

## **Effects of interaction pattern on family harmony and well-being: Test of interpersonal theory, Relational-Models theory, and Confucian ethics**

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Two studies, involving 242 and 245 families, respectively, were conducted to explore the effects of family interaction on family harmony and well-being. Hypotheses were drawn from interpersonal theory, Relational-Models theory, and Confucian ethics. Each of the four members in a family, including father, mother, son, and daughter, completed a questionnaire designed to assess their behaviors toward each of the other three members. Six categories of interpersonal behavior were measured, including love, directing, domineering, hostility, submission, and respect. Both studies found that family affective interaction pattern following the Communal Sharing model contributed to family harmony and well-being. For each family relationship, the existence of particular forms of status differential (Authority Ranking) was beneficial, and several factors, such as role expectation and complementarity, moderated the effects of the status differential of a particular relationship. In general, positive effects were associated with interaction patterns which were consistent with Confucian ethics.

*Key words:* complementarity, Confucian ethics, family harmony, relational models.

### **Introduction**

Interpersonal harmony among family members is deemed very important in Chinese societies. The main goal of Confucian family ethics is to promote family harmony, thereby leading to an orderly and peaceful world (Bodde, 1953; King & Bond, 1985; Hwang, 1995). In addition to the function of maintaining social order, interpersonal harmony is also essential for maintaining individuals' well-being in Eastern societies (Kwan *et al.*, 1997). Although it is widely believed that living up to Confucian family ethics will enhance family harmony, this belief has not been empirically tested. Indeed, Confucianism is sometimes viewed as a system of philosophy, and is thus not testable.

Although family harmony may not be emphasized in Western culture as much as in Chinese culture, the issue of how interpersonal interaction may affect relationship satisfaction or harmony has been addressed by several major theories of interpersonal relationships (Carson, 1969; Kiesler, 1983; Fiske, 1991, 1992). These theories provide relevant constructs and principles that can be employed for examining the effects of Confucian ethics on family harmony. The present study explored what kind of family interaction patterns would lead to family harmony and well-being,

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thereby testing the plausibility of using Confucianism and Western interpersonal theories in explaining those findings.

### **Interpersonal complementarity and harmony**

Interpersonal complementarity is defined in terms of interpersonal behavior operationalized by a two-dimensional interpersonal circle (Carson, 1969; Kiesler, 1983). Eight major categories of interpersonal behaviors can be located counterclockwise around the control and affiliation dimensions: aggressive dominance, aggressive defiance (hostility), fearful defiance, fearful submission (submissive), trusting submission (respect), trusting affiliation, nurturing affiliation (love), and nurturing dominance (directing) (Myllyniemi, 1997). According to Carson (1969) and Kiesler (1983), complementarity occurs on the basis of: (i) reciprocity with respect to the control dimension (e.g. dominance draws submission); and (ii) correspondence with regard to the affiliation dimension (e.g. friendliness draws friendliness). Complementary interaction exists when Interactant B reacts to Interactant A with interpersonal acts that are reciprocal in terms of control, and corresponding in terms of affiliation. For example, Interactant B reacts to the aggressive-dominant behavior of Interactant A with fearful-submissive behavior. However, Wiggins (1982) proposes a different definition of complementarity, in which the complementary reaction to aggressive-dominant behavior is trusting-submissive rather than fearful-submissive behavior.

Previous studies focused on whether momentary social interaction between two strangers would follow the principle of complementarity (Sadler & Woody, 2003). Generally speaking, certain behaviours (e.g. friendly antecedent behaviour) (Tracey, 1994) and friendly-dominance behavior (Strong *et al.*, 1988) are more likely to elicit complementary responses, whereas behaviors like hostile-submissive behavior generally elicit non-complementary responses (Strong *et al.*, 1988).

Complementary interactions are hypothesized to be beneficial to individuals in relationships because they provide individuals with satisfaction of their need for love, dominance, or emotional security, as well as validation and acceptance of their self-concept (Sullivan, 1953; Carson, 1969; Kiesler, 1983; Tracey, 1993; Dryer & Horowitz, 1997; Myllyniemi, 1997). A study on short-term laboratory interactions (Dryer & Horowitz, 1997) showed that for dominance-submission interaction, the strongest predictor of satisfaction was the match between the stated wishes or goals of one participant and the behavior of the other, rather than behavioral complementarity alone. It can be expected that for long-term family interactions, whether complementary interactions will bring satisfaction to the interactants will depend more on the interpersonal status goals that they bring to the interaction situation, which is expected to vary with their social roles. The present study tested this prediction by examining whether the effect of a complementary pattern of interaction along the status dimension would vary with family relationships. For the affective interaction, however, the complementarity effect was not expected to vary with relationships.

Previous studies also focused on investigating the effect of dyadic interactions on the participants' satisfaction with the interactions (Dryer & Horowitz, 1997). However, assessing relationship harmony rather than relationship satisfaction is more appropriate in the study of Chinese families (Kwan *et al.*, 1997). As relationship harmony is more able to tap into the totality of dyadic relationships, it is also more appropriate to examine the complementarity effect on relationship harmony in the context of family interaction. In addition, it is important to examine the complementarity effect of dyadic interactions on the well-being of individuals in relationships because most interpersonal theories propose that interpersonal interactions affect individuals' need satisfaction and emotional feeling. It should be noted that the complementarity principle can be more appropriately applied to analyzing the effect of dyadic interaction along the status dimension.

For family affective interaction, however, there seems to exist a process that goes beyond the dyadic reciprocity process.

### **Relational-Models theory**

When studying family interactions, the relational models proposed by Fiske (1991, 1992) can help provide the basic terms to define family roles. Communal Sharing (CS) is a relation of unity, undifferentiated collective identity, and kindness. Authority Ranking (AR) is a relationship of hierarchical ordering of status and precedence, often accompanied by the exercise of command and complementary displays of deference and respect. Equality Matching (EM) is one-to-one correspondence relationship in which people are distinct but equal as manifested in balanced reciprocity.

In addition, the relational models also define the obligations and motivations for people in performing those roles. The Relational-Models theory proposes that social role duties and human needs are usually congruent because they are derived from the common fundamental models that people desire. The models also provide the basic ideals and standards that people use to evaluate each other's social action. It is suggested that positive feeling is associated with the participation in the desired model of family interactions, while negative feeling is associated with the failure of engagement. In the relational models, the complementary coordination of family interactions depends on whether the family members share a common model, as well as the members' implicit assumption that other members are following the same model. The discordance in models that family members use in structuring their relationships may result in disharmony and unhappiness.

The present study proposed that the degree to which CS is followed by a family could be indicated by three indices: total level of love displayed, symmetry (reciprocity) of love between dyadic relations, and equivalence (less differentiation) of love. This is based on Fiske's (1991) definition that CS is an equivalence relation, and the postulation that CS relationship can vary in strength (Clark & Chrisman, 1994; Haslam & Fiske, 1999). Among the three indices, the level and equivalence of love should be more able to reflect the state of the whole family system, while symmetry or reciprocity of love can only reflect the relationship at the dyadic level. The level and equivalence of love may be unique to CS. For instance, although following the EM model may enhance the reciprocity of love or hostility, it should have little impact on either the active display of love or the degree of equivalence. The effects of these constructs on family harmony and well-being were examined in this study.

Regarding AR, the concepts of interpersonal circumplex and complementarity can be used to help delineate the different forms of AR because several forms of AR involve not only the control dimension but also the affiliation dimension. The present study tested whether status differential that fits more with the characteristic form of AR would more likely be beneficial.

### **The Confucian tradition**

Some parallels can be drawn between relational models and the Confucian ideas regarding social interactions. Confucius advised that if every individual acts towards others in a proper way, then an orderly and harmonious world will be achieved (King & Bond, 1985). The proper way is prescribed as *li* (propriety) (i.e. a set of rules for action). Social interaction should begin with an assessment of the role of relationship between oneself and others along two social dimensions: intimacy/distance and superiority/inferiority.

According to Confucius, the essence of benevolence is 'loving others' or 'treating others in the same way as loving oneself', which corresponds to the concept of Communal Sharing.

However, as there is a boundary to which Communal Sharing can be applied, Confucius argued that the exercise of benevolence should begin with loving one's family. Respecting the virtuous or superior is called righteousness (*yi*). The principle of righteousness structures family relations into hierarchical dualities: father-son, older brother-younger brother, and husband-wife. The appropriate behaviors for these relationships advocated by Confucius can be applied to the different forms of Authority Ranking relationships. It is suggested that inferiors' respect or deference to superiors is contingent upon the condition that superiors fulfill their duty of caring for, protecting, and directing inferiors. Confucius did not endorse domineering control over inferiors, nor advise that inferiors should be unconditionally obedient to superiors. Even for the father-son relationship, the ideal form of filial piety is that children display respect toward their parents, rather than just being submissive or obedient toward their parents.

Although the ethical rules formulated by Confucius aim to achieve family and social harmony, the reason for their beneficial effect on family and social relationships was left unexplained. However, the principles proposed by interpersonal theories may provide some plausible explanations. Most of the ethical behaviors that Confucius had addressed, including love (benevolence), kindness, domineering, respect, deference, and submission, can be located in the circumplex model of interpersonal behaviors. Moreover, the ethical norms for major dyadic relationships seem to make complementary interactions more likely to occur. Findings from previous studies on complementarity of behavior (Strong *et al.*, 1988; Tracey, 1994) suggested that when children displayed respect or sincere deference to their parents, their parents were more likely to respond to them with directing, supportive, or nurturing behavior. These patterns of interaction are complementary or at least accomplementary (complementary on one but not on both dimensions). Confucius maintained that some form of hierarchical order should exist for different family relationships, and there are different role expectations for these relationships.

The Relational-Models theory may have significant implications for the new interpretation of Confucianism. The role of duty prescribed in the ethical system of Confucianism has been considered a constraint imposed by external authority, and is uncongenial to the development of the individuals' nature. Fulfilling those role duties prescribed by *li* may contribute to family harmony, but at the expense of individuals' interest or well-being (King & Bond, 1985). However, the Relational-Models theory argues that the role system constructed by using the fundamental models may be viewed as a kind of social duty, as well as the expression and pursuit of human desire and motives. In fact, Confucius held a similar viewpoint, arguing that the ethical system reflects the essence of human nature. It can be said that the core concepts of benevolence and righteousness in the Confucian role system basically correspond to CS and EM. If the argument that the fundamental models are based on social duty and human desire is plausible, it follows that the Confucian ethical system should lead to family harmony, as well as the well-being of family members.

## Summary of hypotheses

The present study explored the interaction patterns of four family members, including father, mother, son, and daughter. The patterns of affective interaction were analyzed primarily in terms of their fit with Communal Sharing. The patterns of status interaction were analyzed in terms of their fit with role expectation and complementarity. Based on the above theoretical analyses, the following hypotheses were proposed.

First, it was hypothesized that benevolence or CS is the core model of affective interaction for a family, so that the degree to which a family follows CS should be positively related to the

harmony of the family, as well as to the well-being of the family members. The two unique indices of CS, the total level of love displayed and equivalence of love, should independently contribute to family harmony and family members' well-being.

Second, it was hypothesized that the effects of a particular status differential on relationship harmony or individuals' well-being should depend on its fit with both the principle of complementarity, and the normative expectation for the relationship. The present study examined the degree of fit of these and their beneficial effects on the family.

## Method

### Sample

Two studies were conducted, with 242 and 245 families included, respectively. These families primarily lived in southern Taiwan, and their demographics are listed in Table 1. There was a difference in the average age of the children in the two studies. In Study 1, most of the children participants were college students (more than 50%), and the average age for daughters was 20.8 years old, while it was 20.2 for the sons. In Study 2, most of them were senior high school students (more than 40%), with the average age of daughters and sons being 19.4 and 19.7 years old, respectively.

**Table 1** Characteristics of the families sampled

	Study 1	Study 2
Number of families	242	245
Nuclear ( <i>vs</i> extended)	77%	85%
Average no. of family members	5.4	5.0
Urban ( <i>vs</i> rural)	64%	58.8%
Age (years)		
Father	50.2	49.2
Mother	46.6	46.1
Son	20.2	19.7
Daughter	20.8	19.4

### Procedure

Each of the four members in the family, including father, mother, son, and daughter, completed a questionnaire designed to assess his or her daily behaviors toward each of the other three family members. They had to rate how often they displayed a list of behaviors toward each of them. Their perception of family harmony was also measured. In study 2, a measure of individuals' well-being was also included. Each family that had completed the questionnaires was given US \$12 for their participation.

### Construction of interpersonal behavior scales

In Study 1, 33 items for assessing interpersonal behavior were written based on the circumplex model of interpersonal behavior, and the Confucian conception of family ethics. The correlation matrix of the 33 interpersonal behaviors for each relationship across all families was subjected to an oblique factor analysis. For eight of the 12 relationships, scree tests showed that six factors

**Table 2** Items for the six behavioral scales and the factor structure for the father-to-daughter relationship

Scales and Items	Factor				
	1	2	3	4	5
<b>Love (nurturing)</b>					
When necessary, I made a suggestion to her.	0.78				
I expressed affection to her.	0.51				
I was glad to help her to get a job done or to solve problems.	0.57				
I tried to find time to interact with her.	0.43				
<b>Directing (Friendly Dominance)</b>					
I made decisions for her on important matters.	0.71				
I reminded her of what she should do.	0.68				
I pointed out to her when she did not behave.	0.74				
<b>Domineering (Hostile-Dominance)</b>					
I rebuked her in front of other families.		0.76			
I raised my voice to her.		0.83			
I demanded impolitely that she do something.		0.83			
I got mad when she did not conform to my intention.		0.51			
I asked her to shut up.		0.62			
<b>Hostility</b>					
I wanted to avenge her for what she had done to me.			0.81		
I tried to avoid seeing her.			0.78		
I scorned or ignored her opinions.			0.74		
I felt hostile towards her.			0.61		
<b>Submissive (Hostile-Submission)</b>					
I did not state my own view to avoid making her feel unpleasant.				0.41	
I did not express my view when I disagreed with her.				0.75	
I gave in easily when arguing with her.				0.40	0.48
When she criticized or rebuked me, I kept silent.				0.77	
<b>Respect (Friendly-Submission)</b>					
I let her make decisions for me on important matters.					0.61
I went along with her.					0.82
I consulted her for advice.					0.73
I felt secure to let her to make decisions.					0.56

Only loadings above 0.40 are listed.

should be extracted. However, for the other four relationships, five or seven factors could be extracted. Thus, in order to maintain consistency, six factors of behavior were adopted for all 12 relationships. Based on the results from the 12 factor analyses, 24 items (shown in Table 2) were selected to tap the six factors of interpersonal behavior, namely, love, directing, domineering, hostility, submissive, and respect. The criterion for selecting an item was that it had a relatively high loading on the same factor for most relationships.

The 24 selected behaviors were then factor analyzed again for each of the relationships. For the father-to-daughter relationship, however, the items for Nurturing and Directing loaded on the same factor (Table 2), so that only five factors could be extracted. Nevertheless, for other relationships, Nurturing and Directing could be extracted as separate factors.

In Study 2, 28 behavioral items were used. To increase the content validity of the scales, some items for Love, Directing, and Hostility scales were revised. For instance, for the Love scale, the

item, 'I made suggestions to him/her when necessary', was dropped and replaced by 'I considered what he or she needed'. Three items for the Directing scale were revised in order to reflect more clearly the aspect of directing behavior which connoted affection. A sample item is 'I would like to teach him or her when he or she did not understand, or was incapable of doing something'. In addition, three items for the Hostility scale were revised to refer to the behaviour, rather than the feeling aspect of hostility. For instance, the item, 'I criticized him or her on the spot', was added.

Through the same procedure of item selection used in Study 1, four items were selected for each of the six scales. The items for the Domineering, Submissive, and Respect scales were almost the same as those adopted in Study 1. The internal consistency of the six behavioral scales for most of the relationships reached an acceptable level. The average Cronbach alpha across 12 relationships for the Domineering, Hostility, Love, and Respect scales were all above 0.80. The average alpha for the Submissive and Directing scales was above 0.60.

Whether the scales could tap the corresponding constructs of the interpersonal circumplex could be revealed by examining both the correlation patterns and factor analytic results among six behavior scales. The scale intercorrelations for the father-son relationship (Study 1) are presented in Table 3. The intercorrelations were approximately ordered in a circular sequence. For example, the correlations of Love scale with other scales were: Directing ( $r = 0.32$ ), Domineering ( $r = -0.29$ ), Hostility ( $r = -0.56$ ), Submissive ( $r = 0.22$ ), and Respect ( $r = 0.61$ ). The intercorrelations changed from positive to negative, and reversed from negative to positive. This pattern revealed that the structure of the six behavioral scales fitted the circumplex model relatively well. In Study 2, a similar intercorrelation pattern was also found. For example, for the daughter-to-father relationship, the Love scale was found to correlate with the Directing ( $r = 0.51$ ), Domineering ( $r = -0.48$ ), Hostility ( $r = -0.55$ ), Submissive ( $r = 0.35$ ), and Respect ( $r = 0.65$ ), respectively.

To test for the two-dimensional structure (i.e. love-hate and dominance-submission), the correlation matrices among the six scales for each of the 12 relationships were analyzed by the method of principal components analysis. For 10 of the 12 relationships, scree test results indicated that two factors, which accounted for about 60% of variance, should be extracted. The factor loadings for three relationships are presented in Table 4. The first dimension contrasted love with hostility. The second dimension contrasted dominance (directing and domineering) with submission (submissive and respect).

Similar analyses were conducted for the data of Study 2. Scree test results indicated that for most of the relationships, three factors should be extracted. Love and Directing scales loaded on Factor 1, Domineering and Hostility scales loaded on Factor 2, and Submissive and Respect scales loaded on Factor 3. Although the three-factor structure did not seem to fit the circumplex model, the loading patterns showed that the six scales could still tap the constructs as expected.

**Table 3** Intercorrelations among the six behavioral scales for the father-son relationship

Scale	1	2	3	4	5	6
1. Love		0.56***	-0.28***	-0.52***	-0.03	0.29***
2. Directing	0.32***		0.19**	-0.14*	-0.15***	0.07
3. Domineering	-0.29***	0.28***		0.61***	-0.03	-0.14*
4. Hostility	-0.56***	-0.03	0.64***		0.24***	-0.09
5. Submissive	0.22***	-0.13*	-0.29***	-0.04		0.35***
6. Respect	0.61***	0.08	-0.42***	-0.56***	0.38***	

Listed above the diagonal are the correlations for the father-to-son relationship, and listed below the diagonal are for the son-to-father relationship. \* $p < 0.05$ , \*\*\* $p < 0.001$ .

**Table 4** Two-factor structure of the six behavioral scales for three relationships

Variable	Father-to-son		Son-to-father		Father-to-mother	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Love	0.84	0.07	0.85	0.33	0.86	0.14
Directing	0.45	0.46	0.26	0.90	0.11	0.64
Domineering	-0.61	0.34	-0.59	0.56	-0.73	0.33
Hostility	-0.83	-0.06	-0.81	0.05	-0.91	-0.14
Submissive	-0.14	-0.79	0.35	-0.40	-0.06	-0.80
Respect	0.35	-0.65	0.84	0.00	0.39	-0.58

Numbers listed are factor loadings.

**Table 5** Mean scores for the six behavioral scales in 12 relationships (Study 1)

Relationship	Behavioral scale					
	Love	Directing	Respect	Submissive	Domineering	Hostility
Father						
Father to mother	4.05	3.50 <sup>ab</sup>	3.21 <sup>ab</sup>	2.72 <sup>ab</sup>	2.23 <sup>ab</sup>	1.63 <sup>ab</sup>
Father to son	4.14	3.75 <sup>a</sup>	2.82 <sup>a</sup>	2.35 <sup>ac</sup>	2.44 <sup>ac</sup>	1.46 <sup>a</sup>
Father to daughter	4.11	3.76 <sup>b</sup>	2.84 <sup>b</sup>	2.45 <sup>bc</sup>	2.31 <sup>bc</sup>	1.45 <sup>b</sup>
Mother						
Mother to father	4.08 <sup>ab</sup>	3.18 <sup>ab</sup>	3.60 <sup>ab</sup>	2.95 <sup>ab</sup>	2.23 <sup>a</sup>	1.62 <sup>ab</sup>
Mother to son	4.21 <sup>ac</sup>	3.59 <sup>ac</sup>	2.91 <sup>ac</sup>	2.42 <sup>a</sup>	2.41 <sup>ab</sup>	1.34 <sup>a</sup>
Mother to daughter	4.29 <sup>bc</sup>	3.74 <sup>bc</sup>	3.06 <sup>bc</sup>	2.47 <sup>b</sup>	2.25 <sup>b</sup>	1.37 <sup>b</sup>
Son						
Son to father	3.50 <sup>a</sup>	2.38 <sup>ab</sup>	3.37 <sup>ab</sup>	3.22 <sup>ab</sup>	1.71 <sup>ab</sup>	1.74 <sup>a</sup>
Son to mother	3.70 <sup>ab</sup>	2.78 <sup>ac</sup>	3.30 <sup>b</sup>	2.98 <sup>ac</sup>	1.91 <sup>ac</sup>	1.57 <sup>ab</sup>
Son to sister	3.43 <sup>b</sup>	2.89 <sup>bc</sup>	2.73 <sup>ab</sup>	2.54 <sup>bc</sup>	2.30 <sup>bc</sup>	1.71 <sup>b</sup>
Daughter						
Daughter to father	3.74 <sup>a</sup>	2.43 <sup>ab</sup>	3.42 <sup>a</sup>	3.23 <sup>ab</sup>	1.77 <sup>ab</sup>	1.66 <sup>a</sup>
Daughter to mother	4.08 <sup>ab</sup>	2.87 <sup>ac</sup>	3.44 <sup>b</sup>	2.99 <sup>ac</sup>	1.91 <sup>ac</sup>	1.46 <sup>ab</sup>
Daughter to brother	3.70 <sup>b</sup>	3.18 <sup>bc</sup>	2.67 <sup>ab</sup>	2.45 <sup>bc</sup>	2.39 <sup>bc</sup>	1.69 <sup>b</sup>

The numerals listed are mean scores. For each set of three relationships involving a role, mean scores with the same superscript indicates significant difference between two relationships.

The validity of the behavioral scales was further substantiated by the systematic variations of the pattern of scores among the different roles. It was expected that participants' scores on the Respect, Directing, Submissive, and Domineering scales should vary with the role-status of the participants. For instance, children should display more respect to their parents than to their siblings, and the results supported this idea (Table 5). It showed that sons expressed more respect for their parents ( $M = 3.37$  and  $3.30$  for fathers and mothers, respectively) than for sisters ( $M = 2.73$ ). In contrast, fathers displayed more directing behaviors to sons and daughters ( $M = 3.75$  and  $3.76$ , respectively) than to wives ( $M = 3.50$ ). Similar results were also found in Study 2. In addition, it was expected that participants' score on the behavioral scales on the love-hate dimension would not vary with their role-status. The results were consistent with this prediction (e.g. father did not express more love to wives ( $M = 4.05$ ) than to sons and daughters ( $M = 4.14, 4.11$ , respectively)).

### Family harmony scale

The family harmony measure consisted of four items, for example, 'as a whole, how well does your family get along?' (very harmonious to very inharmonious), with higher scores indicating more harmonious relationships. As the scores of the four family members were moderately correlated (all above 0.40), the four scores were summed to form an index of family harmony. The Cronbach alphas for this index were 0.83 for Study 1 and 0.82 for Study 2.

The Chinese well-being measure was translated from the Quality of Life measures (Campbell *et al.*, 1976). It measures three components of well-being: positive emotions, life satisfaction, and meaningfulness of life. Respondents were asked to assess their recent feelings about their using eight pairs of bipolar adjectives (e.g. empty-full, with higher scores indicating better well-being). Cronbach's alphas for the measure within family members were: father 0.91; mother 0.88; son 0.90; and daughter 0.91. As the Cronbach's alpha across the four family members was 0.70, and the intercorrelations among family members ranged from 0.33 to 0.50, the scores of the four family members were summed to form an index of family well-being.

## Results

### Effect of levels of Love and Hostility

The basic index of Communal Sharing is a relatively high level of love and a low level of hostility. It is expected that both indices are related to family harmony and well-being. The total level of love that the four family members displayed to each other was positively correlated with family harmony in both studies (Table 6), while the total level of hostility was negatively correlated with family harmony. In Study 2, it was also found that the total level of love was positively correlated

**Table 6** Regression of affective reciprocity and equivalence on family harmony or well-being controlling for affective level

	Study 1		Study 2			
	Harmony		Harmony		Well-being	
	$\beta$	$r$	$\beta$	$r$	$\beta$	$r$
Level of Love	0.58***	0.60***	0.67***	0.65***	0.60***	0.62***
Reciprocity of Love	0.03	0.19**	-0.10* <sup>a</sup>	0.08	-0.05	0.21**
$R^2$	0.34		0.42		0.38	
Level of Hostility	-0.43***	-0.63***	-0.60***	-0.56***	-0.70***	-0.69***
Reciprocity of Hostility	0.14*	0.40***	-0.11* <sup>a</sup>	0.13*	-0.04	0.25**
$R^2$	0.32		0.34		0.48	
Level of Love	0.52***	0.60***	0.62***	0.65***	0.58**	0.62***
Equivalence of Love	0.18***	0.40***	0.10*	0.28***	0.14**	0.30***
$R^2$	0.37		0.43		0.40	
Level of Hostility	-0.32***	-0.63***	-0.64***	-0.56***	-0.72**	-0.69***
Equivalence of Hostility	0.32***	0.55***	-0.16* <sup>a</sup>	0.15**	-0.07	0.29**
$R^2$	0.32		0.34		0.48	

<sup>a</sup>The estimators were not meaningful due to a multicollinearity problem.

Study 1:  $N = 242$ ; Study 2:  $N = 245$ .

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

with family well-being, whereas the total level of hostility was negatively correlated with family well-being.

### **Reciprocity of affective interaction and its effect**

It was found that there were moderate levels of reciprocity of love for all dyadic relationships. For example, in Study 2, the dyadic correlations of love with fathers were: father-son 0.40; father-daughter 0.45; and husband-wife 0.62. In contrast, there was also the reciprocity of hostility. The dyadic correlations of hostility with fathers were: father-son 0.40; father-daughter 0.43; and husband-wife 0.59. It seemed that a higher level of affective reciprocity was exhibited in the spousal interaction than in the parent-child interaction.

Several steps were taken to calculate the index of love reciprocity for each family. First, the absolute value of the difference between dyadic pairs of family members' scores on the love scale was computed. For instance, for the father-son dyad, the absolute value of the difference between the father's love toward his son and the son's love toward his father was calculated. Second, the six absolute difference values for the six dyadic relationships were summed to form the index of deviation from the reciprocity for a family. Higher deviation scores indicated less reciprocity of love in a family. However, in the subsequent analyses, the directions of the values of the effect estimators were changed, so that the positive value of an estimator indicated a higher level of reciprocity, a higher level of family harmony, or a higher level of well-being.

As shown in Table 6, reciprocity of love was positively correlated with family harmony in Study 1. In Study 2, this correlation was not significant; however, reciprocity of love was positively correlated with family well-being. Regression analyses showed that, after controlling for the effect of total love, reciprocity of love did not have any significant effect on family harmony in both studies, nor any significant effect on family well-being in Study 2.

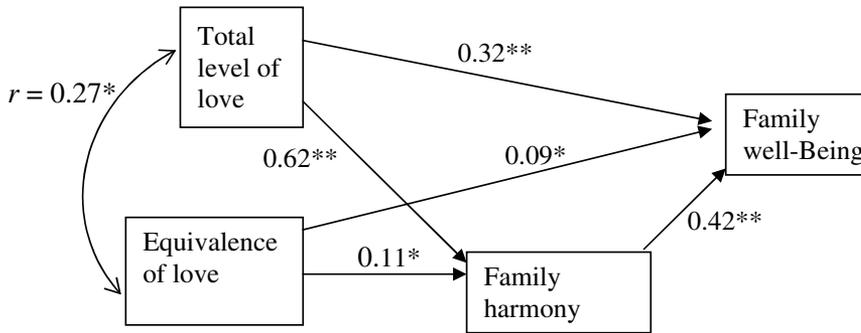
The index for the reciprocity of hostility was also computed. It was found that in both studies, reciprocity of hostility was positively correlated with family harmony. Regression analysis showed that after controlling for the effect of total level of hostility, reciprocity of hostility had significant effect on family harmony in Study 1; however, this effect was not significant in Study 2. In Study 2, reciprocity of hostility had no effect on the total well-being of family members either.

Love and hostility may be viewed as two ends of the same continuum, and the net affection for a relationship can be computed by subtracting the hostility score from the love score. In both studies, the reciprocity of this net affect was positively correlated with family harmony ( $r = 0.30$  and  $0.24$  for Study 1 and Study 2, respectively,  $p < 0.001$ ). However, in both studies, after controlling for the levels of net affection, reciprocity of net affection had no significant effect on family harmony. In Study 2, reciprocity of net affect did not have any significant effect on family well-being.

### **Equivalence of affection and its effect**

It was found that there was a high level of equivalence of love among family members. For example, in Study 2, results showed that a father's love for his son was highly correlated with a father's love for his daughter ( $r = 0.74$ ,  $p < 0.001$ ), and a father's love for his daughter was highly correlated with a father's love for his wife ( $r = 0.73$ ,  $p < 0.001$ ).

To examine the effect of equivalence, the deviation from equivalence of love (i.e. love differential) for each family was computed. First, the degree of love differential for each person's dealing with other family members was computed. For instance, the degree of love differential for the father role was computed by adding the absolute values of the three differences: between a



**Figure 1** Equivalence of love increases well-being directly as well as indirectly through family harmony. \* $p < 0.05$ , \*\* $p < 0.01$

father's love for his son and his love for his daughter, between a father's love for his wife and his love for his son, and between a father's love for his wife and his love for his daughter. Second, the four love differentials for the four family roles were summed to obtain an index of love differential for a family. Higher differential score indicated less equivalence of love. However, the sign of the index scores was reversed for subsequent statistical analyses, such that a positive value of an estimator indicated a positive effect of higher equivalence.

As shown in Table 6, both studies found that equivalence of love was positively correlated with family harmony. Regression analyses showed that equivalence of love still had a significant effect on family harmony when the total level of love was controlled for. In Study 2, it was found that equivalence of love also had a unique effect on family well-being ( $\beta = 0.14$ ,  $p < 0.01$ ).

Path analysis was conducted to examine whether equivalence of love could increase the total well-being of family members by increasing family harmony. As shown in Fig. 1, in addition to increasing family well-being directly ( $\beta = 0.09$ ,  $p < 0.05$ ), equivalence of love also increased family well-being indirectly by increasing family harmony (indirect effect =  $0.11 \times 0.42$ ).

The positive effect of love equivalence held true for all the family members. For each of the four family roles, equivalence of love was positively correlated with the perception of both family harmony and well-being. For instance, in Study 2, results showed that the more equivalent the love among family members, the more harmonious the daughter perceived her family ( $r = 0.27$ ,  $p < 0.001$ ), and the higher the well-being felt ( $r = 0.18$ ,  $p < 0.001$ ).

According to the theory of Communal Sharing, equivalence of hostility is not expected to have the same positive effect as equivalence of love on family harmony and well-being. The results of both studies supported this prediction (Table 6). Although equivalence of hostility was positively correlated with family harmony in both studies, regression analyses showed that after controlling for the level of hostility, equivalence of hostility did not have a stable significant effect on family harmony (Study 1:  $\beta = 0.32$ ,  $p < 0.001$ ; Study 2:  $\beta = -0.16$ , *ns*). In Study 2, it did not have any unique effect on the well-being of the family.

### **Pattern of status interaction**

The results showed reciprocity of behaviors associated with the dominance-submission dimension between dyads. For instance, in Study 2, for the interaction between father and son, there were significant correlations for the directing, respect, submissive, and domineering behaviors ( $r = 0.15$ ,  $0.23$ ,  $0.16$ , and  $0.31$ , respectively, all with  $p < 0.05$ ). For the spousal interaction, the dyadic

correlations for the four behaviors were 0.32, 0.44, 0.26, and 0.52, respectively. Comparing the corresponding correlations for these two dyads shows that levels of reciprocity for behaviors along the status dimension were generally higher in the spousal relationships than in the parent-child relationships.

With regard to complementary behaviors, only the correlations for the complementary directing-respect behaviors were significant. The correlation between father's directing and son's respect was 0.35 ( $p < 0.001$ ), and the correlation between son's directing and father's respect was 0.17 ( $p < 0.01$ ). It seems that father's directing behavior was more likely to elicit son's respect than the reverse. This may be because the former was more consistent with role expectation than the latter. In contrast, the correlation between husband's directing and wife's respect ( $r = 0.30$ ) was almost equal to the correlation between wife's directing and husband's respect ( $r = 0.31$ ). It is interesting to note that domineering behavior did not elicit complementary submissive or respect behavior even in the father-son relationship. Father's domineering behavior to son was negatively correlated with son's submission ( $r = -0.15$ ,  $p < 0.05$ ) and respect ( $r = -0.21$ ,  $p < 0.01$ ) toward him.

### **Effects of status differentials between parents and children**

For parent-child relationships, four categories of status difference indices were calculated, as shown in Table 7. First, the status differential between parent and child can be indexed by the differential display of the same behavior. Results showed that the more frequently children displayed respect towards the parents, compared with the parents' respect towards them, the more harmonious the family (Study 1:  $r = 0.19$ ,  $p < 0.01$ ; Study 2:  $r = 0.21$ ,  $p < 0.01$ ), and the higher the well-being that family members experienced (Study 2:  $r = 0.26$ ,  $p < 0.01$ ). This status differential index was positively correlated with the individual well-being of son, daughter, and mother ( $r = 0.19$ , 0.22, and 0.22, respectively, all with  $p < 0.01$ ), although it was not significantly correlated with father's well-being ( $r = 0.10$ , *ns*). It seems that the normative status differential due to the differential display of respect behavior tended to be beneficial to all family members. In contrast, the status differentials caused by the differential display of directing, domineering, or submissive behavior did not consistently correlate with either family harmony or well-being.

Second, status differential in parent-child relationships can be indexed by the differential display of complementary behaviors. Some of these status differentials conformed to the normative expectations for parent-child relationships, and showed positive correlations with family harmony and well-being (Table 7). For example, the more frequently children displayed respect toward the parents, in comparison with the parents' directing toward them, the more harmonious the family (Study 1:  $r = 0.38$ ,  $p < 0.001$ ; Study 2:  $r = 0.17$ ,  $p < 0.01$ ), and the higher the well-being experienced by family members (Study 2:  $r = 0.16$ ,  $p < 0.05$ ). This status differential was also positively correlated with the well-being of son and daughter ( $r = 0.13$ ,  $p < 0.05$ ; and  $r = 0.23$ ,  $p < 0.01$ , respectively), but uncorrelated with the well-being of father and mother ( $r = 0.01$ , 0.08, respectively, *ns*). It is interesting to note that this normative status differential seemed to be more beneficial to children than to parents.

The status differentials formed by children's display of respect toward their parent tended to have a more positive effect than did children's display of submission. As shown in the fourth analysis of Table 8, when the two indices, 'children's respect minus parents' domineering' and 'children's submission minus parents' domineering', were used to predict family harmony, the regression coefficient was 0.42 ( $p < 0.001$ ) and 0.22 ( $p < 0.05$ ), respectively. When they were used to predict family well-being, the regression coefficient was 0.59 ( $p < 0.001$ ) and 0.05 (*ns*),

**Table 7** Status differential indices for parent-child relationships and their correlations with family harmony and well-being

Status differential indices	Study 1	Study 2	
	Harmony	Harmony	Well-being
Normative differential with the same behavior <sup>†</sup>			
(Children's-Parents') respect	0.19**	0.21***	0.26***
(Children's-Parents') submission	0.07	0.34***	0.26***
(Parents'-Children's) directing	-0.13*	0.13*	0.07
(Parents'-Children's) domineering	-0.11*	-0.12	-0.02
Normative complementarity <sup>‡</sup>			
Children's respect-Parents' directing	0.38***	0.17**	0.16*
Children's respect-Parents' domineering	0.62***	0.61***	0.63***
Children's submission-Parents' domineering	0.40***	0.59***	0.57***
Children's submission-Parents' directing <sup>§</sup>	0.05	0.02	-0.05
Counter-normative complementarity <sup>‡</sup>			
Parents' respect-Children's directing	0.09	0.06	-0.06
Parents' respect-Children's domineering	0.53***	0.49***	0.57***
Parents' submission-Children's domineering	0.32***	0.35***	0.48***
Parents' submission-Children's directing <sup>§</sup>	-0.15*	-0.18***	-0.23***
Power differential <sup>†</sup>			
(Children's-Parents') (respect-directing)	0.04	0.24***	0.23***
(Children's-Parents') (respect-domineering)	0.06	0.05	0.15*
(Children's-Parents') (submission-domineering)	-0.03	0.14*	0.15*
(Children's-Parents') (submission-directing)	-0.04	0.32***	0.22***

-, Minus.

<sup>†</sup>Each index was computed by adding the four subscores for the four relationships: father-son, father-daughter, mother-son, and mother-daughter. Higher index scores indicate that the parent's status is relatively higher than the children's.

<sup>‡</sup>Higher scores indicate that children's status is relatively higher than that of their parents.

<sup>§</sup>According to several circumplex models of interpersonal theory (Tracey, 1994), this pair of behaviors is not considered complementary.

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

respectively. The results showed that children's respect toward their parents contributed more to family harmony and well-being than did children's submission to parents.

Third, although some status differentials were counter-normative, they were positively correlated with family harmony and well-being. For example, the index, parents' respect to children minus children's domineering to parents, was positively correlated with family harmony and well-being (Table 7). Nevertheless, some status differentials might deviate too much from normative expectation so that positive effects were unlikely to occur. In both studies, it was found that if parents displayed more respectful behavior toward the children, relative to the level of the children's directing behaviors toward them, the family was not more harmonious (Table 7). Some counter-normative status differentials even showed negative effects. For example, if parents displayed more submissive behaviors toward the children, in comparison with children's directing behaviors toward them, the family became less harmonious (Study 1:  $r = -0.15$ ,  $p < 0.05$ ; Study 2:  $r = -0.18$ ,  $p < 0.001$ ), and family members experienced less well-being ( $r = -0.23$ ,  $p < 0.001$ ).

Even when the normative and counter-normative status differentials were both positively related to family harmony and well-being, the normative differentials tended to have stronger

**Table 8** Regression comparison of status difference indices between parent and children in predicting family harmony and well-being

Predictor	Study 1	Study 2	
	Harmony $\beta$	Harmony $\beta$	Well-being $\beta$
Analysis 1			
Children's respect–Parents' domineering	0.47***	0.52***	0.47***
Parents' respect–Children's domineering	0.25***	0.13	0.23**
Analysis 2			
Children's submission–Parents' domineering	0.30***	0.57***	0.42***
Parents' submission–Children's domineering	0.20**	0.02	0.24***
Analysis 3			
Children's respect–Parents' directing	0.37***	0.17**	0.15*
Parents' respect–Children's directing	0.03	0.07	–0.05
Analysis 4			
Children's respect–Parents' domineering	0.69***	0.42***	0.59***
Children's submission–Parents' domineering	–0.12	0.22*	0.05

Study 1:  $N = 242$ , Study 2:  $N = 245$ .

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

positive effects. For instance, when the two indices, 'children's respect minus parent's domineering' and 'parent's respect minus children's domineering', were simultaneously used to predict family harmony, the regression coefficient was 0.52 ( $p < 0.001$ ) and 0.13 ( $p = 0.06$ ), respectively (Table 8). When they were used to predict family well-being, the regression coefficient was 0.47 ( $p < 0.001$ ) and 0.23 ( $p < 0.01$ ), respectively.

Finally, it was found that the complementary patterns of status differential rather than power differentials were more crucial in building beneficial Authority Ranking. When the complementary patterns were reduced to the net differences along the dominance-submission dimension, their effects were generally weaker and inconsistent (Table 7). For example, the interaction pattern for respect and domineering behaviors could be reduced to the relative level along the dominance-submission dimension. The status level for the parent was calculated by subtracting parent's respect to child from his/her domineering to the child, and the status level for the child was calculated by subtracting child's respect to parent from his/her domineering to parent. It was found that in both studies, this status differential between parents and children was not correlated with family harmony ( $r = 0.06, 0.05, ns$ ). However, the complementary counterparts were positively correlated with both family harmony and well-being.

In summary, for the parent-child relationship, the status differentials, including both normative and complementary, were found to be more beneficial to the family, especially when the interaction patterns involved children's respect toward their parents. Moreover, it was not the net power differential, but the complementary form of Authority Ranking that tended to exert a positive effect on the family.

### **Effects of status differentials for spousal relationship**

Individual well-being rather than family harmony was used as the dependent variable when examining the effects of status differential between wife and husband. As couples were expected to be of equal status, the status differentials were not categorized into normative or counter-

normative. The effects of three types of status differentials were examined. First, the status differential between husband and wife was indexed by the differential display of the same behavior. However, none of this type of status differential was found to correlate with the well-being of either husband or wife.

Second, several status differentials based on the complementary interaction pattern were found to be contributing to the well-being of either husband or wife (Table 9). For example, when the two indices, 'wife's respect minus husband's domineering' and 'husband's respect minus wife's domineering', were used to predict the well-being of the husband, the regression coefficients were 0.40 ( $p < 0.001$ ) and 0.08 (*ns*), respectively. When these two indices were used to predict the well-being of the wife, the regression coefficients were 0.31 ( $p < 0.001$ ) and 0.23 ( $p < 0.01$ ), respectively.

Similar to the parent-child relationship, the status differential constructed by respectful instead of submissive behavior was more likely to show beneficial effects. As shown in Table 9, when the two indices, 'wife's respect minus husband's domineering' and 'wife's submission minus husband's domineering', were used to predict the well-being of the husband, the regression coefficients were 0.44 ( $p < 0.001$ ) and 0.03, respectively. The results suggested that wife's respect contributed more to the well-being of the husband than did the wife's submission. Similarly, husband's respect to his wife contributed more to the well-being of wife than did husband's submission.

However, unlike the parent-child relationship, the complementary status differential based on respect and directing behavior had no significant effect on the well-being of either husband or wife. Finally, if the complementary interaction patterns were reduced to the difference along the dimension of dominance-submission, all of the status differentials were uncorrelated with the well-being of either husband or wife.

**Table 9** Regression comparison of status difference indices between spouse in predicting the well-being of husband or wife

Predictors	Husband $\beta$	Wife $\beta$
Analysis 1		
Wife's respect–Husband's domineering	0.40***	0.31***
Husband's respect–Wife's domineering	0.08	0.23**
Analysis 2		
Wife's submission–Husband's domineering	0.29***	0.24**
Husband's submission–Wife's domineering	0.15	0.22**
Analysis 3		
Wife's respect–Husband's directing	0.02	0.11
Husband's respect–Wife's directing	0.11	0.05
Analysis 4		
Wife's respect–Husband's domineering	0.44***	–
Wife's submission–Husband's domineering	0.03	–
Analysis 5		
Husband's respect–Wife's domineering	–	0.46***
Husband's submission–Wife's domineering	–	0.01

$N = 245$ .

\*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

**Table 10** Regression comparison of status difference indices between siblings in predicting the well-being of brother or sister

Predictors	Brother $\beta$	Sister $\beta$
Analysis 1		
Sister's respect–Brother's domineering	0.26**	0.11
Brother's respect–Sister's domineering	0.08	0.38***
Analysis 2		
Sister's submission–Brother's domineering	0.22**	0.14
Brother's submission–Sister's domineering	0.11	0.36***
Analysis 3		
Sister's respect–Brother's directing	–0.05	–0.02
Brother's respect–Sister's directing	0.00	0.17**
Analysis 4		
Sister's respect–Brother's domineering	0.25**	–
Sister's submission–Brother's domineering	0.07	–

$N = 245$ .

\*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

### **Effects of status differentials for sibling relationships**

For sibling relationships, results showed that only the complementary status differentials that put a sibling in a higher position contributed to his/her well-being. For example, when the two indices, 'sister's respect minus brother's domineering' and 'brother's respect minus sister's domineering', were used to predict brother's well-being, the regression coefficients were 0.26 ( $p < 0.01$ ) and .08 (*ns*), respectively (Table 10). When the two indices were used to predict sister's well-being, the regression coefficients were 0.11 (*ns*) and 0.38 ( $p < 0.001$ ), respectively.

Similar to other relationships, status differentials based on respectful instead of submissive behaviors were more beneficial to the sibling involved. For example, when the two indices, 'sister's respect minus brother's domineering' and 'sister's submission minus brother's domineering', were used to predict brother's well-being, the regression coefficients were 0.25 ( $p < 0.01$ ) and 0.07 (*ns*), respectively.

## **Discussion**

### **Communal Sharing model as a path to family harmony and well-being**

The present study revealed that both the level of love and equivalence of love had a unique contribution towards family harmony and well-being, supporting the argument that Communal Sharing is the fundamental model for close family interactions. Although it seems natural that the level of love contributes to family harmony and well-being, whether the underlying process involves Communal Sharing is less clear. A study by Chuang YC (unpubl. data, 2003) can help clarify the issue. In that study, two scales were constructed to measure respondents' normative beliefs in both Communal Sharing and Equality Matching for family interaction, based on the conceptual definition by Fiske (1991). Results showed that a family's CS belief was positively correlated with its level of love. Moreover, one's CS belief could enhance his/her love towards other family members, after taking the level of love he/she received from others into account. This

love-enhancing effect of CS held true for all dyadic family relationships. On the other hand, a family's EM belief did not correlate with its level of love, and no love-enhancing effect was found for individual family members' EM belief.

In addition to the level of love, equivalence of love is also an important index of CS. However, there may be doubts as to whether it is an index of CS or EM. Chuang's study (unpubl. data, 2003) provided support that equivalence of love is more likely to be derived from CS than EM. CS was found to be positively correlated with equivalence of love, while the correlation with EM was negative.

Several findings of the present study consistently showed that equivalence of love as an index of CS had positive effects on family. First, it was found that after controlling for the level of love, equivalence of love still had a positive effect on family harmony and well-being. This finding is significant because previous studies which examined the effects of interaction rules for close relationships tended to find that the absolute level of reward was a robust and better predictor of relationship satisfaction, compared with measures of global equity or equality (Clark & Chrisman, 1994; for a review). Second, it was only the equivalence of love that had positive effects, but not the equivalence of hostility nor the equivalence of net affect. Third, equivalence of love had positive effects not only on the family as a whole, but also on individual family members. Finally, path analysis showed that equivalence of love could directly increase family well-being, even after taking the effect of family harmony into account.

However, the present study showed that reciprocity of love did not have a unique effect on family harmony and well-being after controlling for the level of love. It seems that reciprocity of affect may not be important for evaluating the relationship quality of the whole family. In this sense, the null effect of reciprocity of love seems to support the argument that CS is the ideal model for family relationships. The affective reciprocity consistently found in the present study might result from the operation of complementarity, such that family members just reacted to others' positive affect with positive affect. Thus, reciprocity of affect would not have a significant effect independent of the level of love, as the level of love changed with the degree of reciprocity of affect in the same direction. Based on the above analyses, it can be inferred that Communal Sharing belief can induce more love and equivalent love toward other family members, thereby leading to family harmony and well-being.

### ***Proper form of Authority Ranking may vary with relationship***

The present study found that for each family relationship, particular forms of status differential (Authority Ranking) were likely to be beneficial. Several factors are associated with these variations. First, role expectations for different family relationships might influence the effect of status differential. In the parent-child relationship, as a hierarchy was expected, normative complementary differentials tended to have more positive effects than counter-normative differentials. Moreover, the normative differentials would benefit both parents and children. In couple relationships, as equal status is expected, none of the net status differentials had positive effects. However, some complementary differentials were found to contribute to the well-being of either husband or wife, although the status differential that favors the husband tended to benefit him more. Finally, in sibling relationships, equal status was also expected, and the relative standing of an individual in the relationship might need to be defined by oneself. This may explain why only the complementary differentials that put oneself in the position of a higher rank contributed to the well-being of oneself.

In addition to role expectation, the form or structure of Authority Ranking is also important. Across three kinds of family relationships, complementary status differentials that were based on

others' trusting respect, rather than passive submission, tended to be more beneficial. In addition, one's more frequent display of respect, relative to the other interactant's level of domineering, was more beneficial than submissive behavior. It is important to note that for the parent-child relationship, only the difference in the display of respect behavior was found to be beneficial.

### ***Implications for relationship theories***

The findings of the present study have several implications for interpersonal theory. For affective interaction, the principle of complementarity that is primarily applied to dyadic interactions may be inadequate for explaining the process of family interaction involving all family members. However, for family status interactions, the principle of complementarity is applicable in several aspects, such as delineating the different forms of status differentials that may exist in each dyadic family relationship, which was usually ignored in previous studies.

Recent modifications of interpersonal theory emphasize that interpersonal goals associated with the status dimension is a critical determinant of whether or not the complementary interaction is satisfying. The findings of the present study provide support for this argument in the context of family interaction. Role expectation usually entails specific interpersonal goals that actors are expected to pursue. This may explain why the effect of the same form of status differential changes across relationships. This may also explain why normative patterns of status differential between parents and children are more beneficial to both parents and children. According to Myllyniemi (1997), the complementary interaction between parent's directing and children's respect may separately satisfy the nurturing and trusting emotional needs or goals that exist between parents and children.

The present study also found that role expectation affects the occurrence of complementarity. The equal-status role expectation for couple relationships may underlie the stronger reciprocity of behavior found for both affective and status interaction. Therefore, it is more likely to find patterns of complementarity along the affective dimension in couples' interaction, whereas complementarity along the status dimension is less likely to occur.

In the parent-child relationship, it was found that the likelihood that children's respect behavior elicits their parents' directing response was higher than the likelihood that parents' respect behavior elicits their children's directing response. This may be because the former was more consistent with normative role expectation. It should be noted that the former pattern of complementarity was found to be more beneficial. So this role expectation may indirectly contribute to family harmony.

The findings of the present study also have several implications for the Relational-Models theory. Few previous studies operationalized the constructs of the theory and examined the effects of the adoption of the fundamental models in real life contexts. The present study showed that using the CS model to coordinate affective interactions among family members would be beneficial to family harmony, as well as to the well-being of family members. Thus, it supports the premise of Relational-Models theory that Communal Sharing is normative and desirable for close kinship interactions. People seek to establish Communal Sharing relationships not only for the normative order of family harmony, but also for the well-being of individuals.

The present study also showed that some complementary forms of Authority Ranking existed in each family dyadic relationship, which could exert beneficial effects. This result supports Fiske's argument that Authority Ranking is a fundamental relationship model that can meet humans' needs for security or status. In addition, it was shown that across all family relationships, status differential based on respect rather than domineering was more likely to be beneficial. This finding supports Fiske's (1991) argument that Authority Ranking is different from coercive power.

However, it should be noted that for more equal-status family relationships, Authority Ranking may not be in a linearly asymmetric order, as implied in the Fiske's definition of AR. It is the complementary status differentials rather than in absolute power differences that show positive effects in these interactions.

### **Implications for the role of Confucianism in modern Chinese societies**

The present study has significant implications for the role of Confucianism in modern Taiwan. First, the findings suggest that following the benevolence and righteousness principles of Confucianism to coordinate family interaction would lead to family harmony, as well as the well-being of family members. Although Confucius maintained that some form of hierarchical order should exist in major family relationships, the role expectations for these relationships are somewhat specific. That is, the form of Authority Ranking should be adjusted in order to be consistent with the nature of the relationship. This viewpoint is supported by the findings that the effects of particular forms of status differential varied with relationships.

Confucians also emphasized the importance of constructing a hierarchical order that comes primarily from inferior's respect rather than superior's domineering. This prescription is supported by the findings that for all family relationships, complementary status differentials based on others' respect were more beneficial. Thus, in a family context, following the ethical norms of Confucianism is likely to be beneficial, and Confucianism can still play a constructive role even in a modern Chinese family context.

The findings also suggest that although the Confucian ethical system has been considered a normative model, it can also be viewed as a manifestation of human nature. Following the Confucian ethical system can be beneficial to family harmony and the well-being of family members partly because some human fundamental needs are fulfilled. Finally, the findings also suggest that both interpersonal theories and Relational-Models theory are able to offer some theoretical insight as to why Confucius' advice works in modern Chinese families.

### **Acknowledgments**

The research was supported by grants from National Science Council (NSC 86-2413-H-153-004) and Ministry of Education (89-H-FA01-2-4-6), Republic of China (Taiwan). I thank the reviewers for their comments and for the Editor's help in editing this paper.

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