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Compliance in Chinese and Canadian toddlers: A cross-cultural study

Xinyin Chen\textsuperscript{a}, Kenneth H. Rubin\textsuperscript{b}, Mowei Liu\textsuperscript{a}, Huichang Chen\textsuperscript{c}, Li Wang\textsuperscript{d}, Dan Li\textsuperscript{e}, Xiangping Gao\textsuperscript{e}, Guozhen Cen\textsuperscript{e}, Haigen Gu\textsuperscript{e}, and Boshu Li\textsuperscript{e}

Observational data concerning children's compliance were collected from samples of 2-year-olds in PR China and Canada. Information on child-rearing attitudes was obtained from mothers. It was found that Chinese toddlers had higher scores on voluntary committed compliance than their Canadian counterparts. In contrast, Canadian toddlers had higher scores on externally imposed or situational compliance and overt protest than Chinese toddlers. Girls displayed more committed compliance than boys in both samples. Maternal warmth and induction were positively associated with committed compliance in Chinese toddlers, and maternal induction was positively associated with situational compliance in Canadian toddlers. Maternal punishment orientation was negatively associated with committed compliance and positively associated with situational control in Chinese toddlers, but not in Canadian toddlers. The results might indicate specific cultural "meanings" of different forms of child compliance.

To subdue one's self and return to propriety is perfect virtue. If a man can for one day subdue himself and return to propriety, the under heaven will ascribe perfect virtue to him.

\textit{Confucius, the Analects, xii}

Introduction

In most societies, an important socialisation goal is to help children learn to voluntarily control their behaviour in accord with societal expectations and standards (Maccoby & Martin, 1983; Whiting & Edwards, 1988). Typically, such socialisation efforts begin in the first or second year of life when parents place demands on their children for self-control and when children demonstrate an awareness of social demands and abilities to direct their own behaviour (Edwards, 1995; Kopp, 1982; Whiting & Edwards, 1988).

In early childhood, self-control often occurs in the form of compliance (1) to initiate, maintain, or modify particular actions, and (2) to delay or inhibit certain behaviours, in response to adults’ requests and demands (Kopp, 1982). During the toddler years, parents may be particularly concerned with children’s self-control because rapid growth in children’s locomotor and linguistic abilities and their seemingly autonomous pursuits pose a considerable challenge to the caregiver (Schaffer & Crook, 1980). From a developmental perspective, control of the young child’s behaviour is initially imposed and maintained by external demands; gradually, control comes to be mediated by internal factors (Kopp, 1982). Thus, parents initially help their children exercise control and restraint through the issuing of frequent requests and directives (Kuczynski & Kochanska, 1990). Progressively, regulation of the child’s behaviour shifts to the child him- or herself, and parents increasingly assume the role of distal monitors; thus, children come to “internalise” social standards and begin to regulate their behaviours without intervention from parents (Kochanska & Aksan, 1995).

The transition from externally prompted control to internalised self-generated regulation is a progressive process, driven by both maturational factors and experience (Kopp, 1982; Vaughn, Kopp, & Krakow, 1984). Consistently, researchers have shown that, with age, children display increasingly mature forms of self-regulation (e.g., Vaughn et al., 1984). Nevertheless, it is the case that the extent to which children develop self-regulatory abilities varies from one individual to another (e.g., Block & Block, 1980; Rexford, 1978). For example, at the ages of 2 and 3 years, some children are generally cooperative and compliant, whereas others are more disobedient and defiant (e.g., Kochanska, 1995). Moreover, individual differences in control behaviour during the early years appear to be stable over time and predictive of later social adaptation and maladaptation (e.g., Block & Block, 1980; Kuczynski & Kochanska, 1990; Patterson, 1982). For example, it has been found that self-restraint and compliance may serve as a basis for the internalisation of social rules and values and for the development of socially and morally appropriate behaviours (Kochanska & Aksan, 1995). In contrast, noncompliant and defiant behaviour may be associated with later socioemotional problems of an externalising nature (Patterson, 1982).
**Culture and child compliance**

A variety of social and cognitive processes, including attention, language, memory, social communication and interaction, and sense of self, are involved in the development of self-control and compliance (e.g., Kochanska, 1995; Kopp, 1982). Little attention has been paid, however, to the role of cultural factors, despite an existing literature on the significance of context and culture for behavioural development (Hinde, 1987; Super & Harkness, 1986; Vygotsky, 1987). Although the emergence of self-control may be considered a significant early achievement in most societies, different values may be placed on the phenomenon, and different schedules may be prescribed for its development, depending on the socialisation goals and requirements of the given culture. Consequently, culture may affect the developmental pace, timetable, and processes of compliance. Further, given cultural patterns of socialisation, child compliance may develop in different ways from one culture to another.

In Western cultures, compliance is encouraged during early childhood (Chamberlain & Patterson, 1995). Given cultural emphases on independence and self-assertion, Western parents have the difficult task of helping their young children learn to balance the needs of the self with those of others (Edwards, 1995; Kobayashi-Winata & Power, 1989). Further, in Western cultures, parents are encouraged to be sensitive to their children's needs and to understand children's abilities and behaviours from a developmental and “child-centred” perspective (Rubin, Stewart, & Chen, 1995). Consequently, Western parents may expect, evaluate, and respond to their children’s abilities to exercise self-control by using different standards at different developmental stages and across varying contexts (e.g., Goodnow, 1995).

Compared with Western cultures, Chinese culture values and emphasises self-control and compliance in a more consistent and absolute manner (Chao, 1995; Ho, 1986). Chinese culture, mainly represented by Confucian ideologies, may differ from Western cultures in many aspects. However, collectivism is a major characteristic of the Chinese society (see Hofstede, 1980; Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994). As a value system, collectivism emphasises the welfare and interests of the group, especially when they are in conflict with those of the individual, because achieving and maintaining social order and stability are the primary concerns. Individuals are encouraged to control their personal needs and desires to achieve group success (Kim et al., 1994). Consistent with the general socialisation goals, Chinese culture emphasises compliance to authority from a very early age (e.g., Ho, 1986; Luo, 1996). According to traditional Confucian views, human beings are innately endowed with empathic feelings, compassion, or “human heartedness”, which constitute the root of ren (virtue). The cultivation and strengthening of these feelings and innate virtues, by following the dictates of li (propriety)—a set of rules for actions—are believed to result in a harmonious society (Luo, 1996). Consistently, children are encouraged to restrain their personal desires and impulsive acts and develop cooperative and compliant behaviours in social interactions. For example, the Confucian doctrine of “filial piety” dictates that children pledge obedience and reverence to parents (Ho, 1986). Failure to show filial piety may result in the receipt of harsh discipline. Compliance, or shun cong in Mandarin, indicates how one “follows the direction of others (the authority) without rebellion and defiance” (Modern Chinese Dictionary, 1996). Compliance in parent–child interactions in childhood is considered an exhibition of guai (being well-behaved) and tin hua (being polite, listening to adults' words), which are the most commonly used terms to praise a child in China. In contrast, noncompliance is often regarded as a most serious behavioural problem during childhood and adolescence. Not only are children encouraged to comply with parental demands, but also to understand and accept more general social expectations and requirements concerning their conduct. These understandings, in turn, are thought to help children demonstrate self-controlled behaviour (Luo, 1996).

Given the emphasis on self-control and self-restraint in Chinese culture, one may question whether it is the case that Chinese children are more compliant than their North American counterparts; further, one may ask how early it is in development that such differences become noticeable. In short, do Chinese toddlers demonstrate more “on-task” behaviour than North American toddlers in response to adult requests for compliance? Moreover, are they more likely to display restrained behaviour to prohibitions? These questions were addressed in a study of Chinese and Canadian toddlers.

**Child-rearing attitudes and child compliance**

Cultural norms and values are often reflected in the beliefs held by parents. These culturally based beliefs, including socialisation goals and expectations, may function as guides for the organisation of parental attitudes and affective reactions toward the child, parental behaviours, and parent–child relationships. It is believed that child-rearing attitudes are important “cultural mediators” (Saarni, 1998); thus, an examination of relations between parental child-rearing attitudes and child behaviour may enable an understanding of how cultural factors are involved in individual development (e.g., Goodnow, 1995; Holden, 1995).

Chinese parents may differ from Western parents in parenting styles and practices such as parental control and affective expressiveness (e.g., Chen, Hastings, Rubin, Chen, Cen, & Stewart, 1998; Kelley, 1992; Lin & Fu, 1990; Steinberg, Dornbusch, & Brown, 1992; Wu, 1981). It has been found, however, that consistent with the results in Western cultures (e.g., Hart, DeWolf, Wozniak, & Burt, 1992; Rose-Krasnor, Rubin, Booth, & Coplan, 1996; Weiss, Dodge, Bates, & Pettit, 1992), attitudes pertaining to parental warmth and the endorsement of inductive parenting styles are associated with adaptive development in Chinese children (e.g., Chen, Liu, & Li, 2000b; Chen, Rubin, & Li, 1997b; Chen, Wu, Chen, Wang, & Cen, 2001; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Hart, Olson, Robinson, & Mandleco, 1997; Lau & Cheung, 1987). In contrast, power-assertive child-rearing attitudes are associated with adjustment problems (e.g., Chen, Dong, & Zhou, 1997a; Chen et al., 2001; Dornbusch et al., 1987). It has been argued that regardless of the culture, when parents are sensitive to their children's needs and abilities, and when parental expectations and requests are reasonable and appropriate, children are likely to feel secure and accepted and, thereby, to follow parents’ suggestions and advice. Since power-assertive parents provide little explanation, guidance, and emotional support in child-rearing, their children may be less likely than others to develop an autonomous understanding of social standards and to display voluntarily and willingly compliant behaviours that are
maintained by “internalised” social expectations (Chamberlain & Patterson, 1995; Chen et al., 1997a; Lau & Cheung, 1987; Rohner, 1986).

Thus, we hypothesised in the present study that, in general, maternal warmth and inductive child-rearing attitudes would be associated with more mature forms of compliance in both Chinese and Canadian children. Moreover, we expected that power-assertive parenting styles such as a punishment orientation would be associated with a relatively low level of compliance such as noncompliance and defiance in children.

**Sex differences in compliance**

Finally, sex differences in compliance have been reported among Western children (Maccoby, 1990). Girls are consistently found to be more compliant and cooperative and less rebellious than boys in parent–child and peer interactions (Jacklin & Maccoby, 1978; Kochanska, 1995; Schneider-Rosen & Wenz-Gross, 1990). For example, Schneider-Rosen and Wenz-Gross found that girls were more likely to comply with maternal demands on a clean-up task, and displayed longer latency to touching attractive stimuli when they were requested to inhibit their behavioural impulses. Sex differences in such social behaviours as altruism and aggression have been found among Chinese children as well as those in many other cultures (e.g., Chen, Li, Li, Li, & Liu, 2000a; Whiting & Edwards, 1988). Given the argument that early compliance may be a developmental antecedent or origin of social functioning (Kochanska, 1995; Patterson, 1982), it seemed important to consider whether the compliant behaviours of boys and girls would differ in the Chinese and Canadian samples. Given that in both Chinese and North American cultures, girls may experience greater socialisation pressure than boys to develop self-control and obedient behaviour (e.g., Ho, 1986; Kochanska & Aksan, 1995; Maccoby, 1990), we expected that girls would have higher scores on committed compliance and lower scores on noncompliance and defiance in both samples.

In summary, the primary purpose of the study was to examine whether there were differences between Chinese and Canadian toddlers on behavioural compliance. To understand the cultural meaning of compliance from a socialisation perspective, we examined the relations between child-rearing attitudes and child compliance in each sample. We were also interested in sex differences in compliant behaviours. We believed that the study would help us understand the importance of cultural context for early behavioural functioning.

**Method**

**Participants**

The data for this study were drawn from a larger cross-cultural project on children’s socio-emotional development. Findings concerning behavioural inhibition in a subsample of the present group of toddlers have been reported elsewhere (Chen et al., 1998). Two hundred and twenty-eight Chinese children (108 boys and 120 girls) residing in two cities of PR China, and 108 Canadian children (54 boys and 54 girls) residing in Southwestern Ontario, participated in this study. Toddler mean age was 24.4 months ($SD = 2.2$) for the Chinese and 24.9 months ($SD = 1.1$) for the Canadian children. Mothers’ mean ages were 30.1 and 31.0 years ($SD = 3.2$ and 4.1; range 23–41) in the Chinese and Canadian samples, respectively.

The participants were randomly selected through newspaper birth announcements and recruited through telephone solicitation in Canada and local birth registration offices in China. Ninety-seven per cent of the Canadian toddlers were Caucasian and all participants in China were Chinese.

In both samples, children were from average SES families. In the Chinese sample, 39% of mothers had an educational level of high school or below high school, and 61% of mothers had received a vocational school, college, or university education. In the Canadian sample, 30% of mothers had no more than a high school education; 70% of mothers had a college, university, or postgraduate education. At the time of data collection, 97% of the Chinese mothers and 52% of the Canadian mothers were working outside of the home. Nonsignificant differences were found on the child and maternal variables between children from families with different maternal education and employment status.

Seventy-three per cent of the Canadian toddlers had one or more siblings. However, due to the “one-child-per-family” policy that was implemented in the late 1970s, 96% of the Chinese toddlers were only children; like the other demographic factors, the only child phenomenon has been an integral part of the family and sociocultural background for child development in contemporary China. Nonsignificant differences on the compliance and maternal variables were found between only children and those with siblings as well as between first-born and later-born children in the Canadian sample. Thirty-one per cent of the Chinese children and 24% of the Canadian children had out-of-home daycare experience (attending daycare for 10 hours or more per week for 6 months). Nonsignificant differences were found between children with different daycare experiences in each sample on compliance; maternal variables were likewise nonsignificant.

The two randomly selected samples were representative of the urban population of toddlers in each country. Complete child-rearing data were obtained from 179 mothers in the Chinese sample (86 boys and 93 girls) and 86 mothers in the Canadian sample (46 boys and 40 girls). Other mothers did not complete the child-rearing measure or filled it in incompletely or incorrectly. Nonsignificant differences were found between children who had maternal report data and those who did not on child compliance.

**Procedure**

We assessed children’s behavioural compliance by observing their reactions on a clean-up task and on a behaviour-delay task. These procedures have been used by many researchers of child compliance (e.g., Abe & Izard, 1999; Feldman, Greenbaum, & Yirmiya, 1999; Kochanska & Aksan, 1995; Schneider-Rosen & Wenz-Gross, 1990; Vaughn et al., 1984). Specifically, mothers and toddlers were invited to visit the university laboratory within 3 months of each toddler’s second birthday. During the visit, each toddler–mother dyad entered an unfamiliar room comprising one large and one small chair, a low table, and an assortment of attractive toys. The child was allowed to play with the toys for 10 minutes while the mother sat in the large chair and filled out a questionnaire. The experimenter, whom the child had already met, entered with a basket and asked the mother to encourage the child to clean up.
the toys. The clean-up session lasted for approximately 4 minutes. Both the pilot and formal experiments indicated that children did not display excessively negative reactions during this session. All children, except two in the Chinese sample, did not complete the task during the time.

After the clean-up session, the child was observed in a series of sessions for the assessment of behavioural inhibition (see Chen et al., 1998, for detailed descriptions). Then, the experimenter brought into the room a packet of crayons and several pieces of white paper. The experimenter described and demonstrated crayon use. After ensuring that the child displayed interest, the experimenter told the child to wait to play with the crayons until she returned to the room “in one minute”. The mother was asked not to intervene during this session. The procedure and materials were identical in the Chinese and Canadian laboratories.

The administration of the laboratory sessions was conducted by the authors, as well as by graduate and senior undergraduate students in China and Canada. The researchers were trained following the same procedure. All laboratory sessions were videotaped through a one-way mirror and coded in Canada. Written consent was obtained from parents of all participants in Canada and China. The families received $30 in Canada and a gift worth approximately 100 yuan in China for their participation.

Child compliance. Adapted from Kochanska and Aksan (1995), a compliance coding scheme was used to code child behaviours every 10 seconds during the clean-up session. Four codes were used, including committed compliance, situational compliance, passive noncompliance, and overt protest. Committed compliance was coded when the child worked willingly and wholeheartedly. The child set his/her goals (e.g., moving spontaneously from one pile of toys to the next), and the work was not contingent on maternal sustained control. Situational compliance was coded when the child was generally cooperative, but required sustained or repeated maternal control to stay on task. Without maternal intervention, the child was likely to get distracted and/or cease working. Passive noncompliance was coded when the child did not stay on task on his/her own, and when prompted, ignored the mother. Overt protest was coded when the child did not stay on task, and when prompted, displayed defiant behaviours, with strong negative emotions. Finally, uncodable or time out was coded when the child focused on other activities, or the child was out of camera range. The four compliance codes were of interest in the analysis. Relative frequency scores (score for each category divided by the total segments) were calculated for each child and used in the analysis. In addition, the latency to touch the crayons was recorded to index child compliance to prohibition in the crayon-paper session.

The data for both Chinese and Canadian toddlers were coded by two Chinese students in the Psychology department of a Canadian university; they were fluent in both English and Chinese languages. The coders were trained by the first author following the same procedure. Reliability, using percentage of agreement and Cohen’s k, was computed for 10% of each sample. The inter-coder reliability (Cohen’s k) for the compliant behaviours on the clean-up task was .86.

Child-rearing attitudes. Mothers completed the Child-Rearing Practices Report Q-Sort (CRPR; Block, 1981). The CRPR includes 91 items describing child-rearing attitudes, values, beliefs, and behaviours, written on individual cards. Mothers sorted the cards into seven piles (13 cards each), from “least descriptive” to “most descriptive”. Consequently, item scores ranged from 1 (least descriptive) to 7 (most descriptive). The Chinese version of the CRPR was translated and back-translated by the research team. In the present study, indices of warmth/acceptance (e.g., “My child and I have warm, intimate times together”; “I express affection by hugging, kissing and holding my child”), induction/reasoning (e.g., “I respect my child’s opinions and encourage him/her to express them”; “I talk it over and reason with my child when he/she misbehaves”), and punishment orientation and harshness (e.g., “I believe physical punishment to be the best way of disciplining”; “I believe that scolding and criticism make my child improve”) were formed based on previously published research (e.g., Block, 1981; Lin & Fu, 1990) as well as on iterative processes of discussion in our collaborative Canadian-Chinese research group. The score of each child-rearing variable was computed by dividing the total item score by the number of items in the category. Test–retest reliabilities with an interval of 2 weeks based on a subsample of Chinese mothers (n = 40) were .61, .71, and .70 for warmth, induction, and punishment orientation, respectively. This measure has been used and has proved reliable, valid, and appropriate in Chinese and other Asian samples in previous studies (Chen, et al., 1997a; 1998; Lin & Fu, 1990; Zahn-Waxler, Friedman, Cole, Mizuta, & Hiruma, 1996).

Results

Intercorrelations among child compliance variables

The results indicated that committed compliance, situational compliance, and passive noncompliance were negatively correlated with each other in both the Chinese and Canadian samples. Committed compliance and situational compliance were negatively correlated with overt protest in both samples. Passive noncompliance was positively correlated with overt protest in the Canadian sample but not in the Chinese sample. Compliance to prohibition was positively correlated with committed compliance and negatively correlated with situational compliance in the Chinese sample. There were nonsignificant differences between the samples in the magnitude of the corresponding correlations. The results are presented in Table 1. These results were generally consistent with other reports (e.g., Kochanska & Aksan, 1995).

Comparisons across cultures and sex on child compliance

The means and standard deviations of boys and girls for each sample are presented in Table 2. The compliance variables in the clean-up session were relative frequency scores. The scores, which were proportions of the total segments, did not add up...
Compliance to prohibition (28.74 (34.40 (21.15 (20.46 9.33** 0.55 0.34
Overt protest (.06 (.03 (.10 (.07 3.90* 3.00 0.01
Passive noncompliance (.22 (.18 (.25 (.17 0.14 9.26** 0.70
Culture, Wilks (ratio of within group or residual variance controlled as covariates in the MANCOVA and the subsequent
treatment status, maternal education, and family size were
overall effects of culture and sex on the five compliance
variables. Child daycare experience, maternal current employment
status, maternal education, and family size were controlled as covariates in the MANCOVA and the subsequent
ANCOVA analyses. The analysis revealed significant main effects of Culture, Wilks (ratio of within group or residual variance relative to the total variance of the dependent variables) = .87,
F (5, 324) = 11.17, p < .001, and Sex, Wilks = .95, F (5, 324) = 3.67, p < .01, on the overall compliance variables. The effects of the covariates were nonsignificant. There was a nonsignificant interaction between culture and sex.
Follow-up univariate analyses of covariance (ANCOVA) indicated that there were significant sex differences on committed compliance and passive noncompliance. Boys had significantly lower scores on committed compliance and higher scores on passive noncompliance than girls. Main effects of culture were found on committed compliance, situational compliance, overt protest, and compliance to prohibition. Chinese children had significantly higher scores on committed
compliance and compliance to prohibition, and lower scores on situational compliance and overt protest than the Canadian children.

Relations between child compliance and child-rearing attitudes
We first conducted regression analyses to detect cultural differences in the relations between child-rearing variables and child compliance, following the procedure suggested by Pedhazur (1982). In the analyses, child compliance variables were criterion variables. Child sex, daycare experience, family demographic variables (maternal employment, education, and
family size), and the main effects of maternal child-rearing
variables and culture were controlled first. The interaction
between culture and each of the child-rearing variables was
then entered into the equation. The results indicated significant interactions between culture and maternal warmth in predicting committed compliance, situational compliance, and overt protest. Significant interactions were also found between culture and maternal induction in predicting committed compliance and situational compliance. Finally, culture ×
maternal punishment orientation interactions were significant in predicting situational compliance and compliance to prohibition. There were no significant interactions between the demographic variables, child-rearing variables, and culture in the regression analyses. The results concerning culture ×
maternal child-rearing attitude interactions are presented in Table 3.
To examine the culture × child-rearing attitude interactions, follow-up regression analyses were conducted for the relations between maternal child-rearing variables and child compliance separately for each of the samples. In the analyses, child sex, daycare experience, and the family demographic variables were entered first to control for the effects of these variables. Each of maternal child-rearing variables was entered in the next step. The main effects of child-rearing variables for the two samples are presented in Table 4.
For the interactions between culture and maternal warmth, the results indicated that maternal warmth was positively associated with committed compliance and negatively associated with situational compliance in the Chinese sample; the associations were nonsignificant in the Canadian sample.

Table 1
Intercorrelations among compliance variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>China</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td></td>
<td>(n = 108)</td>
<td>(n = 120)</td>
</tr>
<tr>
<td></td>
<td>(n = 54)</td>
<td>(n = 54)</td>
</tr>
<tr>
<td>Committed compliance</td>
<td>.16</td>
<td>.26</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>.20</td>
<td>.33</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>.22</td>
<td>.18</td>
</tr>
<tr>
<td>Overt protest</td>
<td>.06</td>
<td>.03</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>28.74</td>
<td>34.40</td>
</tr>
</tbody>
</table>

Child daycare experience, maternal employment status, education and family size were controlled as covariates in the ANCOVA analyses.

Table 2
Means (and standard deviations) of compliance scores and ANCOVA results
Maternal warmth was negatively associated with overt protest in the Canadian sample; the relation was nonsignificant in the Chinese sample. For the interactions between culture and maternal induction, the parenting variable was positively associated with committed compliance and negatively associated with compliance to prohibition in the Chinese sample, but not in the Canadian sample, although the culture × maternal induction interaction was not significant. Similarly, although the culture × maternal punishment orientation interaction was not significant, maternal punishment orientation was negatively associated with committed compliance in the Chinese sample, but the association was nonsignificant in the Canadian sample.

**Discussion**

Self-regulation or self-control represents a significant characteristic that serves to modulate reactivity in potentially evocative situations (Rothbart & Bates, 1998). Likewise, it promotes the appropriateness of children’s behaviours during social interaction (Rothbart & Bates, 1998). Whereas sociability and social initiative are highly valued in American culture, they appear to be less so in Chinese culture (Chen, Rubin, & Li, 1995; Ho, 1986). On the other hand, cooperation and self-restraint may be considered more important in Chinese culture than in American culture (e.g., Chen, 2000; Ho, 1986). Cross-cultural research on child control behaviour may provide valuable information for the understanding of cultural influences on the development and organisation of competent behaviour.

The results of the present study indicated that Chinese toddlers differed from their Canadian counterparts in self-control, as reflected in behavioural compliance. These results, along with previous findings concerning behavioural wariness.

### Table 3

**Interactions between child-rearing attitudes and culture in predicting child compliance**

<table>
<thead>
<tr>
<th>Child compliance</th>
<th>Beta</th>
<th>R^2 ch</th>
<th>F ch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warmth × Culture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed compliance</td>
<td>-.16</td>
<td>.08</td>
<td>4.84*</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>.17</td>
<td>.02</td>
<td>5.71*</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>.09</td>
<td>.01</td>
<td>1.47</td>
</tr>
<tr>
<td>Overt protest</td>
<td>-.15</td>
<td>.02</td>
<td>3.85*</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>-.05</td>
<td>.00</td>
<td>.40</td>
</tr>
<tr>
<td>Induction × Culture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed compliance</td>
<td>-.15</td>
<td>.02</td>
<td>4.31*</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>-.24</td>
<td>.04</td>
<td>11.56***</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>-.02</td>
<td>.00</td>
<td>.06</td>
</tr>
<tr>
<td>Overt protest</td>
<td>-.05</td>
<td>.00</td>
<td>.39</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>-.10</td>
<td>.01</td>
<td>1.87</td>
</tr>
<tr>
<td>Punishment orientation × Culture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed compliance</td>
<td>.12</td>
<td>.01</td>
<td>2.67</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>-.21</td>
<td>.03</td>
<td>8.72**</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>.02</td>
<td>.00</td>
<td>.03</td>
</tr>
<tr>
<td>Overt protest</td>
<td>.09</td>
<td>.01</td>
<td>1.59</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>.16</td>
<td>.02</td>
<td>4.29*</td>
</tr>
</tbody>
</table>

The interactions terms were entered into the equation after child sex, demographic variables, and main effects of child-rearing variable and culture.

* p = .05; ** p < .01; *** p < .001.

Maternal warmth was negatively associated with overt protest in the Canadian sample; the relation was nonsignificant in the Chinese sample. For the interactions between culture and maternal induction, the parenting variable was positively associated with committed compliance and negatively associated with compliance to prohibition in the Chinese sample, but not in the Canadian sample, although the culture × maternal induction interaction was not significant. Similarly, although the culture × maternal punishment orientation interaction was not significant, maternal punishment orientation was negatively associated with committed compliance in the Chinese sample, but the association was nonsignificant in the Canadian sample.

### Table 4

**Regression analyses of child compliance based on child-rearing attitude variables**

<table>
<thead>
<tr>
<th>Child-rearing attitudes</th>
<th>China</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>R^2 ch</td>
</tr>
<tr>
<td>Warmth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed compliance</td>
<td>.19</td>
<td>.04</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>-.22</td>
<td>.05</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>-.05</td>
<td>.00</td>
</tr>
<tr>
<td>Overt protest</td>
<td>.04</td>
<td>.00</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>.04</td>
<td>.00</td>
</tr>
<tr>
<td>Induction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed compliance</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>-.19</td>
<td>.03</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>-.02</td>
<td>.00</td>
</tr>
<tr>
<td>Overt protest</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>.21</td>
<td>.04</td>
</tr>
<tr>
<td>Punishment Orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Committed compliance</td>
<td>-.21</td>
<td>.05</td>
</tr>
<tr>
<td>Situational compliance</td>
<td>.21</td>
<td>.04</td>
</tr>
<tr>
<td>Passive noncompliance</td>
<td>.06</td>
<td>.00</td>
</tr>
<tr>
<td>Overt protest</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>Compliance to prohibition</td>
<td>-.17</td>
<td>.03</td>
</tr>
</tbody>
</table>

Maternal child-rearing variables were entered into the equation after child sex, daycare experience, maternal employment status, education, and family size were controlled.

† p = .06; * p = .05; ** p < .01; *** p < .001.
and reactivity (Chen et al., 1998), provide an initial, cross-cultural, snapshot of how Chinese and North American toddlers differ in behavioural functioning. Cross-cultural differences in Chinese and Western children have been reported in various domains including personality, moral reasoning, social behaviour, and peer relationships (e.g., Chen, Rubin, Li, & Li, 1999; Eckblad & Olweus, 1986; Keller, Edelstein, Fang, & Fang, 1998; Orlick, Zhou, & Partington, 1990). For example, it has been found that Chinese children tend to be more prosocial and less disruptive in social interactions and group activities (e.g., Orlick et al., 1990). However, most such studies have been conducted in middle and late childhood and adolescence. The findings concerning early behavioural differences in Chinese and Western toddlers allow a better understanding of the origins of cross-cultural differences in social and emotional development.

It was first found that, consistent with our expectations, there were sex differences in behavioural compliance. Girls had higher scores on committed compliance and lower scores on passive noncompliance than boys in both samples. The results may be due to the fact that, in both Chinese and North American cultures, there may be greater socialisation pressure for girls to develop controlled, obedient, and self-regulated behaviour (e.g., Ho, 1986; Kochanska & Aksan, 1995; Maccoby, 1990). The extent to which the reported early sex differences are cross-culturally universal and whether biological factors play a role in the emergence of such differences are significant issues that require future study.

The results indicated that Chinese and Canadian toddlers differed in the "quality" of their compliant behaviours. Chinese children had higher scores than Canadian children on committed, internally driven compliance on the clean-up task, and during the crayon session for the assessment of self-generated internal control. In contrast, the Canadian children had higher scores on situational compliance that was maintained by mothers' immediate prompts. This form of compliance reflects a coregulatory process between mother and child; one that may be a necessary prerequisite phase in the course of developing "autonomous" self-control (Kochanska & Aksan, 1995; Kopp, 1982; Maccoby & Martin, 1983; Vaughn et al., 1984). Canadian toddlers were also more likely to display overt protests in response to maternal intervention. Taken together, the results suggested that Chinese toddlers tended to display more mature self-control behaviours than their Canadian counterparts.

The relatively higher level of self-control demonstrated by the Chinese children was consistent with the emphasis on self-constraint and compliance in Chinese culture. As suggested earlier, Chinese parents attempt to train their children in self-control from the very early years because individual voluntary self-discipline is believed to be essential for the harmonious functioning of the collective (Luo, 1996). Furthermore, since it is believed that achievement is a product of effort, Chinese parents appear to be highly persistent and devoted in training and educating their children toward socialisation goals (Stevenson, Lee, Chen, Stigler, Hsu, & Kitamura, 1990).

Emphasis on self-control is reflected in many aspects of parent–child interaction. For example, we observed informally during the period of data collection that, whereas most Canadian children, particularly boys, wore diapers at the age of 2 years, virtually all the Chinese toddlers had finished toilet training. Most of the Chinese children were toilet-trained by about the age of 1-year, and several parents indicated that they started to train their children at 6 months of age. The training of self-control and compliance may also be related to the physical constraints of the Chinese home environment. It has been reported that due to the limited space in the home, Chinese parents begin extensive training on self-restraint in their children when they begin to crawl (Dong, 1998). It should be noted that some important family demographic variables, including maternal employment status, education, and family size were controlled in the analyses, suggesting that the differences between Chinese and Canadian children on compliance might be brought about and maintained by various factors, beyond these variables, in broad social and cultural contexts.

Concerning the associations between child compliance and maternal variables, it should be noted that the present study was correlational; one should be careful in interpreting the relations between the maternal variables and child compliance in terms of causality. As we indicated earlier, we collected data concerning maternal child-rearing attitudes as possible indicators of cultural values, which may help us understand the "meanings" of compliant and noncompliant behaviours from a socialisation perspective. The results concerning significant culture × child-rearing attitude interactions and the follow-up within-sample analyses indicated that the patterns of the relations between child-rearing attitudes and child compliance were different in the Chinese and Canadian samples. The different patterns of the relations may reflect different parental perceptions of, and responses to, children’s regulatory behaviour in the toddler period, which, in turn, might constitute distinct socialisation contexts for the development of self-control in Chinese and Canadian children.

Specifically, it was found that maternal induction was positively associated with child situational compliance in the Canadian sample. The results suggested that externally supported control, as an intermediate stage that may be necessary for the development from lack of control to internalised, committed self-control, might be considered a normal type of behaviour for toddler-age children by Canadian mothers. In the Chinese sample, maternal warmth and induction were positively associated with committed compliance and negatively associated with situational compliance. The results indicated that Chinese mothers might have quite different views on child control (Wu, 1996). Since Chinese culture emphasises and values self-maintained control during the very early years, Chinese mothers might expect their toddlers to display internally controlled, committed compliance and, consequently, tend to express positive attitudes such as warmth toward children who displayed this form of compliant behaviour. In contrast, children who require external support for compliant behaviour may be considered socially and behaviourally incompetent. Accordingly, Chinese mothers might view situational compliance to be less acceptable, and in expressing disappointment or frustration, they might react with what Westerners would view as authoritarian parenting styles.

From a socialisation perspective, the results indicated that from the early years, maternal reasoning and responsiveness might be necessary for the development of self-control, including the emergence of control that was maintained by external prompts in Canadian children. Unlike in the Chinese culture in which parental power assertion and punishment orientation may be supported by cultural norms, harsh and high power parenting attitudes might not contribute to the
development of situational compliance (Patterson, 1982). The finding that punitive child-rearing attitudes were associated with situational compliance in Chinese toddlers, but not in Canadian children, seemed to support the argument that an authoritarian attitude may serve somewhat different functions in Chinese and Western cultures (Chao, 1994; Leung, Lau, & Lam, 1998; Steinberg et al., 1992). Nevertheless, our results also suggested that, even among Chinese children, punishment orientation may hinder the development of compliance at a higher level.

Since most Canadian mothers may not expect their 2-year-olds to exert internally directed self-control, their reactions to the child’s display of such behaviour may not form a consistent pattern. Thus, it may be understandable that maternal attitudes were nonsignificantly associated with the child’s committed compliance in the Canadian sample. Similar results have been found in a study conducted by Kochanska, Kuczynski, and Radke-Yarrow (1989) in a sample of US children at ages 16–44 months. Nevertheless, parents in North America expect increasing voluntary self-control from their children with age and, at the same time, help them to gradually learn voluntary control by using sensitive and inductive parenting strategies (Kopp, 1982; Maccoby & Martin, 1983). Thus, the relations between child-rearing attitudes and child situational and committed compliance may change as children mature. For example, the positive associations between maternal warmth and induction and situational compliance may become weaker or even negative whereas the associations between maternal warmth and induction and voluntary compliance may become increasingly evident with increasing child age. Consistent with this argument, in a recent study conducted with older children, Kochanska and her colleagues (e.g., Kochanska, 1995; Kochanska & Aksan, 1995) found that maternal gentle control (reasoning, guidance) was positively correlated with committed compliance. Similar findings have been reported in other studies (e.g., Parpal & Maccoby, 1985). Given the fact that girls appeared to have a higher level of self-control than boys, it is possible that the developmental changes in the relations between child-rearing attitudes and child compliance may occur earlier in girls.

Taken together, the relations between child-rearing attitudes and compliance appeared different in Chinese and Canadian toddlers, which might indicate culturally specific socialisation norms and values about child behaviours during early childhood. Nevertheless, there may be similar developmental trends across cultures; maternal warmth and sensitivity were associated with the higher level of compliance whereas maternal coercion and punishment orientation were associated with children’s poorer abilities to exercise control.

As the first step in exploring cultural involvement in the organisation of an important dimension of early behavioural functioning, the present study provided valuable information about cross-cultural differences in compliance between Chinese and Canadian toddlers. Although we focused mainly on possible explanations of the differences from a socialisation perspective, it is possible that dispositional factors may play a role in the development of compliance (Rothbart & Bates, 1998). Research on biological processes that are related to behavioural restraint and regulation, such as frontal brain asymmetric activities (Fox et al., 1995), may help us understand this issue further in the future.

There were several limitations and weaknesses in the study. First, our discussion of the cross-cultural differences in parental attitudes and child compliance involved socialisation expectations and beliefs. However, parental expectations were not assessed directly in the present study. To understand the mediational processes of socialisation, it is important to examine relations among cultural norms, parental socialisation goals and expectations, child-rearing attitudes, and parenting behaviours, and their contributions to child development in the future.

Second, we deliberately selected the two samples that were representative of the general population of urban toddlers in China and Canada. Obviously, the two samples were different in many aspects, including sibling status and family background. Alternative methods of sampling, such as the selection of specific groups that “match” on certain characteristics, may be considered in the future. Third, only mothers were included in the present study. The results concerning child-rearing attitudes and parenting strategies may not be generalised to fathers. Fourth, although the general patterns of relations between maternal attitudes and child compliance were found to be different, the magnitude of the associations within each culture was modest. In addition, it is important to examine how early compliance and socialisation contribute, independently and interactively, to developmental outcomes in within-culture and cross-cultural levels. Last, China is currently undergoing dramatic social and economic changes. Western values and ideologies have been introduced into the country along with advanced technology. Chinese family structure and organisation have been changing rapidly (Chen, 2000). Thus, in the future, it will be important to investigate how societal and family changes may influence socialisation patterns and children’s behaviours.

References


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