

# Conflict Style Differences Between Individualists and Collectivists

Deborah A. Cai and Edward L. Fink

*This study investigated the fundamental beliefs regarding cross-cultural differences in conflict styles. The sample consisted of 188 graduate students from 31 different countries residing in the U.S. Findings indicated that assumptions regarding the relationship of culture to conflict style preferences may not be valid. Preference for using five conflict styles were measured: avoiding, obliging, integrating, compromising, and dominating. The integrating style is generally the most preferred; obliging and avoiding are next, followed by compromising and dominating. Avoiding is preferred by individualists rather than by collectivists. Individualists do not differ from collectivists in their preference for the dominating conflict style. We also found that collectivists prefer compromising and integrating more than individualists do, whereas individualism-collectivism had no significant linear effect on preference for the obliging style. Conflict styles are highly multidimensional for both individualists and collectivists. Even though the five conflict styles can be subsumed under four types, the items measuring the five styles cannot be generated from any two-dimensional typology. Finally, the meaning of four of the five styles is different for individualists and collectivists: Dominating is the only style interpreted similarly by both groups. Areas for future research are considered.* **Key words:** Culture, conflict styles, communication, individualism, collectivism

Two areas of scholarly research that have dramatically increased over the past two decades are the study of cross-cultural communication and of conflict management. These areas have converged in a growing body of literature concerning how individuals manage conflict and negotiate in different cultures. One focus of research has been the study of the use of conflict styles in collectivist and individualist cultures (see Cai & Drake, 1998; and Wilson, Cai, Campbell, Donohue, & Drake, 1995, for a summary of this literature). Based on the dual concern model (Blake & Mouton, 1964; Pruitt & Rubin, 1986; Rahim, 1986; Thomas, 1976), which proposes five styles for handling conflict situations, the extant research examines the modes of responding to conflict in different cultures.

Studies suggest that cultures differ in their preferred forms of handling conflict (Chua & Gudykunst, 1987; Elsayed-Ekhouly & Buda, 1996; Kagan, Knight, & Martinez-Romero, 1982; Kumagai & Straus, 1983; Lee & Rogan, 1991; Leung, 1988; McGinn, Harburg, & Ginsberg, 1973; Miyahara, Kim, Shin, & Yoon, 1998; Oetzel, 1998a; Pearson & Stephan, 1998; Ting-Toomey, 1986; Ting-Toomey et al., 1991; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988; Trubisky, Ting-Toomey, & Lin, 1991). The current study, however, challenges beliefs regarding cultural differences in conflict styles (see Kim & Leung, 2000; and Ting-Toomey & Oetzel, 2001, for

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reviews that discuss the cross-cultural limitations of the current conception of conflict styles). What is meant in the literature by a given conflict style is taken to be similar across cultures. Furthermore, the set of conflict styles is typically generated from a two-dimensional typology, such as created by crossing concern for own and for other's outcome (Pruitt & Rubin, 1986). Our study, using an individual-level measure of cultural orientation, will assess whether the broad differences attributed to culture are indeed associated with preferred ways of communicating (or not communicating) about conflict. Although culture has many effects on the individual, this study addresses existing literature that makes comparisons of conflict style preferences based on differences in individualism-collectivism.

We first review the literature on conflict styles. Next, research on cross-cultural communication and preferences for the use of conflict styles is examined, leading to hypotheses and research questions based on this literature. Finally, multidimensional scaling is used to address the hypotheses regarding assumptions about the meaning of conflict styles. These hypotheses are tested and followed by a discussion of the results and their implications for future research.

### *Conceptualizing Conflict Styles*

The dual concern model finds its origins in Blake and Mouton's (1964) theory that conflict in organizations is managed in different ways based on whether a manager has high or low concern for production and high or low concern for people. Crossing these two dimensions results in five ways of handling conflict: withdrawing (low concern for both people and productivity), smoothing (high concern for people and low concern for productivity), forcing (low concern for people and high concern for productivity), problem solving (high concern for both people and productivity), and compromising (moderate concern for both people and productivity). Thomas (1976) extended this model by proposing that a party's desire to satisfy his or her own concerns (i.e., the level of assertiveness the party employs), as well as the desire to satisfy the other's concerns (i.e., the level of cooperation the party employs), will determine the behaviors used to pursue those concerns. Evolving from Blake and Mouton (1964) and Thomas (1976), the dual concern model (Pruitt & Rubin, 1986) predicts conflict behavior based on whether a person has high or low concern for one's own outcomes and high or low concern for the other person's outcomes. Although the dual concern model has been used by researchers to represent individual differences in conflict styles (i.e., the tendency of an individual to handle conflicts of different types in the same way; see Rubin, Pruitt, & Kim, 1994; Ruble & Thomas, 1976; van de Vliert & Kabanoff, 1990), Pruitt and Rubin (1986) emphasize that the decision to use one style or another is a strategic choice based on the likelihood that a style will be successful in a given situation. This perspective suggests that a party's concern for one's own outcomes and the other's outcomes will vary depending on contextual features of the conflict.

The dual concern model (see Figure 1) predicts that when an individual has high concern for one's own interests combined with a high concern for the other person's interests, that individual is most likely to engage in problem solving and use an *integrating* style (also labeled "collaborating"). Integrating is characterized by a willingness to exchange information openly, to address differences constructively, and to make every effort to pursue a solution that will be mutually acceptable (Gray, 1989; Pruitt & Carnevale, 1993; Rahim, 1992). The conflict literature suggests that this mode of handling conflict is preferred over others because it is most likely to

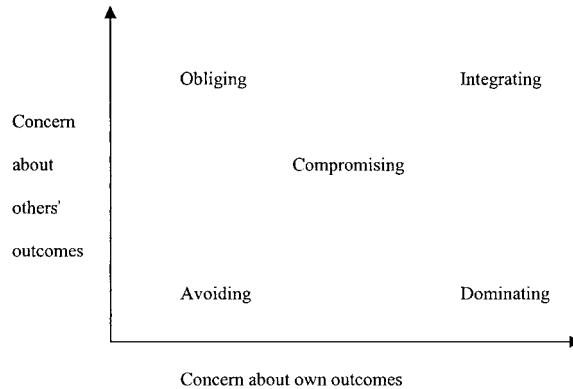


FIGURE 1  
DUAL CONCERN MODEL, ADAPTED FROM PRUITT AND CARNEVALE (1993).

yield win-win solutions. Furthermore, high concern for others is most likely to occur when there is an expectation of a long-term dependency on the other party (Pruitt & Carnevale, 1993).

If concern for one's own interests is low and concern for the other person's interests is high, the dual concern model predicts that the person will use an *obliging* conflict style (also labeled "yielding" or "accommodating"). This non-confrontational style emphasizes preserving the relationship with the other person rather than pursuing an outcome that only meets an individual's own concerns. In this situation the similarities between the two parties are emphasized and the differences are downplayed; there is a tendency to give in to the other's concerns while giving up one's own needs and interests. Rubin and his colleagues (1994) suggest that some conditions (e.g., the presence of time pressure) may encourage obliging. In addition, this style is unlikely to be employed if a party fears appearing weak.

The most confrontational style is *dominating* (also labeled "competing" or "contending"), which is predicted to result from a high concern for one's own interests and a low concern for the other's interests. This mode of conflict management is characterized by the use of forceful tactics such as threats and put-downs, an unwillingness to move from one's initial position, and a focus on defeating the opponent. Dominating is more likely to result in a solution in which one person wins and the other loses. Pruitt and Rubin (1986) note that context is likely to affect the use of this style. For example, it is more likely to be used when the other party seems willing to yield, and it is less likely to be used if there is a risk of alienating the other party.

The fourth conflict style in the dual concern model is *avoiding* (also labeled "inaction" or "withdrawing"). Avoiding is a non-confrontational style that, according to the model, results from having little concern for either one's own or the other's interests. Avoiding supposedly occurs because either the benefit in pursuing the conflict is small or because the other party to the conflict is unlikely to make satisfactory concessions. The person engaged in the conflict may hope that, if left alone, the conflict will somehow go away (Pruitt & Rubin, 1986).

The last style according to the dual concern model is *compromising*, which reflects a moderate concern for one's own interests and a moderate concern for the other party's interests. This style represents a modest effort to pursue an outcome that is mutually acceptable but without making a concerted effort to reach a Pareto optimal

outcome through problem solving. The compromising style is generally characterized as dividing resources in some equitable fashion without pursuing alternative solutions that may meet each party's interests more satisfactorily. When aspirations are not high enough to affect problem solving, or when pressures exist, such as time limitations or high costs of prolonging the conflict, parties are often willing to compromise (Rubin et al., 1994; Yukl, Malone, Hayslip, & Pamin, 1976).

The next section reviews the literature on conflict styles and individualism-collectivism. We examine this literature to ask whether individualists and collectivists perceive conflict styles similarly.

### *Culture and Conflict Styles*

Individualism-collectivism is a commonly used dimension in cross-cultural research (Hofstede, 1980; Hui, 1988; Kluckhohn & Strodtbeck, 1961; Ting-Toomey, 1988; Triandis, 1988). Individualists value the goals, needs, and rights of the individual over the goals, responsibilities, and obligations of the group. Collectivists value the goals, responsibilities, and obligations of the group over the goals, needs, and rights of the individual. Because individuals in collectivist cultures define themselves in terms of relationships (Markus & Kitayama, 1991), the ingroup is considered to be more important within collectivist cultures than within individualist cultures (Triandis, 1988). Thus, in conflict situations, collectivists give greater consideration to the ingroup than do individualists.

A number of studies have compared individualist and collectivist cultures in their use of conflict styles, often using participants from China, Korea, Taiwan, and Japan to represent collectivist cultures and the United States to represent individualist cultures. This classification of countries is based on Hofstede's (1980) work categorizing different countries along several cultural dimensions (see also Lee & Rogan, 1991; Leung, 1988; Ting-Toomey et al., 1991; Triandis et al., 1988; Trubisky et al., 1991; see Kim & Leung, 2000; Ting-Toomey & Oetzel, 2001; and Wilson et al., 1995, for reviews of this literature). In several of these studies people from collectivist cultures were found to be less confrontational than people from individualist cultures. Chua and Gudykunst (1987), for example, compared students from 37 countries studying in the United States. Using an *a priori* categorization based on country of origin, students from high context cultures (who are assumed to be collectivist) were found to be significantly less confrontational than students from low context cultures (who are assumed to be individualist).

These cross-cultural studies examining conflict typically ask participants either to describe a situation in which they were involved or to consider a hypothetical conflict situation and then respond to Rahim's (1983) ROCI-II scale or to a related scale such as the OCCI (Putnam & Wilson, 1982).<sup>1</sup> Also common in these studies is the *a priori* categorization of cultures as individualist or collectivist based on Hofstede's (1980) study. For example, participants from the U.S. and Australia are assumed to represent individualist cultures, whereas those from China, Taiwan, Korea, Japan, and Hong Kong are assumed to represent collectivist cultures. Although these countries may be individualist or collectivist, they also differ in many other ways. Therefore, it is unclear whether the results based on these specific cultures may be generalized to other cultures that are considered collectivist or individualist. The current study goes beyond previous research on conflict styles by using individuals as the unit of analysis, measuring individualism-collectivism at this level. The method of treating individualism-collectivism as an individual rather than

a cultural variable has become more common in recent years because this approach allows researchers to isolate the effects of this dimension while controlling for other possible cultural effects (Cai, Wilson, & Drake, 2000; Drake, 2001).<sup>2</sup> Using this approach we can isolate the effect of individualism-collectivism on the use of the five conflict styles.

Several studies have linked culture to conflict style preference. Ting-Toomey and her colleagues (1991) found respondents from China and Taiwan to be more avoiding than those from Japan, Korea, and the United States. In addition, respondents from China, Taiwan, and Japan were found to be more obliging than those from Korea and the U.S. Similarly, Triandis et al. (1988) showed that Japanese were more likely to avoid confrontation with close friends and acquaintances than were Americans, and Trubisky and her colleagues (1991) showed that respondents from Taiwan were more avoiding, compromising, integrating, and obliging than respondents from the United States. Kirkbride, Tang, and Westwood (1991) found Hong Kong Chinese showed a preference for compromising; avoiding was their next preferred style. Kirkbride et al. supported Tang and Kirkbride's (1986) finding that Hong Kong Chinese preferred compromising and avoiding behaviors, but British expatriates in Hong Kong preferred more assertive styles.

Leung (1988) compared American and Chinese conflict styles. Employing self-report data, he found that both cultures were more likely to pursue conflict with strangers than with friends, and that Chinese were more likely than Americans to sue a stranger, whereas Americans were more likely than Chinese to sue a friend.

Contrary to previous research, Lee and Rogan's (1991) study found Americans to be less confrontational than Koreans. Nevertheless, Lee and Rogan's study still supports the view that preference for avoiding differs cross-culturally. Lee and Rogan found that Koreans varied their use of non-confrontational strategies based on the status of the other person, using avoiding less as the power of the other increased. Respondents from the U.S. did not alter their use of avoiding based on the power of the other party.

Triandis and his colleagues (1988) showed that Japanese were more likely to subordinate their personal needs for the needs of the group, which exemplifies collectivistic behavior (Triandis, 1995). Triandis et al. concluded that when managing conflict, persons from collectivistic cultures tend to use strategies that are approval-seeking or that protect the group over the interests of the individual (see also Morisaki & Gudykunst, 1994; Ting-Toomey, 1988).

In summary, despite somewhat inconsistent findings, the results of these studies have led to the generalization that collectivists are more likely to be non-confrontational whereas individualists are more likely to be confrontational (Ting-Toomey, 1988, 1999; Ting-Toomey, Yee-Jung, Shapiro, Garcia, & Oetzel, 2000).

### *Culture and the Meaning of Conflict Styles<sup>3</sup>*

Most traditional research employing the dual concern model uses the model as a lens to examine conflict styles. The measures, hypotheses, and other theoretical apparatus in this tradition implicitly assume that the five conflict styles mean the same thing to both individualists and collectivists. For example, the dual concern model suggests that, regardless of culture, avoiding is the result of low concern for both one's own and the other party's interests. On the other hand, a few researchers have recently noted that avoiding may be understood differently across cultures (Kim & Leung, 2000; Ting-Toomey & Oetzel, 2001). Gabrielidis, Stephan, Ybarra, Pearson,

and Villareal (1997), in their study of Brazilians and Mexicans, suggested that avoiding may reflect a high concern rather than a low concern for others. Ting-Toomey et al. (2000) argued that obliging and avoiding are not understood identically in all cultures; those from Asian cultures, unlike those from Western cultures, do not view obliging and avoiding negatively. Morris et al. (1998) suggested that avoiding may result from positively valuing conformity and tradition. Thus, it is important to establish whether avoiding, as well as each of the other four conflict styles, has different meaning in different cultures. More specifically, we test whether the meaning of the items measuring the five conflict styles is understood similarly by individualists and collectivists.

### *Number of Distinct Conflict Styles*

The dual concern model has been valuable both theoretically and heuristically. It has provided a basis for making predictions about the use of the various conflict styles. van de Vliert (1990; van de Vliert & Prein, 1989) analyzed conflict styles using multidimensional scaling. The conflict styles appear as points in a multidimensional space, with the largest distances between integrating and avoiding and between dominating and obliging (see also Rubin et al., 1994). The empirically derived multidimensional map shows obliging and avoiding to be closer together than the dual concern model suggests. In addition, the location of compromising suggests high concern for the other party's interests and moderate concern for one's own interests, rather than moderate concern for both self and other. Therefore, although general support has been found for the dimensions proposed by the dual concern model, the number of distinct conflict styles has been assumed rather than tested. Previous research suggests that a three-style model may accurately represent conflict style preferences, with obliging and avoiding forming one style, compromising and integrating forming another style, and dominating as a separate style.

### *Hypotheses and Research Questions*

The above discussion suggests the following hypotheses and research questions:

RQ1: What is the overall trend in conflict style preferences?

H1: Avoiding is the preferred conflict style for collectivists.

H2: Dominating is the preferred conflict style for individualists.

Because the literature offers limited guidance about the three other conflict styles, and because, if individualism-collectivism has any general effect it should be a linear one, we propose the following research questions:

RQ2: Does individualism-collectivism have a linear effect on the preference for the compromising style of managing conflict?

RQ3: Does individualism-collectivism have a linear effect on the preference for the integrating style of managing conflict?

RQ4: Does individualism-collectivism have a linear effect on the preference for the obliging style of managing conflict?

Further, previous research on culture and conflict styles assumes the following to be true:

H3: Conflict styles form a two-dimensional space.

The above-cited research assumes that the meaning of the five conflict styles is the same for individualists and collectivists. Stated as a non-null hypothesis, we test:

TABLE 1  
NUMBER OF PARTICIPANTS BY GENDER, ORIGIN, AND INDIVIDUALISM-COLLECTIVISM ( $N = 186$ )

	Female		Male	
	Non-U.S.	U.S.	Non-U.S.	U.S.
Individualists	30	14	15	9
Midrange	15	9	14	6
Collectivists	17	10	37	10

H4: The meaning of the conflict styles differs between individualists and collectivists.

With few exceptions, the above research on culture and conflict styles assumes that five distinct styles of conflict exist. Our discussion leads us to the following non-null hypotheses:

H5: Obliging and avoiding are distinct conflict styles, in that they are perceived to have different meaning.

H6: Integrating and compromising are distinct conflict styles, in that they are perceived to have different meaning.

## Method

### *Sample*

Because this study focused on the effect of individualism-collectivism on conflict styles, data were collected among people from a large variety of nationalities. Rather than using an *a priori* categorization of culture based on nationality, we measured individualism-collectivism as an individual variable. To have a wide range of collectivism scores, 188 U.S. and international graduate students ( $M$  age = 26.16 years) at a large Midwestern university participated in this study ( $n_{\text{female}} = 96$ ,  $n_{\text{male}} = 91$ , 1 unreported). In addition to the U.S. ( $n = 58$ ), respondents were from 30 countries: Taiwan ( $n = 31$ ); India ( $n = 13$ ); Japan ( $n = 14$ ); Korea ( $n = 11$ ); China ( $n = 8$ ); Singapore and Turkey ( $n = 6$  each); Pakistan ( $n = 4$ ); Germany and Thailand ( $n = 3$  each); Indonesia, Malaysia, Mali, Nepal, Philippines, Saudi Arabia, Spain, Ukraine, and Zambia ( $n = 2$  each); Bermuda, Bulgaria, Cameroon, Egypt, Namibia, Portugal, Puerto Rico, Russia, Senegal, Sudan, and Vietnam ( $n = 1$  each); and 1 unreported. Data for two of the respondents were not included due to large amounts of missing scores on one of the two relevant scales.

Participants were recruited via three methods. Members of international student organizations on campus were requested to participate, volunteers were sought from classes that typically enroll international students, and a \$100 raffle for international students was used to recruit additional participants. This raffle was advertised in the campus newspaper and on campus-wide flyers. Regardless of recruitment method, each participant received a raffle ticket for a lottery with the prize awarded after the completion of the data collection.

The participants in this investigation represent a non-probability convenience sample. Because all of the participants were graduate students at the same university, the sampling procedure implicitly controls for many demographic differences in these cultural groups (see van de Vijver & Leung, 1997, pp. 30–31, for discussion of this strategy).

Table 1 describes the sample in terms of gender, origin (U.S. vs. Non-U.S.), and individualism-collectivism, here treated as a three-level variable (the middle quarter

TABLE 2  
MODIFIED INDEX OF THE INDIVIDUALISM-COLLECTIVISM (INDCOL) SCALE  
BASED ON HUI & TRIANDIS (1986)

- 
- |     |   |
|-----|---|
| 1.  | I would not let my cousin(s) use my car (if I have one).®                                     |
| 2.  | It is enjoyable to meet and talk with my neighbors regularly.                                 |
| 3.  | I would not discuss newly acquired knowledge with my parents.®                                |
| 4.  | It is not appropriate for a colleague to ask me for money.®                                   |
| 5.  | I would not let my neighbors borrow things from me or my family.®                             |
| 6.  | When deciding what kind of education to have, I would pay no attention to my uncles' advice.® |
| 7.  | I would not share my ideas with my parents.®  |
| 8.  | I would help, within my means, if a relative told me that he/she is in financial difficulty.  |
| 9.  | I am not interested in knowing what my neighbors are really like.®                            |
| 10. | Neighbors should greet each other when we come across each other.                             |
| 11. | A person ought to help a colleague at work who has financial problems.                        |
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® = reverse coded.

of the sample is defined as "midrange"). The correlation between individualism-collectivism, treated as an ordered trichotomy, and gender is significant ( $N = 186$ ;  $r = -.247$ ,  $p < .001$ ). This result indicates that males are more collectivistic than females.

### Procedures

Participants were scheduled to come to the research laboratory to complete a questionnaire. The questionnaire included a modified version of the individualism-collectivism scale (Hui & Triandis, 1986), the Rahim Organizational Conflict Inventory-II (Rahim, 1986), and demographic questions. After participating in the research, respondents were provided with an explanation of the purpose of the study but were asked not to reveal this information to others who might be participating.

### Instruments

*Individualism-collectivism.* The original individualism-collectivism (INDCOL) scale developed by Hui and Triandis (1986) consists of 66 Likert-type scale items used to assess an individual's level of collectivism by measuring attitudes and behaviors toward six relational domains (e.g., co-workers, neighbors). Participants were asked the extent to which they agreed or disagreed with each item (1 = strongly disagree; 7 = strongly agree). This scale was modified for our study in three steps. First, 22 items were deleted that lacked clarity or face validity. Next, the remaining 44 items were assessed for internal consistency and parallelism using confirmatory factor analysis (Hunter, 1980). This analysis resulted in three subscales, one each for family, neighbor, and colleague. The three subscales were used to form a single scale with 11 items (see Table 2 for items). Moderate reliability was found for this scale (11-items; Cronbach's  $\alpha = .76$ ). The items were summed into a single collectivism score for each participant. Higher scores on the resulting 11-item index (possible range = 7–77) indicated greater collectivism. To validate the 11-item solution, total scores on this scale were correlated with Hui and Yee's (1994) 33-item version of the INDCOL scale, using the current sample. The finding of a large correlation ( $r = .83$ ,  $p < .0001$ ,  $N = 186$ ) between these two measures supports the use of the 11-item index.

Scores on the 11-item INDCOL scale ranged from 24 to 76 ( $M = 56.58$ ,  $SD = 9.46$ ). For analyses comparing individualists and collectivists, three groups of participants were created. Participants whose INDCOL scores made up the middle

twenty-five percent of the scores were defined as *midrange*. Those with higher scores (greater or equal to 60) were defined as *collectivist* and those with lower scores (less than or equal to 54) were defined as *individualist*. Note that being defined as individualist or collectivist does not assume the individuals were from individualist or collectivist cultures. This procedure resulted in 44 cases being defined as midrange. The remaining sample, excluding those classified as midrange, consisted of 142 cases (71 males, 71 females), with 68 individualists (24 males, 44 females; age  $M = 26.51$  years; INDCOL  $M = 46.71$ ,  $SD = 6.38$ ) and 74 collectivists (47 males, 27 females; age  $M = 26.12$  years; INDCOL  $M = 65.30$ ,  $SD = 4.49$ ).

*Conflict styles.* The Rahim Organizational Conflict Inventory-II (ROCI-II) consists of 35 Likert-type items assessing five styles for handling conflict. This scale (and its earlier 28-item version) has been widely used to compare group conflict styles (van de Vliert & Kabanoff, 1990). Participants were asked the extent to which they agreed or disagreed with each item (1 = strongly disagree; 7 = strongly agree); agreement with the item indicates preference for using the particular style being assessed. Each of the five scales measuring the five conflict styles was evaluated for internal consistency and parallelism using confirmatory factor analysis (Hunter, 1980; for further evidence of the validity for these subscales, see Rahim & Magnier, 1995). Based on this procedure six items were removed from the scale. Five scales, each consisting of five to seven items, were created to represent preference for the five conflict styles: avoiding (Cronbach's  $\alpha = .84$ ); compromising (Cronbach's  $\alpha = .75$ ); dominating (Cronbach's  $\alpha = .84$ ); integrating (Cronbach's  $\alpha = .81$ ); and obliging (Cronbach's  $\alpha = .83$ ). For each scale the total score was computed and then divided by its number of scale items, making each scale have a possible range of 1–7. See Table 3 for the conflict style scale items.

### *Multidimensional Scaling (MDS) Analysis*

The modified ROCI-II scale had 29 items, with 6 items measuring avoiding, 6 items measuring obliging, 5 items measuring dominating, 5 items measuring integrating, and 7 items measuring compromising. Covariance matrices for these 29 items were computed for the individualists ( $n = 68$ ) and collectivists ( $n = 74$ ) separately. In order to investigate differences between these two groups, it is first necessary to rotate one of the spaces to a least-squares best fit on the other space. The metric multidimensional computer program GALILEO (see Woelfel & Fink, 1980) has this capability, and this rotation procedure has been found to be a reliable method for detecting group differences (for uses of the GALILEO program in communication research, see Albrecht, 1979; Barnett & Woelfel, 1988; Fink & Chen, 1995; Neuen-dorf, Kaplowitz, Fink, & Armstrong, 1987; Serota, Cody, Barnett, & Taylor, 1977; and Woelfel, Cody, Gillham, & Holmes, 1980).

Multidimensional spaces were produced for the two sets of 29 items. The space for the responses by the collectivists was rotated to a least-squares best fit to the space for the responses by the individualists. For the analyses using multidimensional scaling, the unit of analysis is the ROCI-II scale item. Note that the location of each item in its multidimensional space is known with great precision, because the data analysis used 68 or 74 respondents to establish the item's multidimensional location. The MDS analyses examine whether the items descriptive of different conflict styles (avoiding, obliging, dominating, integrating, and compromising) have different locations in the multidimensional space. We use the  $x$ -,  $y$ -,  $z$ -, and  $w$ -coordinates of

TABLE 3

MODIFIED RAHIM ORGANIZATIONAL CONFLICT INVENTORY II (ROCI-II) OF CONFLICT STYLES  
BASED ON RAHIM (1983)

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1. I generally try to satisfy the needs of my peers. (Oblige)
  2. I try to work out a compromise that gives both of us some of what we want. (Compromise)
  3. I try to work with my peers to find solutions that satisfy our expectations. (Integrate)
  4. I usually avoid open discussions of differences with my peers. (Avoid)
  5. I exert pressure on my peer to make decisions in my favor. (Dominate)
  6. I try to find a middle course or compromise to resolve an impasse. (Compromise)
  7. I use my influence to get my ideas accepted. (Dominate)
  8. I use my authority to get decisions made in my favor. (Dominate)
  9. I usually accommodate the wishes of my peers. (Oblige)
  10. I give in to the wishes of my peers. (Oblige)
  11. I bargain with my peer so that a middle ground can be reached. (Compromise)
  12. I exchange information with my peers to solve a problem together. (Integrate)
  13. I sometimes bend over backwards to accommodate the desires of my peers. (Oblige)
  14. I sometimes take a moderate position so that a compromise can be reached. (Compromise)
  15. I usually propose a middle ground for breaking deadlocks. (Compromise)
  16. I negotiate with my peers so that a compromise can be reached. (Compromise)
  17. I try to stay away from disagreement with my peers. (Avoid)
  18. I avoid conflict situations with my peers. (Avoid)
  19. I use my expertise to make others decide in my favor. (Dominate)
  20. I often go along with the suggestions of my peers. (Oblige)
  21. I try to give and take so that a compromise can be made. (Compromise)
  22. I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way. (Integrate)
  23. I collaborate with my peers to come up with decisions acceptable to us. (Integrate)
  24. I try to satisfy the expectations of my peers. (Oblige)
  25. I sometimes use my power to win a competitive situation. (Dominate)
  26. I try to keep my disagreement with my peers to myself in order to avoid hard feelings. (Avoid)
  27. I try to avoid unpleasant exchanges with my peers. (Avoid)
  28. I keep disagreements with my peers to myself to prevent disrupting our relationship. (Avoid)
  29. I try to work with my peers for a proper understanding of a problem. (Integrate)
- 

these items to represent the item's location in the multidimensional space. It should be noted, however, that these four dimensions do not account for 100% of the variance in the location of these items in their respective spaces, a point to be discussed subsequently. To represent the location of each style in the spaces, we averaged the location of all the items representing each style on the  $x$ -,  $y$ -,  $z$ , and  $w$ -axes to create the average location for avoiding, obliging, and so on.

## Results

### *Overall Preferences for Conflict Styles*

Research Question 1 asks about the overall trend in conflict style preferences. Figure 2 provides the profile of preferences for each conflict style by level of individualism-collectivism. It is clear from this figure that integrating is the preferred conflict style regardless of level of individualism-collectivism (integrating:  $M = 5.81$ ,  $SD = 0.83$ ; obliging:  $M = 4.48$ ,  $SD = 1.08$ ; avoiding:  $M = 4.33$ ,  $SD = 1.29$ ; compromising:  $M = 3.89$ ,  $SD = 0.59$ ; dominating:  $M = 3.77$ ,  $SD = 1.30$ ). The differences between these overall means were tested using paired  $t$ -tests with the styles in the order of their preference. Because we used multiple comparisons and because ten pair-wise tests are possible, the cut-off level for statistical significance was adjusted to be  $.05/10 = .005$ . We found that integrating was significantly preferred over obliging,  $t(182) = 14.37$ ,  $p < .001$ ,  $\eta^2 = .532$ ; obliging was not significantly preferred over avoiding,  $t(183) = 1.62$ ,  $ns$ ; avoiding was significantly

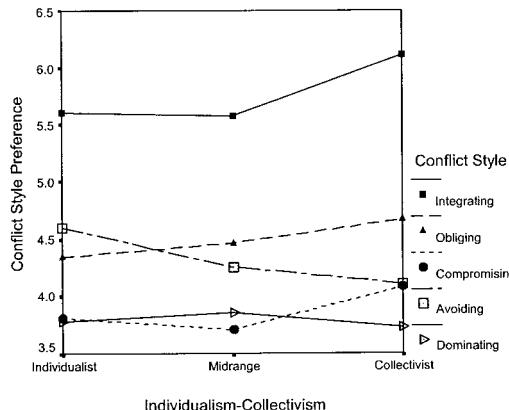


FIGURE 2

PROFILE OF PREFERENCE FOR CONFLICT STYLES BY LEVELS OF INDIVIDUALISM-COLLECTIVISM.

preferred over compromising,  $t(183) = 4.46, p < .001, \eta^2 = .098$ ; and compromising was not significantly preferred over dominating,  $t(182) = 1.08, ns$ .

### *Cultural Differences in Conflict Styles<sup>6</sup>*

We first examined whether avoiding was the preferred conflict style for collectivists (H1), and whether dominating was the preferred style for individualists (H2). Preference for avoiding and dominating were the dependent variables in separate ANOVAs. Because these hypotheses are directional, we tested for linear trends.

The results are shown in Figure 2. First, we found that avoiding was much preferred over dominating for all participants ( $t[182] = 3.864, p < .001, \eta^2 = .076$ , using a paired  $t$ -test). Second, there was a significant linear trend of individualism-collectivism on avoiding: Individualists preferred avoiding more than midrange persons, and midrange persons preferred avoiding more than collectivists;  $F[1, 182] = 5.218, p < .024, \eta^2 = .028$ . These results are the opposite of what was hypothesized in H1. Third, there was no significant linear trend of individualism-collectivism on dominating ( $F[1, 181] = .190, p = .664$ ). Therefore, Hypotheses 1 and 2 were not supported.<sup>7</sup>

We next inquired as to whether there was a linear effect of individualism-collectivism (considered as a trichotomy) on preference for compromising (RQ2). We found a small but significant linear effect: Collectivists preferred compromising more than individualists ( $M_{collectivists} = 4.09, M_{midrange} = 3.72, M_{individualists} = 3.81; F[1, 182] = 8.963, p < .003, \eta^2 = .05$ ). Figure 2 displays the relevant means for these three research questions.

RQ3 asked whether there is a linear effect of individualism-collectivism on preference for integrating. We again found a significant linear effect: Collectivists preferred integrating more than individualists ( $M_{collectivists} = 6.13, M_{midrange} = 5.59, M_{individualists} = 5.60; F[1, 181] = 15.944, p < .001, \eta^2 = .08$ ). Finally, we asked whether there was a linear effect of individualism-collectivism on preference for obliging (RQ4). This linear effect was not significant.

### *The Meaning of Conflict Styles*

The above hypotheses and research questions investigated differences in conflict style preferences based on individualism-collectivism. These hypotheses implicitly

assume that the meaning of these styles, as represented in the modified ROCI-II scale, is the same cross-culturally.<sup>8</sup> Now we wish to scrutinize this assumption.

First, we needed to establish the dimensional structure of the five conflict styles. Consistent with previous research (see, e.g., Bilsky & Rahim, 1999; van de Vliert, 1990; van de Vliert & Prein, 1989), we hypothesized (H3) that these conflict styles form a two-dimensional space. To address this hypothesis, we examined the standardized eigenvalues (variance accounted for, expressed as percent of total variance) from the multidimensional scaling analyses of the covariance matrices of scale items separately for the individualists and collectivists. Specifically, we looked at the eigenvalue scree plots for the individualist and collectivist spaces. As can be seen in Figure 3, the resulting space for both groups is highly multidimensional. Whereas for both groups the first three dimensions accounted for about 50% of the variance in the space (for individualists,  $x$ -axis = 20.3%,  $y$ -axis = 16.7%,  $z$ -axis = 13.7%; for collectivists:  $x$ -axis = 26.5%,  $y$ -axis = 16.8%,  $z$ -axis = 9.3%), many other dimensions accounted for the remaining 50%. After these first three dimensions, the variance accounted for by the additional dimensions diminishes slowly ( $w$ -axis, the fourth dimension, = 8.4% for individualists and 6.7% for collectivists). Furthermore, in both spaces seven dimensions accounted for more variance than the average single item (i.e., in each space there are seven dimensions that accounted for more than  $[100\%]/[29 \text{ items}] = 3.45\%$  of the variance), a necessary condition for statistical significance. Therefore Hypothesis 3 is rejected: Contrary to previous research, conflict styles form a space with greater than two dimensions. In other words, the comprehensive *meaning* of the items measuring these styles cannot be generated from a two-dimensional typology of any sort, including one based on target of concern (own vs. other's outcomes).

The next hypotheses examined whether the five proposed styles had the same cross-cultural meaning (H4) and were distinct (H5 and H6). To determine the appropriate number of dimensions to use in the subsequent analyses, the scree plots for each group (individualists and collectivists) were scrutinized for an “elbow” and plots of differences in eigenvalues were examined for a drop-off in variance explained (see Gnanadesikan, 1997; Krzanowski & Marriott, 1994; and Tabachnick & Fidell, 2001, for advice on determining the number of dimensions based on the eigenvalue distribution). Based on multiple criteria, it appears that four dimensions are reasonable for subsequent analyses. This number is reasonably parsimonious given the multidimensional scaling results. These four dimensions represent the majority of variance for these five conflict styles in each space. Figures 4, 5, and 6<sup>10</sup> display the location of the five conflict styles in the first three dimensions.

To test H4, a Group (2 levels: individualist vs. collectivist)  $\times$  Style (5 levels: avoid, compromise, dominate, integrate, oblige)  $\times$  Coordinate (4 levels: the  $x$ ,  $y$ ,  $z$  and  $w$ -axes) repeated-measures ANOVA was employed. Because the unit of analysis was the item, Group and Coordinate were both within-subjects factors. If the conflict styles differ in their location on these four dimensions across the two cultures, we should find a significant Group  $\times$  Style  $\times$  Coordinate interaction.

The repeated-measures ANOVA met the assumption of sphericity, according to Mauchly's test ( $p > .39$  for both Coordinate and Group  $\times$  Coordinate). This ANOVA revealed a significant main effect for Group ( $F[1, 24] = 7.016, p < .014$ , partial  $\eta^2 = .226$ ), a Group  $\times$  Style interaction ( $F[4, 24] = 4.760, p < .006$ , partial  $\eta^2 = .442$ ), a main effect for Coordinate ( $F[3, 72] = 55.262, p < .001$ , partial  $\eta^2 = .10$ )

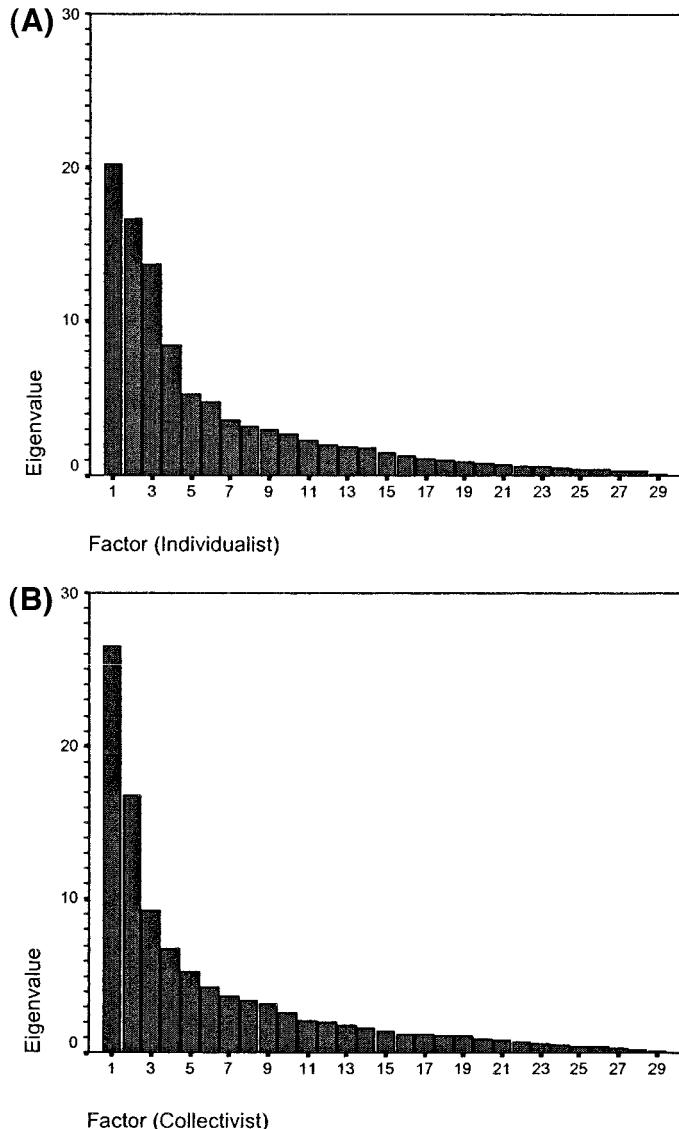


FIGURE 3

PERCENTAGE OF VARIANCE ACCOUNTED FOR BY THE MULTIDIMENSIONAL SPACES PRODUCED FROM THE 29 ROCI-II ITEMS:  
**(A)** SPACE GENERATED FROM ITEMS RESPONDED TO BY INDIVIDUALISTS.  
**(B)** SPACE GENERATED FROM ITEMS RESPONDED TO BY COLLECTIVISTS.

.697), a Style  $\times$  Coordinate interaction ( $F[12, 72] = 37.066, p < .001$ , partial  $\eta^2 = .861$ ), and a Group  $\times$  Style  $\times$  Coordinate interaction ( $F[12, 72] = 2.848, p < .003$ , partial  $\eta^2 = .322$ ).<sup>11</sup> The Group  $\times$  Coordinate interaction was not statistically significant ( $p = .061$ , observed power = .611). These results indicate that the location of the items assessed by the individualists differs from the location of the items assessed by the collectivists, and therefore that the two groups of participants interpreted the conflict styles differently. Specifically, the two groups differed in the meaning assigned to avoiding, integrating, obliging, and compromising. Employing

### Location of Styles in Two Dimensional Space: X & Y

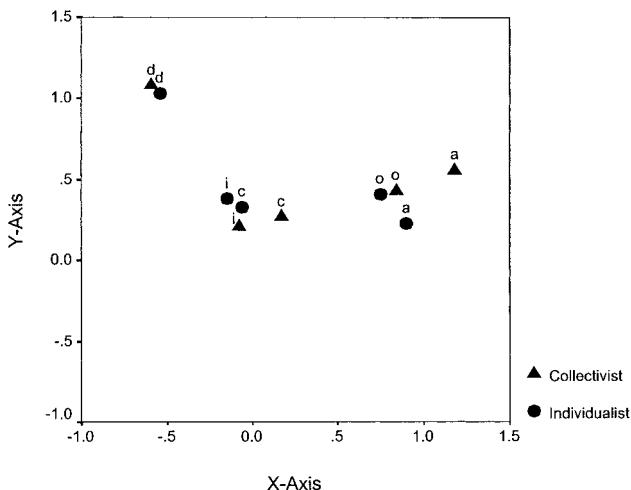


FIGURE 4

LOCATION OF CONFLICT STYLES IN TWO-DIMENSIONAL SPACE: X (FIRST DIMENSION) AND Y (SECOND DIMENSION). CONFLICT STYLES ARE LABELED *A* FOR AVOID, *O* FOR OBLIGE, *I* FOR INTEGRATE, *C* FOR COMPROMISE, AND *D* FOR DOMINATE.

paired *t*-tests with the item as the unit of analysis, we compared the location of the items across the four dimensions. We found that avoiding differed in its location in the individualists' space as compared to the collectivists' space: *x*-axis,  $t(5) = 3.152$ ,  $p < .03$ ; *y*-axis,  $t(5) = 5.425$ ,  $p < .003$ ; *z*-axis and *w*-axis *ns*. Integrating also differed in its location across the two spaces: *y*-axis,  $t(4) = 3.537$ ,  $p < .024$ ; *w*-axis,  $t(4) = 3.710$ ,  $p < .021$ ; *x*-axis, *z*-axis *ns*. Obliging differed in the *z*-axis,  $t(5) = 7.063$ ,  $p < .001$ ; *x*-, *y*-, and *w*-axes *ns*. Compromising differed on the *x*-axis,  $t(6) = 2.611$ ,  $p < .040$ ; *y*-, *z*, and *w*-axes *ns*. Dominating did not significantly differ in its location on the first four axes.

We next tested H5, which asked whether obliging and avoiding are distinct conflict styles, and H6, which asked whether integrating and compromising are distinct conflict styles. Specifically, we performed two repeated-measures ANOVAs as above, one with only the items for avoiding and obliging, and the other with only the items for compromising and integrating. If each of these pairs of styles is distinct, we should find a significant Style  $\times$  Coordinate interaction.

For the repeated-measures ANOVA with the items representing integrating and compromising, the Style  $\times$  Coordinate interaction was not significant (observed power = .218). For the repeated-measures ANOVA with the items representing avoiding and obliging, the Style  $\times$  Coordinate interaction was significant ( $F[3, 30] = 17.094$ ,  $p < .001$ , partial  $\eta^2 = .631$ ). Therefore, integrating and compromising can be assumed to mean the same thing, and they can be combined without loss of information. However, avoiding and obliging appear to mean different things. Thus, these results support the reclassification of the five styles into four styles. In sum, the five conflict styles (avoiding, compromising, dominating, integrating, obliging) can be collapsed into four types (avoiding, obliging, integrating & compromising, dominating).<sup>12</sup>

### Location of Styles in Two Dimensional Space: X & Z

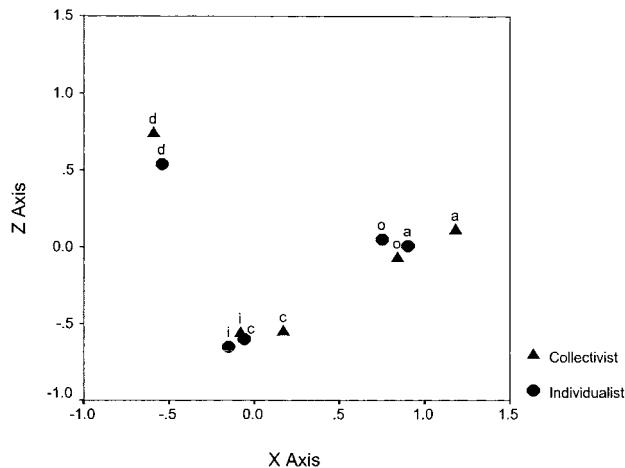


FIGURE 5

LOCATION OF CONFLICT STYLES IN TWO-DIMENSIONAL SPACE: X (FIRST DIMENSION) AND Z (THIRD DIMENSION). CONFLICT STYLES ARE LABELED *A* FOR AVOID, *O* FOR OBLIGE, *I* FOR INTEGRATE, *C* FOR COMPROMISE, AND *D* FOR DOMINATE.

## Discussion

### Summary

We posed six hypotheses and four research questions, and found that the interpretation of conflict styles is both simpler and more complex than we believed. First, we found that the integrating style was generally the most preferred, obliging and avoiding were next, followed by compromising and dominating. Contrary to Hypothesis 1, avoiding was preferred by individualists rather than collectivists. Individualists did not differ from collectivists in their preference for the dominating conflict style. We also found that collectivists prefer compromising and integrating more than individualists do, whereas individualism-collectivism had no significant linear effect on preference for the obliging style.

We next employed multidimensional scaling to examine the meaning assigned to the five conflict styles. Considering only the first two dimensions (*x* and *y*), the locations of the five conflict style preferences (Figure 4) were similar to the appearance of the dual concern model (Figure 1). Our finding (H3) that the space needed to represent the 29 items measuring the five conflict styles was highly multidimensional for both individualists and collectivists is contrary to the idea that the items used to measure the five styles can be generated from any two-dimensional typology. This finding indicates that there are more facets to the five conflict styles than previously proposed.

Not only is the meaning of the five styles complex, it also differed for individualists and collectivists. Specifically, the meaning of four of the five styles was understood differently by individualists and collectivists; dominating was the only style interpreted similarly by both groups.

When we examined the general differences in meaning that the five styles have,

### Location of Styles in Two Dimensional Space: Y & Z

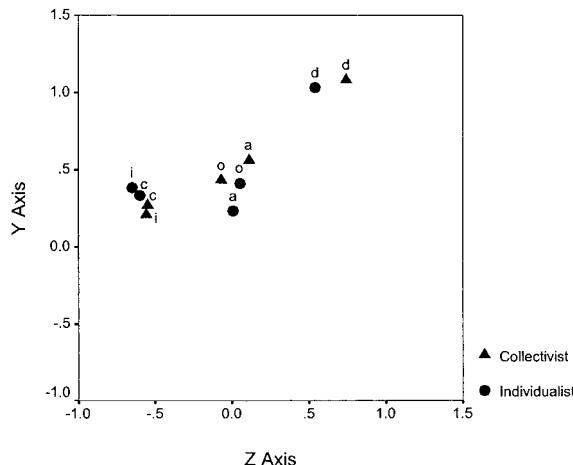


FIGURE 6

LOCATION OF CONFLICT STYLES IN TWO-DIMENSIONAL SPACE: Y (SECOND DIMENSION) AND Z (THIRD DIMENSION). CONFLICT STYLES ARE LABELED *A* FOR AVOID, *O* FOR OBLIGE, *I* FOR INTEGRATE, *C* FOR COMPROMISE, AND *D* FOR DOMINATE.

we found that the five styles can be represented by four types: Consistent with van de Vliert and Kabanoff's (1990) view, compromising and integrating can be combined. Compromising is sometimes viewed negatively, as a style used when stakes are not high enough to expend the effort to problem solve (Pruitt & Rubin, 1986). Our findings suggest that compromising and integrating were not viewed differently, and that compromising should not necessarily be viewed as an expedient way to resolve conflict.

#### *Implications*

The complexity of our results is evident in the finding that the 29 items measuring the conflict styles were highly multidimensional. Thus, there must be other response-style dimensions that are not currently identified (see Sorenson, Morse, & Savage, 1999). Miyahara et al. (1998) suggest two potentially additional dimensions: (a) concern for avoiding dislike by others, and (b) concern for avoiding imposition (p. 518). Sternberg and Soriano (1984) suggest seven styles for resolving conflict: physical action, economic action, wait and see, accept the situation, step-down, third-party, and undermine esteem. Sternberg and Soriano's resolution styles are quite different from the five styles employed here, and reflect different modes of resolving conflicts. Similarly, Sternberg and Dobson (1987) report that their 14–16 strategies for conflict resolution represent four factors: nonphysical intensifying styles intended to pressure the opposing side into a settlement, conflict mitigating styles, acceptance of the situation, and physical force. Future research is needed to develop a more theoretically compelling and exhaustive typology of conflict styles consistent with the multidimensionality that we found.

Our findings revealed some parsimony in the number of styles: In four dimensions, four styles are sufficient (but see note 12). Although the items measuring

dominating, obliging, and compromising focused on intrapersonal aspects of conflict, several of the items measuring avoiding and integrating focused on interpersonal verbal behavior. Because individualist cultures rely on low context communication (i.e., meaning is explicit in the content of the verbal message; see Triandis, 1995), verbal expression of conflict may be normative. On the other hand, because collectivist cultures rely on high context communication (i.e., meanings are implicit within the context and relationship in which the communication takes place), verbal expression of conflict may be deviant. Therefore, the individualist-collectivist difference in the meaning assigned to the conflict styles may represent differences in expression or in high- versus low-context communication. Future research is needed to clarify this issue.

We found that different cultural orientations were associated with different meanings that people ascribe to ways of handling conflict. In the present study, we found that four of the five conflict styles have significant differences that can be attributed to a particular cultural orientation (i.e., individualism-collectivism). This finding raises fundamental questions both for theory and research.

General theory requires concepts that have cross-cultural validity. The styles of managing conflict were generated from a theoretical typology—the dual concern model—that assumes that the strategies employed by all people can be described by similar actions. However, it is often the case that people in different cultures see the same behavior and make very different conclusions about the underlying motivations that determined that behavior; Katz and Liebes's (1990) study of the television show *Dallas* provides a demonstration of this principle. Perhaps the dual concern model has prematurely provided an etic analysis without sufficient emic groundwork.

Progress in research comes about when measures are isomorphic with constructs, and constructs form a network of propositions. Both construct validity and internal validity may be established when these stipulations are met. Our findings regarding cultural differences in the meaning of conflict styles suggest that the validity of the measures employed is problematic for cross-cultural research. A broader framework is needed to capture the way individualists and collectivists interpret conflict.

### *Limitations and Conclusions*

Two possible limitations of this study are the particular sample employed and the measurement of conflict style preference by self report rather than by observation of actual behavior. We dealt with the first issue by analyzing individualism-collectivism at the individual level. This strategy made the representativeness of the sample irrelevant to our investigation.

Although self report of conflict style preferences may not correspond to actual behavior, using self reports allowed the comparison of this study's results with previous research that has, in fact, employed such paper-and-pencil measures. Therefore, what may ordinarily appear as a limitation is here actually a necessity.

The dual concern model has provided a typology, and, to a lesser extent, a mechanism, for understanding responses to conflict. Does this model have cross-cultural validity? We find that the dual concern model is incorrect or incomplete in several regards: The two-dimensional model grossly understates the complexity of conflict management, the meaning of the styles is clearly not universal, and the five styles themselves are not exclusive. Einstein is reputed to have said that "everything should be made as simple as possible, but not simpler." Although the dual concern

model has proven a good heuristic, our research suggests that the model is the kind of oversimplification to which Einstein referred.

## Footnotes

<sup>1</sup>In a review of ten studies on culture and conflict styles by Wilson et al. (1995), three studies employed the ROCI-II scale, two studies employed the OCCI, and the remaining five studies used some other measure.

<sup>2</sup>Some researchers make a distinction between individualism-collectivism as a cultural-level variable and independent-interdependent self-construals as an individual level variable (Kim, Aune, Hunter, Kim, & Kim, 2001; Kim et al., 2000; Kim & Leung, 2000; Kim, Shin, & Cai, 1998; Oetzel, 1998b; Singelis & Brown, 1995). But we argue that when data are collected on individuals and the individual is the unit of analysis, as is the case in the present study, individualism-collectivism is being treated as an individual-level variable. On the distinction between individual and collective properties, see the discussion by Lazarsfeld and Menzel (1966).

<sup>3</sup>There are many notions of meaning, and the one employed here is derived from the symbolic interactionist approach (Blumer, 1969). The notion of meaning employed in the present investigation, and its relation to the term belief, is consistent with that found in Woelfel and Fink (1980): "No concept or object has meaning in and of itself, but rather takes on meaning only in relation to some other object or set of objects" (p. 145). "The perceived distance between any two points [in a multidimensional space of concepts] is called a belief" (p. 132). Thus, the full set of beliefs regarding a concept constitutes the meaning of the concept. Therefore, meaning is not an attribute of language per se, but of individual or collective representations of beliefs.

<sup>4</sup>Contrary to the procedure of the present study, researchers often compare participants from two or a few nations considered to be individualist or collectivist. For example, Ting-Toomey et al. (1991) compare the conflict styles of people from the U.S., China, Taiwan, Japan, and South Korea, but do not measure the participants' level of collectivism. Furthermore, in many studies (e.g., Chua & Gudykunst, 1987), the classification of nations is based primarily or exclusively on Hofstede's (1980) twenty-one year old study that provides individualism index scores on 40 countries. However, these countries may vary along cultural dimensions other than individualism-collectivism, and individualism-collectivism may be related to other cultural dimensions within a specific national culture.

Cai et al. (2000) argue that by seeking participants from a variety of nations, stronger conclusions can be made about the causal effects of collectivism. In other words, by drawing participants from a variety of nations, spurious conclusions about other cultural aspects affecting conflict style preferences may be ruled out. Further, this method (i.e., using participants from a variety of nations) also recognizes that within any nation there is substantial interpersonal variation in collectivism (Triandis et al., 1988).

In order to isolate the effects of collectivism in this study we measure the collectivism of individual participants rather than the collectivism of cultural groups. Our main concern is to obtain a sample that represents the full range of individualism-collectivism scores, not to obtain a sample that is representative of the participants' home culture.

It is possible that participants' INDCOL scores from questionnaires in English differ from responses that the participants would have made if the questionnaire were in the participants' native languages. What effect might this "language problem" have? The most likely effect is that the range of INDCOL scores might be attenuated due to the use of English questionnaires for all respondents (i.e., cultural differences, as made salient by one's native language, are reduced, "homogenizing" the INDCOL scores). If this were the case, the ability to find effects associated with the INDCOL scores would be reduced. Thus, our procedures are likely to be conservative.

Finally, were the individualism-collectivism scores affected either by the participants' competence in English, or their acculturation to the U.S.? Although we cannot assess whether the mean level of responses to the INDCOL scale is so affected, correlations between measures of length of time in the United States and with self-reported assessment of spoken English (i.e., "How competent do you feel as an English speaker?"; 1 = "not at all competent," 7 = "very competent") with INDCOL scores show no evidence of either relationship (INDCOL and tenure in U.S.:  $r = -.057$ , ns; INDCOL and self-reported English competence:  $r = -.016$ , ns).

<sup>5</sup>If we use the individualism-collectivism scale scores (where higher scores indicate greater collectivism) rather than the trichotomy, the Pearson product-moment correlation between individualism-collectivism and gender (male = 1, female = 2) becomes  $-.189$  ( $N = 185$ ,  $p < .01$ ).

<sup>6</sup>We examined whether gender determined style preference in order to control for its effect if necessary. In a Gender (2 levels)  $\times$  Individualism-Collectivism (3 levels)  $\times$  Styles (within subjects, 5 levels) repeated-measures ANOVA, no gender by style interaction was found, and there was a marginally significant three-way interaction. In general, males preferred the dominating style more than females ( $M_{male} = 4.01$ ,  $M_{female} = 3.55$ ;  $F[1, 178] = 5.160$ ,  $p \leq .024$ ,  $\eta^2 = .028$ ). Because of the absence of a significant gender interaction, gender will not be incorporated in our subsequent analyses.

<sup>7</sup>The ANOVA for preference for dominating meets the assumption of homoscedasticity based on Levene's test. The ANOVA for preference for avoiding does not (Levene's test:  $F[1, 182] = 4.070$ ,  $p < .045$ ). When a

transformed value of avoiding is employed (avoiding raised to the 1.5 power), Levene's test is not significant, but the linear trend remains significant.

<sup>8</sup>The modified ROCI-II scale asks participants to indicate their tendency to use each style, as assessed by items measuring that style. We here interpret the comparison of these tendencies as indicative of the meaning of the items.

<sup>9</sup>Furthermore, the scree plots for both groups exhibit the same general pattern (for example, the correlation between the eigenvalues in the two spaces is .966,  $N = 29$  items,  $p < .001$ ). The patterns in these two spaces suggest that the dimensional structure of these spaces is similar.

<sup>10</sup>We note that Figure 4 (rotated 180° along the  $x$ - $y$  plane) resembles Figure 1, which is a schematic of the dual concern model. This finding provides some construct validity to our results. The three two-dimensional figures generated by pairing the  $w$ -axis with each other axis are not presented, but a complete table of coordinates is available from the authors.

<sup>11</sup>See Levine and Hullett (2000) for a discussion of the computation of  $\eta^2$  in SPSS (Norušis, 1999). Consistent with their discussion, we label what we report partial  $\eta^2$ 's, which, like partial  $r^2$ 's, can total to more than 100% in a multivariate analysis.

<sup>12</sup>Note that the effects found and the number of dimensions used are not independent. For example, over the first three dimensions we find no significant difference between obliging and avoiding.

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