al., 1987; Levine and White, 1985; Stevenson et al., 1986]. These researchers have suggested that cultural values, which parents communicate to their children, are an im-

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portant factor in determining children's scholastic achievement. In the research reported here we compared cultural values concerning education in the United States and China. Previous comparative work in Asia on cultural values and school achievement has been done mainly in Japan, but interest in comparative studies involving China has been growing among both Western and Chinese researchers.

In this paper we present the results of tests of academic achievement from a large cross-national study of American and Chinese children's academic performance and adaptation to school. Next we examine the importance of education in traditional and modern China, and cultural beliefs about education and human achievement in Confucian and modern Chinese philosophy. Finally, we examine how cultural values may be manifested in parents' beliefs about and expectations for their children's level of achievement.

Differences in Achievement

Data on children's achievement come from a mathematics test and a reading test given at the beginning of the school year in both countries. A total of 720 American children and 396 Chinese children participated. Each sample was composed of equal numbers of first, third, and fifth graders (chronological ages approximately 7, 9, and 11). The children came from 20 schools in Chicago, Ill., and surrounding suburbs, and 11 schools in Beijing. To obtain representative samples of children, 2 classrooms were randomly selected from each school at each grade, and 3 boys and 3 girls were then selected randomly from each classroom.

The mathematics test was constructed using a method described by Stigler et al. [1982]. Rather than translating American tests, the mathematics test was constructed based on analyses of the curricula used in the two countries. Items were chosen so that they represented mathematical concepts and operations common in both curricula. A similar process was used in constructing the reading test. It was based on detailed curriculum analyses of words and phrases appearing in the textbooks of the two countries. The reading test evaluated skills in both decoding and comprehension.

Mean scores for the mathematics test are shown in figure 1. Chinese children obtained much higher scores than American children at all three grades. Figure 2 shows the results combined for the decoding and comprehension parts of the reading test. American first and third graders outperformed their Chinese counterparts, but by fifth grade the difference between countries had disappeared.

The Cultural Contexts of Education

In the remainder of the paper we examine how cultural values and parents' beliefs may influence the level of achievement of children in the two cultures. Our primary focus is on Chinese values [see Spence, 1985, for discussion of American values regarding education].

The Importance of Education in China

Education has always been an extremely important means of personal advancement in China. From the seventh century until 1905, examinations were used as the sole criterion for selection of officials in the Chinese civil service. Hundreds of scholars from all

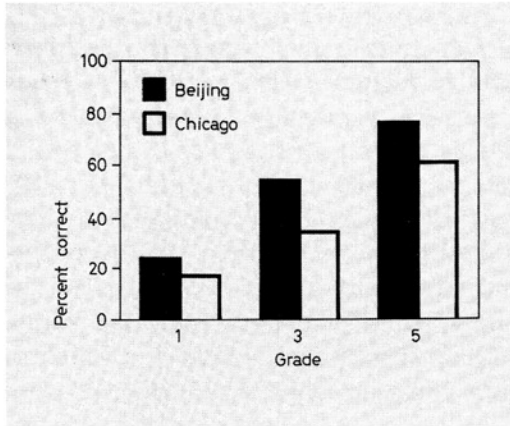


Fig. 1. Average percentage of correct responses on the mathematics test for Grades 1, 3, and 5 (average ages 7, 9, and 11).

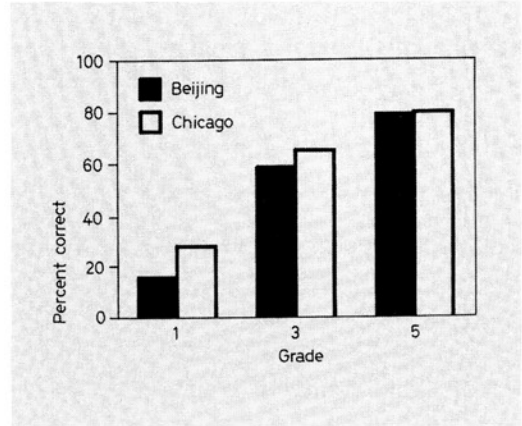


Fig. 2. Average percentage of correct responses on the reading test for Grades 1, 3, and 5 (average ages 7, 9, and 11).

over the country gathered every 3 years in the capital for the examination, which normally lasted 1 to 2 weeks. To be qualified to take this examination, the scholars must have passed similar examinations at the local and provincial levels. For scholars and their families, the opportunity to take these examinations was probably the most important event in their lives.

Examinations remain the primary path of upward mobility in contemporary China. Because of the huge urban-rural economic differences and the strict control of migration, the only way the younger generation of farmers can move to the cities or towns is to pass the annual National College Entrance Examination, which is extremely competitive. Currently only 4–5% of those taking the National College Entrance Examination are admitted to college [Hawkins, 1983]. In addition, even gaining admission to high school appears to be increasingly difficult, although no empirical data are available.

Human Malleability and Self-Cultivation

Competition with other students for education is a major source of motivation for Chinese students. However, motivation from such extrinsic sources will not be maintained if children do not believe that persistence will eventually pay off. Chinese cultural values help to ensure that children will work diligently. One important value concerns human malleability and potential for change. Chinese philosophy traditionally has emphasized malleability and the importance of the environment in shaping the expression of human potential. For example, Confucius believed that the general population should and could be educated; Confucius wrote, 'In teaching there should be no distinction of classes' [Legge, 1966, p. 235].

Chinese beliefs about self-improvement are a second cultural value relevant to educational achievement. Chinese philosophy has emphasized that societal improvement must begin with self-improvement. The Confu-

cian doctrine was cultivate yourself, regulate your family, govern well your state, then order well the kingdom. These beliefs persist today. In Munro's [1977] words, 'It is accurate to describe the [contemporary] Chinese position as a belief that inner causes (correct thoughts, wishes) can have important effects in changing the material world' [p. 81]. Chinese children are taught that study and high educational achievement is an important form of self-improvement.

In China, ability is considered to be an accumulation of skills and knowledge. In a survey of the ideology of Chinese middle-school children, Tong et al. [1985] found that the students' favorite adage was 'Genius comes from hard work and knowledge depends on accumulation'. This does not mean that innate ability is considered unimportant, but rather that ability is not an ultimate or complete explanation for any achievement. According to Ridley [1977], in traditional Chinese philosophy 'it was acknowledged that those of lesser intellectual capacity might have to travel more slowly, but there was no doubt that in the end they would cover the same ground' [p. 6]. According to the Chinese perspective, innate ability may determine the rate at which one acquires new knowledge, but the ultimate level of achievement is attained through effort. Furthermore, there is always the possibility of improvement at any level of ability.

Chinese beliefs in human malleability and self-improvement lead to a strong emphasis on effort in educational endeavors. Chinese children are inculcated with the belief that change is possible, and that change should start with themselves. In this way Chinese children come to believe that improving their academic performance is within their own control.

Collectivism versus Individualism

Collectivism and group identification is another Chinese value relevant to educational achievement. In China, parents and other family members, as well as members of the community in which a child lives, assume the primary responsibility for teaching and disciplining children; a child's achievement therefore is considered to reflect the effort of the entire family or community. The concept of achievement motivation in China thus includes a socially oriented component that is absent in American conceptions of achievement motivation [Ho, 1986; Yang, 1986].

Parents' Beliefs

Our source of data on parents' beliefs about education and their children's ability was an interview administered individually to 580 American and 390 Chinese mothers. To ensure linguistic comparability, the interview was developed simultaneously by a group of Chinese and American researchers. The interview provided information about mothers' beliefs, demographic characteristics of the households, parents' education and occupation, as well as information about the child's adaptation to school. Fathers were asked to return a shorter questionnaire by mail, but the very low American response rate (24%, compared to over 90% for China) makes cross-national comparisons difficult. Children also were given a short interview addressing their beliefs about achievement.

Parents' Satisfaction with Children's Academic Performance

Parents were asked to rate their satisfaction with their child's academic performance

on a 5-point scale, with 1 representing 'not satisfied at all' and 5 representing 'very satisfied'. Parents' satisfaction with their children's performance differed greatly between China and the United States. At all grades, Chinese mothers were much less satisfied with their children's performance (mean = 3.1) than were American parents (mean = 4.1). Among American mothers, 76% were either very satisfied or satisfied, compared to 36% of the Chinese mothers. The difference was even larger for comparisons of fathers: 88% of the American fathers, but only 28% of Chinese fathers, were satisfied or very satisfied.

There were potentially important differences in the relation between parental level of satisfaction and children's performance on the achievement tests. To analyze these relations, the combined scores of the mathematics and the reading tests were standardized within country and grade. Mothers' expressions of satisfaction with their children's performance were then examined as a function of these standardized achievement scores (z scores). As shown in figure 3, mothers of first-grade Chinese children who scored only slightly below the mean for all Chinese first graders expressed dissatisfaction with their children's performance. In contrast, American mothers of first graders expressed dissatisfaction only when their children's performance was almost one standard deviation lower than the average for first graders. At fifth grade, however, both Chinese and American mothers expressed dissatisfaction when their children performed around one-half standard deviation below the mean.

The satisfaction of Chinese mothers had little relation to their perception of how much their children liked school. However,

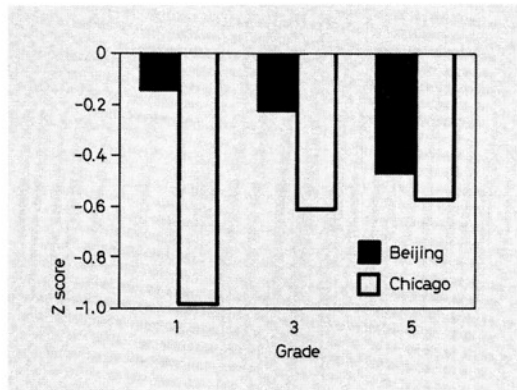


Fig. 3. Parent's satisfaction with children's achievement as a function of child's achievement level.

the satisfaction of American mothers was related to their perceptions of their children's satisfaction with school, even when the effects of their ratings of the children's achievement were partialled out. In the United States, the partial correlations between mothers' own satisfaction and mothers' perception of their children's satisfaction were 0.13 (NS), 0.28 ($p < 0.001$), and 0.35 ($p < 0.001$), at first, third, and fifth grade, respectively. In China, the partial correlations were less than 0.10 at all grades. These results suggest that American mothers took into account how satisfied their children were with school when assessing their own satisfaction with the child's performance in school, but Chinese mothers did not.

Another compelling demonstration of differences in level of satisfaction was revealed in the responses of mothers to the following two questions. The mothers were told to suppose their child took a math test with 100 possible points and an average score of 75. They then were asked what score they thought their child would get, and the score

with which they would be satisfied. Both American and Chinese mothers expected their child would obtain 80 to 85 points. However, American mothers indicated that they would be satisfied with a score in mathematics that was an average of 7 points *lower* than the score they actually expected their child to receive, whereas Chinese mothers said they would be satisfied with a score that was an average of 10 points *higher* than what they expected their child to receive. Very similar results were found when the question was phrased in terms of a reading test.

One might expect that large discrepancies between the scores that their parents expected and scores with which they would be satisfied might result in Chinese children not enjoying school. However, Chinese and American children did not differ significantly in their ratings of how much they liked school. In addition, Chinese mothers believed that their children liked school very much. Mothers were asked to rate on a 5-point scale a series of statements, such as how much their children liked school, talked positively about teacher, came home from school happy, could not wait for vacations to end, and were eager to go to school in the morning. Ratings by Chinese mothers were consistently higher than those made by American mothers, all $ps < 0.01$. For example, Chinese mothers (mean = 3.9) said that their children could not wait for vacations to end! (The American mean was 2.6). Similarly, Chinese children (mean = 4.6) were rated as more eager to go to school in the morning than were American children (mean = 3.9).

Influencing Children's Performance

The interview with the mothers also revealed differences in how Chinese and American parents attempt to influence their

children's academic achievement. A direct measure of parents' attempts to influence their children's performance is how much time they spend helping their children with school-related work. Chinese mothers indicated that they spent substantially more time than their American counterparts working directly with their children on homework. In fact, Chinese mothers of first graders said they spent on average almost a full hour per day working with their child on homework; American mothers said they spent on average 32 min per day. Fathers were also asked how much time they spent helping their children. Among Chinese fathers, 44% spent more than 15 min per day helping their child with mathematics, while only 21% of American fathers did so.

Parents and Schools

The previous results might give the impression that Chinese parents believe that they play an important role in the education of their children. However, it is American parents who have the stronger belief that parental influence is important in determining children's achievement. Mothers were asked to indicate on a 5-point scale their beliefs about the relative importance of teachers and parents in determining children's academic performance. Chinese parents placed strong emphasis on the role of teachers; 66% of Chinese mothers believed that the teacher was more important than the parents, and only one Chinese parent believed that parents played a more important role than teachers in influencing children's academic performance. In contrast, only 19% of the American mothers believed that teachers were more important than parents. Similarly, Chinese mothers (mean = 4.8) gave higher ratings than American par-

ents (mean = 4.1) to the question 'How important is help from the teacher in influencing children's academic achievement?'

Conclusions

The Chinese emphasis on achievement, and the high standards imposed by Chinese parents, might imply that Chinese children are constantly failing in the eyes of their parents, and therefore must rely on the extrinsic motivation of obtaining good grades and passing the college entrance examinations to maintain their interest in school. These extrinsic rewards must play a role in the values Chinese parents communicate to their children. However, the present results do not reveal a pattern of beliefs and values characteristic of extrinsic motivation. The impression from the interviews, and from informal observations of Chinese classrooms [Kessen, 1975], is that Chinese children like school very much, that they are very dedicated to their work, and that they are less subject to the symptoms of distress than are American children. Chinese values apparently inculcate children with a belief system that focuses on internal goals. The philosophical beliefs in human malleability, effort, self-improvement, and deference to the group are important in instilling this focus.

These results also point out the difficulty in attempting to characterize Chinese or other Asian philosophy regarding education, achievement, and intelligence by analyses derived from Western psychology. For example, taken out of context, the emphasis of Chinese parents on high achievement, and their overall low level of satisfaction, may give the impression that they are stern and uncaring parents. Considered within the cul-

tural philosophy that emphasizes the role of effort and the malleable nature of human intelligence, the strong emphasis on achievement is not perceived as a source of stress by Chinese children. It is obviously necessary to consider the entire cultural value system, and the role of education within that system, in understanding cross-national differences in educational achievement.

References

- Comber, L. C., & Keeves, J. (1973). *Science achievement in nineteen countries*. New York: Wiley.
- Garden, R. A. (1987). The second IEA mathematics study. *Comparative Educational Review*, 31, 47–68.
- Hawkins, J. N. (1983). The People's Republic of China (Mainland China). In R. M. Thomas & T. N. Postlethwaite (Eds.), *Schooling in east Asia: Forces of change* (pp. 137–188). Oxford: Pergamon Press.
- Hess, R. D., Chang, C., & McDevitt, T. M. (1987). Cultural variations in family beliefs about children's performance in mathematics: Comparisons among People's Republic of China, Chinese-American, and Caucasian-American Families. *Journal of Educational Psychology*, 79, 179–188.
- Ho, D. Y. F. (1986). Chinese patterns of socialization: A critical review. In M. H. Bond (Ed.), *The psychology of the Chinese people* (pp. 1–37). Hong Kong: Oxford University Press.
- Husen, T. (1967). *International study of achievement in mathematics: A comparison of twenty countries*. New York: Wiley.
- Kessen, W. (1975). *Child development in China*. New Haven: Yale University Press.
- Less, S. Y. (1987). Effort and ability: A comparison of the achievement beliefs of Chinese and American children and their mothers. Unpublished doctoral dissertation, University of Michigan.
- Lee, S. Y., Ichikawa, V., & Stevenson, H. W. (1987). Beliefs and achievement in mathematics and reading: a cross-national study of Chinese, Japanese, and American children and their mothers. In D. A. Kleiber & M. L. Maehr (Eds.), *Advances in motivation and achievement: enhancing motiva-*

- tion (Vol. 5, pp. 149–179). Greenwich CT: JAI Press Inc.
- Legge, J. (1966). *The four books: Confucian analects, the great learning, the doctrine of the mean, and the works of Mencius*. New York: Paragon Book Reprint Corp.
- LeVine, R.A., & White, M. I. (1985). *Human conditions: The cultural basis of educational developments*. New York: Routledge & Kegan Paul.
- Munro, D. J. (1977). *The concept of man in contemporary China*. Ann Arbor: University of Michigan Press.
- Ridley, C. P. (1977). Theories of education in the Ch'ing period. *Ch'ing-shi Wen-t'i*, 3, 34–49.
- Spence, J. T. (1985). Achievement American style: The rewards and costs of individualism. *American Psychologist*, 40, 1285–1295.
- Stevenson, H.W., Lee, S. Y., & Stigler, J. W. (1986). Mathematics achievement of Chinese, Japanese, and American children. *Science*, 231, 693–699.
- Stigler, J. W., Lee, S. Y., Lucker, G.W., & Stevenson, H. W. (1982). Curriculum and achievement in mathematics: A study of elementary school children in Japan, Taiwan, and the United States. *Journal of Educational Psychology*, 74, 315–322.
- Tong, N., Zhao, R., & Yang, X. (1985). An investigation into the current ideology of middle school students. *Chinese Education*, 17, 6–21.
- Yang, K. (1986). Chinese personality and its change. In M. H. Bond (Ed.), *The psychology of the Chinese people* (pp. 106–170). Hong Kong: Oxford University Press.

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