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Lei Chang, Bin-Bin Chen, and Lin Qin Ji

SYNOPSIS

Objective. The present study examined mothers' and fathers' attributions and attitudes related to parenting in China. **Design.** Interviews were conducted with 241 pairs of parents to obtain maternal and paternal reports of attributions regarding successes and failures in parent-child interactions and on progressive versus authoritarian attitudes about parenting. **Results.** Mothers' mean levels of attributions and attitudes did not differ significantly from fathers' mean levels of attributions and attitudes. The authors found significant correlations between mothers' and fathers' attributions regarding uncontrollable success, authoritarian attitudes, and modernity of attitudes. **Conclusions.** Supporting the cultural evolutionary view that drastic social changes bring about nonconforming and individualistic behavioral tendencies, these findings rectify and expand the existing literature portraying Chinese parenting as uniformly Confucian and traditional.

INTRODUCTION

Humans have the longest childhood, the most extensive biparenting, and the most complex cultural systems among mammalian species (Bogin, 1999). Parenting, in turn, has become the major means of cultural transmission, and culture continues to shape human behavior throughout the life span (Harkness & Super, 2002). In this lifelong acculturation and socialization process, culture affects behavior in at least three ways. First, distal cultural heritages and traditions affect behavior by shaping the collective psyche, including philosophical orientations and cognitive styles (Nisbett, Peng, Choi, & Norenzayan, 2001). Second, the proximate and immediate social milieu, including the sociopolitical and legal systems, financial and economic conditions, and contemporary societal norms and ideologies governing various aspects of social living, directly affect behaviors and attitudes of individuals (Chang, Schwartz, Dodge, & McBride-Chang, 2003; Elder, 1998; Silbereisen, 2000). Last, according to and extending cultural evolution theories (Boyd & Richerson, 2005), the extent of intergenerational change (versus stability) in all of the aforementioned sociocultural facets affects human behaviors in ways that form the basis of cultural evolution (Chang et al., 2011). Focusing on this last mode of cultural influence, we examine parental role differences in terms of parental attributions for success and failures and in terms of authoritarian versus progressive parenting attitudes in the context of intergenerational social changes in China in the past 30 years. Within the framework of cultural evolution (Boyd & Richerson, 2005), we expect China's drastic social changes to bring about an individualistic cultural orientation that breaks away from conforming to and keeping traditional social roles including gender differentiated

parental roles. We review in this article some of the social changes taking place in China and the corresponding cultural and attitude shift relevant to parenting and child socialization before we present data on gender undifferentiated parental attributional beliefs and parenting attitudes.

Social Transformations of China

The past 30 years have seen unprecedented changes in China's history (Chen & Wang, 2009). In terms of the economy, the current market reform, which was officiated in 1978 but effectively took off only in the early 1980s, brought about large-scale changes and redistributions of wealth and material resources. According to the National Bureau of Statistics of China (<http://www.stats.gov.cn>), in the fiscal period of 1978–1984, its gross domestic product (GDP) was 508 yuan. GDP for the fiscal year 2007 was 19,524 yuan. This is an increase of more than thirtyfold. Average personal annual income was 497 yuan (urban) and 235 (rural) for the 1978–1984 period and 14,908 yuan (urban) and 5,791 yuan (rural) in 2007, increases of more than thirtyfold and twentyfold, respectively. GDP growth has been between 7.6% and 15.2% per annum in the past 30 years, except 1989 and 1990, which were 4.1% and 3.8% (<http://www.stats.gov.cn>). Actual purchasing power has increased even more because Chinese currency appreciated more than 20% against the U.S. dollar and other major currencies during this period.

Together with this upward growth trajectory is increased economic variability in terms of wealth distribution and economic ownership. Before 1978, the urban economy in China was almost 100% state owned and, with almost zero unemployment, everyone was a state employee compensated according to the same salary scale, which ranged from 31 yuan per month for entry-level skilled workers and clerical staff to 590 yuan per month for the president of the country and other top government officials and military generals. Today, state ownership represents 40% (Mao, 2009; Yuan, 2009) to 30% of China's domestic product (Hu, 2009). Wealth distribution has become increasingly variable and uneven, ranging from the unemployed to billionaires, the number of which ranks fifth (excluding Hong Kong and Taiwan) in the world (Forbes, 2009). The urban-rural income ratio has been between 2 and 3 which is much higher than the average of 1.5 among developed countries (Cai & Yang, 2000). The continuing difference between the richer coastal and poorer inland regions represents another sign of economic disparity (Zhong, 2006). China's Gini index (a measure of inequality of income or wealth) was 47 in 2009, which was 2 points higher than that of the United States (Central Intelligence Agency World Fact Book, 2009). It was 27.98 when first reported of China in 1981 (Ravallion & Chen, 2007).

Another area of development and change is education. China achieved 9-year compulsory education nationwide in 2000. Government expenditures on education rose from 11,420 million yuan in 1980 to 634,836 million yuan in 2006 (National Bureau of Statistics of China, 2008). The number of tertiary institutions rose from 598 in the 1978–1982 period to close to 2000 in 2008 (National Bureau of Statistics of China, 2008). Other statistics reported by the same agency show that the number of college students (from 2 to 4 years) rose 4,500% during this period, and the number of 4-year college degree holders rose 105% from 4.4 million to 46 million. During the same period, tertiary teaching staff rose close to 500%. However, the number of college graduates represents less than 5% of the total population (National Bureau of Statistics of China, 2008). Although 9-year compulsory education is legally required of all citizens, the quality of

education varies tremendously. Before market reform, state-run public schools ensured a reasonable level of parity across regions and schools. Since market reform, education has become increasingly unequal and inequitable as a result of uneven economic growth across regions, increasing nongovernment involvement in public education, and the emergence and rapid growth of private schools (Kwong, 1997). Economic opportunities in otherwise economically impoverished regions may draw children away from schools rather than improving local education. According to a recent study (Yu & Li, 2008), the school dropout rate was 4.47% in rural areas, which was .97% higher than the national average. The latest statistics show that 8.40% of the population 15 years of age and older are illiterate, with a wide range from a low of 3.34% in Beijing to a high of 19.33% in Gansu province (National Bureau of Statistics of China, 2008).

Family structure and family lives have also experienced extraordinary changes (Chen & Wang, 2009). Before 1978, the country exercised a residence registration system that prohibited rural-to-urban or intercity population movement. Today, rural migrants take up most of the unskilled and much of the skilled workforce in urban areas. A 2006 estimate puts rural migrants working and living in cities at 132 million (Office of the Leading Group of the State Council for the Second National Agricultural Census, 2008). Most migrant workers leave their spouses and children behind (National Bureau of Statistics of China, 2002, as cited in Tao & Xu, 2007). *Liu shou er tong* (children left behind) has become a special population, estimated to be 58 million (All China Women's Federation, 2008). People in the city used to be employed by their work units (*dan wei*) where they had an "iron rice bowl" (*tie fan wan*), a metaphor representing secured life-long employment. For many people, life used to be very much contained in the work units, which provided housing, medical and other benefits, and leisure and entertainment. Many people married their spouses within work units and had their children replace them upon retirement. This commune-like lifestyle has now been completely replaced by a global urban subsistence where people move, quit, or get laid off from jobs.

Marriage has also changed accordingly. In cities and rural areas, people marry later than they did 30 years ago. According to an estimate made by the National Bureau of Statistics of China (1987), the average marriage age was 21.71 for men and 18.92 for women in 1982, which rose to 25.86 for men and 23.49 for women in 2005 (Office of the Leading Group of the State Council for 1% National Population Sample Survey and National Bureau of Statistics of China, 2006). The divorce rate has increased dramatically. Divorce rate is calculated by comparing the number of marriages against the number of divorces in the same year. According to the National Bureau of Statistics of China, in 1985, the nationwide divorce rate was 5.52%. In 2007, the national divorce rate was 21.16%. The divorce rate in Shanghai in 2007 was 39.17% (Li, 2008). According to a 1982 survey conducted by the All China Women's Federation (1991), unmarried men outnumbered unmarried women by 8.49%, and divorced men outnumbered divorced women by 0.67% in 1985. A similar survey conducted in 2008 found these gender differentials to rise to 36.28% and 27.54%, respectively (National Bureau of Statistics of China, 2008).

Cultural Evolutionary Influence on Parental Attitudes

These social changes apply to an entire generation of the Chinese population from which we sampled our participating parents for this study. With average ages of 35.56 and 37.93 years for mothers and fathers, respectively, our participants have personally

experienced these drastic intergenerational changes. What effects do these sociocultural transformations have on the behavior of this generation of Chinese? We explore this question within the framework of cultural evolution (Boyd & Richerson, 2005). Consistent with the evolutionary cognitive prediction that variant-invariant information patterns resulting from environmental variability shape domain-specific versus domain-general cognitive adaptations (e.g., Cosmides & Tooby, 1992), human acculturation and learning activities respond to the same environmental variations. Variable and changing environments favor individual learning by trial and error, and predictable and unchanging environments encourage social learning by copying and conforming (e.g., Boyd & Richerson, 1988). Whereas human beings have adopted mixtures of social and individual learning, the extent of environmental stability tilts the local culture toward a tradition-oriented (i.e., social learning) or an innovation-oriented (individual learning) cultural bent (Chang et al., 2011). The evolved culture, in turn, feeds back into the environmental variability-stability continuum, reinforcing and expediting the cultural adaptive process. Mathematical models confirm the mixes of individual and social learners with the distribution of the two shifting according to environmental stability versus change (Rogers, 1988). Other empirical findings support the prediction that people selectively switch between individual and social learning depending on environmental change (Kameda & Nakanishi, 2003; Mesoudi, 2008), and individual learning spreads when the environment changes more rapidly (McElreath et al., 2005).

When individual innovation is deemed adaptive in an unpredictable environment, natural selection should also favor high rather than low confidence in one's own abilities, independence in thinking, and high rather than low interest in finding new solutions (Boyd & Richerson, 2005). If social learning or copying of existing solutions to an unchanging environment is adaptive, such personality attributes as conformity, compliance, and gullibility should also remain active in the population (Chang et al., 2011). These personality attributes help individuals to conform to their prescribed social roles necessitated and sustained by the extent to which existing social orders and cultural traditions are stable (Mesoudi, 2009). By contrast, changes in existing social orders and cultural traditions are expected to bring about individualistic and nonconforming behaviors and to result in a wider range of individual differences as individuals exert more individual learning effort. Within this cultural evolutionary framework, social transformations taking place in otherwise a collectivistic and traditional China are expected to shape behavior in the individualistic direction.

More specifically, we expect people in a rapidly changing China not to conform to traditionally prescribed social roles including parental roles. Fathers and mothers are social roles that have strong gender differentiations in Chinese culture rooted in the Confucian tradition. Throughout Chinese history, especially among the literate elites, women have lower status than men until they become mothers whose status is then elevated in relation to the children, who must observe the parent-offspring hierarchy. Emphasis is then put on how maternal roles are different from paternal roles. Most of the role differentiation centers on distinctions between communal and tender-hearted values on the maternal side, and paternal agency, discipline, and authority (Ho, 1986; Shek, 1998). Implicit in the proverb, "strict fathers and kind mothers" (*yan fu ci mu*), Chinese fathers traditionally serve the role as instrumental and well-reasoned authority figures (Chen, Wang, Chen, & Liu, 2002; Ho, 1986) who are expected to be aloof and distant to their children and other family members (Ho, 1987; Shek, 2001). Chinese fathers traditionally have disciplinary responsibilities with their children, whereas Chinese mothers

are expected to be nurturing and protective of their children (Wilson, 1974). Fathers make all the important decisions on behalf of children, whereas mothers mainly serve to carry out these decisions (Ho, 1986) and take up the daily routines of child care (Wilson, 1974). Other role differentiations reflect the patriarchic and patrilocal structure of the family relationship. Once married, the wife becomes a member of the husband's family. Children are by default carriers of the paternal but not maternal lineage. Children's conduct either brings honor or shame to the paternal lineage, and fathers but not mothers take responsibility for children's success and failure. This differential attribution is implicit in such adages as "feed but do not teach kid, dad's misdeed indeed" (*yang bu jiao, fu zhi guo*) and "child does not behave, father is to blame" (*zi bu jiao fu zhi guo*), whereas few or no old Chinese sayings hold mothers responsible for child conduct.

Although our discussion focuses on traditional Chinese parenting values, role differentiations between maternal and paternal parenting are also observed in Western culture where similar distinctions are made between maternal warmth and tender heartedness and paternal agency and authority (Castro, de Pablo, Gómez, Arrindell, & Toro, 1997; G. Russell & Russell, 1987; Stewart, Bond, Kennard, Ho, & Zaman, 2002). In addition, a Western father also assumes the role of a playmate to his children who, together with the father, have to be reined in by the mother (Jain, Belsky, & Crnic, 1996; Stewart et al., 2002; also see Parke, 2002, for a comprehensive review). Thus, Western and Chinese cultures traditionally make some kind of distinction between maternal and paternal roles.

Within this traditional social role context, cultural evolution theory predicts reduced parental role differentiations among Chinese parents who have experienced the extraordinary social changes described earlier. As evidenced in the reduced gender role differentiations in China (Chang, 1999, 2003, 2004; Chang et al., 2003; Chen, Cen, Li, & He, 2005; Chuang & Su, 2008; Shek, 2008; Y. Wang & Chang, 2008), environmental variability including social changes propels deviations from existing social norms (Boyd & Richerson, 2005). Culturally prescribed parental roles and role differentiations represent such social norms (Silbereisen, 2000). Recent reports of mainland Chinese parents confirm this prediction. One survey found that most Chinese fathers do not observe gender role boundaries in rearing children, with 77% reporting engaging in domestic chores and taking care of children just like mothers (National Bureau of Statistics of China, 2001). In another study, Chinese fathers were found to be actively involved in other types of "maternal" child care activities such as feeding and bathing infants (Chuang & Su, 2009b). Mainland Chinese fathers have also been found to be less authoritarian than mothers (Porter et al., 2005). These reduced role differentiations reflect individual learning strategies and individualistic behavioral tendencies that we predict to have resulted from drastic national social changes. Recent reports found Mainland Chinese parents to be less authoritarian and to give the strongest endorsement to independence and self-confidence and the lowest endorsement to obedience as desired child qualities (Chen et al., 2005; Chuang & Su, 2009a; Porter et al., 2005; Q. Wang & Chang, 2009; Y. Wang & Chang, 2008). Independence and individualism may also manifest in interparental differences and disagreements. For example, there are greater interparental differences and disagreements on various childcare issues among mainland Chinese couples as compared with their overseas Chinese and non-Chinese counterparts (Chuang & Su, 2009a, 2009b; Porter et al., 2005). We expect the effect of societal changes to be so geared toward the individualistic direction that this generation of Chinese couples may have greater differences between themselves than would normally be expected within marriages.

The Present Study

Focusing on similarities and differences between mothers and fathers as two social roles, we expected few or no mean differences between parents in attributions about successes and failures in caregiving situations and progressive versus authoritarian attitudes. We tested this hypothesis against the traditional expectation that, because fathers and mothers take on different socialization roles in parenting their children, their parental attitudes should be different, reflecting their social roles. Focusing on individual differences and similarities within couples, we expected greater within-couple differences than between-role differences with the same set of parental attribution and attitude variables. Together, these hypotheses test the larger cultural evolutionary premise that drastic social transformations as currently taking place in China should render individuals to behave more individualistically rather than conforming to traditional social roles.

METHOD

Context

Participants were recruited from two cities: Shanghai and Jinan of the People's Republic of China. Shanghai is the largest metropolitan city in China, with a population of 18.58 million (National Bureau of Statistics of China, 2008). Nearly 89% of the Shanghai population are urban residents (National Bureau of Statistics of China, 2008). Shanghai is on the Yangtze River Delta in the east coast of China. Shanghai is a major financial, shipping, and industrial center. The city of Jinan is the capital of Shandong province in the northeast of China. Jinan has a population of 6.6 million people, and Shandong province has a population of 94 million people (Shandong Bureau of Statistics, 2009). About 71% of the Jinan population lives in urban areas (Shandong Bureau of Statistics, 2009). The economy of Jinan is characterized by heavy industry, textiles, and farm products, as well as service and information technology.

Participants

A total of 241 families across the two sites participated in the study. These include 121 mothers and fathers from Shanghai and 120 mothers and fathers from Jinan. We found no significant differences between the two cities in the variables of interest, and so the data were combined for all analyses in the present report. Approximately 83% of families in the present sample had only one child. See Table 1 for other demographic characteristics of the sample, which is fairly representative of the urban population in China.

Procedures

We recruited families from two elementary schools in Shanghai and three elementary schools in Jinan. The two schools in Shanghai were of similar socioeconomic status representing average income families. Two of the three schools in Jinan were

TABLE 1
Demographic Characteristics of Children and Families

	<i>M</i>	<i>SD</i>
Age (years)		
Child	8.35	.63
Mother	35.56	2.87
Father	37.93	3.38
Education (years)		
Mother	12.51	3.05
Father	13.14	2.91
Number in household		
Children	1.20	.45
Adults	2.73	.97
Child's gender (%)		
Female	52.0	
Male	48.0	
Parents' marital status (%)		
Married	99.0	
Unmarried	1.0	

of similar and average socioeconomic status, whereas the third school represented slightly lower income levels. After obtaining approval from the university ethics committee and elementary school authorities, consent letters with recruitment information including explanations about monetary compensation for participating in the study were distributed to the students who brought them to their parents. Signed consent letters were brought back by the children. All subsequent interviews took place in the child's school. Parents were interviewed separately in different rooms mostly on the same interviewing occasion, and they completed a demographic questionnaire as well as two parenting measures and a measure of social desirability bias (Reynolds, 1982).

The analyses in this article focus on constructs from two measures of attributions and attitudes (see Lansford & Bornstein, 2011). First, parents completed the short form of the Parent Attribution Test (Bugental & Shenum, 1984), which was developed to measure parents' perceptions of causes of success and failure in hypothetical caregiving situations. Parents are presented with a hypothetical scenario that involves either a positive or negative interaction with a child (e.g., "Suppose you took care of a neighbor's child one afternoon, and the two of you had a really good time together"). Parents then are asked to respond to a series of questions regarding reasons that the interaction was positive or negative. Parents rate on a 7-point Likert-type scale ranging from 1 (*not at all important*) to 7 (*very important*) how important factors such as the child's disposition and the parent's behavior were in determining the quality of the interaction. The amount of power or control attributed to oneself versus children is the key dimension of interest. This measure yielded four variables: (1) attributions regarding uncontrollable success (six items; e.g., "how lucky you were in just having everything work out well"); (2) attributions regarding adult-controlled failure (six items; e.g., "whether you used the wrong approach for this child"); (3) attributions regarding child-controlled failure (six items; e.g., "the extent to which the child was stubborn and resisted

your efforts"); and (4) perceived control over failure (the difference between attributions regarding adult-controlled failure and attributions regarding child-controlled failure).

Second, parents completed the Parental Modernity Inventory (Schaefer & Edgerton, 1985), which assesses parents' attitudes about childrearing and education. Each of 30 statements is rated on a 4-point Likert-type scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). This instrument yielded three variables: (1) progressive attitudes (8 items; e.g., "Children have a right to their own point of view and should be allowed to express it"); (2) authoritarian attitudes (22 items; e.g., "The most important thing to teach children is absolute obedience to their parents"); and (3) modernity of attitudes (the difference between the progressive attitudes score and the authoritarian attitudes score). Alphas for each variable are shown in Table 2.

RESULTS

As shown in Table 2, mothers and fathers reported attributions near the scale mid-points. The responses were relatively consistent, yielding moderate standard deviations. However, variability was greater for attributions regarding uncontrollable success than for attributions regarding adult- or child-controlled failure. Between the two sets of parental attitude questions, mothers and fathers reported greater progressive attitudes than authoritarian attitudes. Like the attribution variables, there was moderate variability.

Gender Similarities and Differences in Parents' Attributions and Attitudes

Repeated-measures linear mixed models with gender of parent as the within-subjects fixed factor tested for differences between mothers and fathers in attributions for success and failure in caregiving situations and progressive versus authoritarian attitudes. Test results are presented with and without controls for mothers' and fathers' ages, educations, and possible social desirability bias. The seven parental attribution and attitude measures were the outcome variables on which maternal and paternal means were compared. The results are reported in Table 2. There were no significant or practically meaningful mean differences between mothers and fathers on any of the seven outcome variables. Controlling or not controlling parental age, education, and possible social desirability bias yielded the same null results that the two sets of means profiling two parental roles were almost identical.

Within-Family Correlations Between Parents' Attributions and Attitudes

We also conducted zero-order correlations of mothers' attributions and attitudes with fathers' attributions and attitudes. These are reported in the last columns of Table 2. There were significant correlations between mothers and fathers on attributions regarding uncontrollable success, authoritarian parenting attitudes, and modernity of attitudes. There was no significant interparental correlation for progressive parenting attitudes or the other attribution variables.

TABLE 2
Parenting Attributions and Attitudes: Alphas, Tests of Gender Differences, and Correlations for Mothers and Fathers ($n = 232-241$)

	Mothers (α)	Fathers (α)	Mothers		Fathers		F^a	d	d^a	r	r^a
			M	SD	M	SD					
Attribution											
Uncontrollable success	.67	.70	4.36	1.11	4.18	1.15	3.86	3.72	.16	.16*	.14*
Adult-controlled failure	.61	.65	4.59	.77	4.58	.73	.00	.16	.01	-.03	.09
Child-controlled failure	.63	.54	3.99	.79	4.03	.78	.27	.04	-.05	.02	.08
Perceived control over failure	—	—	.59	1.02	.55	1.18	.16	.15	.04	-.03	-.01
Attitudes											
Progressive attitudes	.70	.66	3.22	.38	3.17	.31	3.07	2.32	.15	.13	.09
Authoritarian attitudes	.85	.83	2.41	.35	2.43	.34	.70	.00	-.06	.00	.39***
Modernity of attitudes	—	—	.81	.51	.74	.45	3.33	1.41	.14	.10	.25***
Note. Linear mixed models with gender of parent as the within-subjects factor. Cohen's d was computed using Equation 3 for paired samples in Dunlap, Cortina, Vaslow, and Burke (1996).											
^a Controlling for parents' age, education, and possible social desirability bias.											

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

Note. Linear mixed models with gender of parent as the within-subjects factor. Cohen's d was computed using Equation 3 for paired samples in Dunlap, Cortina, Vaslow, and Burke (1996).

^aControlling for parents' age, education, and possible social desirability bias.

DISCUSSION

These results are consistent with our expectation that mothers' and fathers' mean levels of attributions regarding successes and failures in caregiving situations and parenting attitudes would not show differences between parents. The current generation of Chinese parents does not seem to observe traditional parental prescriptions that differ between fathers and mothers either by Chinese (Ho, 1986) or Western cultural norms (A. Russell & Saebel, 1997). Our interpretation of the findings points to the extraordinary and historically unprecedented social transformation that has taken place in China in the past 30 years corresponding to the entire life of a generation of Chinese parents sampled in the present study. According to cultural evolutionary theory, this kind of intergenerational change in an otherwise traditional culture contributes to sudden environmental variability, and deviating from the existing norms and abandoning traditional ways of doing things may be the best adaptation (Boyd & Richerson, 2005). Many of the social norms and traditions are prescribed in social roles and role differentiations of a society (e.g., Ho, 1986; Shek, 1998). The lack of parental role differentiations observed in the present study supports the cultural evolutionary prediction.

Cultural evolutionary theory also predicts behavioral shifts from social learning to individual learning and from conformist to individualistic behavioral orientations (Boyd & Richerson, 2005; Chang et al., 2011; Mesoudi, 2008, 2009). When the environment is more variable and less predictable, culturally adaptive behaviors tend to be individualistic and innovative to respond to the environmental change. When the environment is stable and predictable, cultural adaptations follow the domain constrained route to result in more rigid and scripted behaviors that are copied by the masses. These predictions are partly supported by the within-couple comparisons in the present study. Not reported here, we also examined paired differences on the attribution and attitude variables within each couple. The results showed large within-couple differences which were also nondirectional; that is, mothers or wives could be either higher or lower than their husbands suggesting complete interparental disjointedness. The absolute values of these differences represent a large effect size, averaging 1.0 to 0.8 standard deviations. These results suggest that Chinese couples may be taking an individualistic rather than collectivistic approach toward coparenting their children. Further evidence derives from comparing attributions regarding parent-controlled failure versus attributions regarding child-controlled failure. The difference by subtracting child-controlled failure attributions from parent-controlled failure attributions (Table 2) was much higher than that of Western reports (Rudy & Grusec, 2001), suggesting that Chinese parents took more personal control responsibility for the outcome of parent-child interactions. Subtracting authoritarian from progressive parenting attitudes also resulted in large and positive differences (Table 2), suggesting nontraditional, nonhierarchical, modern, and egalitarian attitudes about parenting. Deviating from Chinese traditions (Ho, 1986), these attitudes should facilitate children's learning innovative strategies to deal with the changing environment (Mesoudi, 2008, 2009).

Limitations and Directions for Future Research

Culture is multilayered, and its influences on behavior are multifaceted, including distal, proximal, and dynamic effects. However, because of the multilayered and multi-dimensional nature of culture, it is difficult or impossible to separate one kind of cultural

effect from another. The present study is so framed that cultural change is hypothesized to have influenced the observed parental attributions and attitudes. However, no experimental or quasi-experimental efforts were made to separate the potential dynamic cultural effect from other kinds of contextual influences. The observed nontraditional parental attitudes may also be the result of proximal cultural influences representing the outcome of globalization and the current status of China's socioeconomic development rather than cultural change itself. Chinese cultural heritages are vast and diverse including Daoism and Buddhism as well as Western and Christian traditions that have been imported to China since the 19th century. Any of these ideologies, rather than the conformist Confucianism alone, also may contribute to the contemporary Chinese cultural tapestry and national psyche. Future research can try to manipulate specific cultural components in an experiment or quasi-experiment or compare intact groups that differ on specific cultural facets to reach more conclusive inferences about cultural influence.

Another limitation is that our interpretation of and hypotheses leading to some of the findings relied on implicit inference rather than historical data. We attribute the lack of within-couple agreement, on the one hand, and the lack of parental role differentiation, on the other hand, to an individualistic shift in cultural orientation as a result of the past 30 years of social transformations in China. However, we do not have data on the same variables 30 years ago to make statistical comparisons between now and then. Instead, we relied on existing literature portraying Chinese parenting as traditionally role oriented (Ho, 1986) that has been changing to be more individualistic (e.g., Chuang & Su, 2009a, 2009b). Although these are true about Chinese culture and its change, the specific parental attitudes and behaviors observed in the present study may have resulted from many factors including what we hypothesized. The parental attitudes and behaviors we examined are also too narrow to capture the broad social changes taking place in China. Future research can make empirical comparisons between a less or more slowly changing region and a faster changing region of China to investigate the expected differences in a larger set of parental attitudes between the two locations.

A third limitation concerns the low reliability of the father-reported child-controlled failure attribution measure. This measure was based on fathers' report of experiences interacting with children living in the residential neighborhood. It is rare for adults to interact with others' children in contemporary urban Chinese living. Unlike in the past, neighbors in urban residential neighborhoods of China have increasingly fewer contacts with one another (Liao, 1997; Q.-H. Wang & Wang, 2009; Zheng, 2000). The lack of experience of caring for neighbors' children could have made it difficult for parents to gauge this kind of response.

Conclusions

Chinese parents' attributions regarding successes and failures in caregiving situations and progressive versus authoritarian attitudes show low parental role differentiation. These findings should help to rectify the widespread portrayal of Chinese parenting by the existing literature as Confucian and following traditional social and gender roles. There are many explanations of these findings. One interpretation is that culture evolves in a process by which sudden and drastic social changes as experienced by a generation of Chinese may affect behavior in the direction of being more individualistic rather than conforming to social roles and traditions.

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