TPM

# HORIZONTAL AND VERTICAL INDIVIDUALISM AND COLLECTIVISM: AN ITALIAN ADAPTATION OF SINGELIS ET AL.'S SCALE AND ITS RELATIONS WITH CONFLICT MANAGEMENT AND LEADERSHIP STYLES

ANDREA BOBBIO
MAURO SARRICA
UNIVERSITY OF PADOVA

This study provides a contribution to the Italian adaptation of the Horizontal and Vertical Individualism and Collectivism scale developed by Singelis, Triandis, Bhawuk, and Gelfand (1995). It examined the relationships between Individualism and Collectivism attributes, Conflict Management, and Leadership Styles. Participants were 308 university students who filled out a self-administered anonymous questionnaire. The dimensionality and factorial structure of Singelis et al.'s scale was tested via confirmatory factor analysis and several psychometric limitations emerged. Subsequent analyses indicated that a three-factor structure, made up of Horizontal and Vertical Individualism and a single Collectivism dimension, with 21 indicators, fitted the data better and it was therefore retained. Positive correlations existed between Vertical Individualism, Conflict Management styles concerned with self-interest, and the task-oriented Leadership style. Conversely, positive correlations emerged between Collectivism, Conflict Management styles characterized by concern for others, and the relationship-oriented Leadership style.

Key words: Culture; Horizontal/Vertical Individualism; Horizontal/Vertical Collectivism; Conflict Management Style; Leadership Style.

*Correspondence concerning this article should be addressed to Andrea Bobbio, Dipartimento di Psicologia Applicata, Università di Padova, Via Venezia 8, 35131 Padova (PD), Italy. E-mail: andreabobbio@unipd.it*

## INTRODUCTION

Of all dimensions proposed to compare cultures, Individualism has encountered special interest (Voronov & Singer, 2002). Initially defined as a unipolar trait (Hofstede, 1980), over the years it has been acknowledged as a bipolar attribute, namely the opposite of Collectivism (Oyserman, Coon, & Kemmelmeier, 2002). Alongside studies attempting to identify global indices of Individualism and Collectivism, an increasing number showed the importance but also the complexity of individual level measures (Carnevale & Leung, 2001; Green, Deschamps, & Páez, 2005). The approach proposed by Triandis (1993a) took into account results of studies on independent versus interdependent self-construal (Markus & Kitayama, 1991); this approach was supported by a wide range of converging results (Soh & Leong, 2002; Triandis & Gelfand, 1998; Triandis, McCusker, & Hui, 1990) and allowed scholars to address relations between the individual and super-individual dimensions of culture.

The present study adopted the model and the scale developed by Singelis, Triandis, Bhawuk, and Gelfand (1995) in order to assess Horizontal and Vertical features of both Individualism and Collectivism. First, an Italian version of the scale was proposed, its psychometric properties being assessed. Italy is generally considered to be a moderately individualistic country (Oishi, Diener, Lucas, & Suh, 1999; Suh, Diener, Oishi, & Triandis, 1998), even if this evaluation is based on 1960's empirical data (Hofstede, 1980) averaged with personal ratings by Triandis (i.e., the reference in Suh et al., 1998, is: Triandis, personal communication, February, 1996). New studies, therefore, may be of interest in order to evaluate Italian samples empirically on these dimensions, and possibly update the rating. Second, we examined the relationships existing between cultural orientations, measured at an individual level, conflict management, and leadership styles preferred by respondents. The aim was to assess whether results in cross-cultural research, concerning the association between Individualistic versus Collectivistic cultures, conflict management, and leadership styles (e.g., Oyserman et al., 2002; Triandis, 1993b) could also be observed at an individual level.

## Individualism and Collectivism as Cultural Syndromes

According to Triandis (1993a, 1999), it is possible to delineate cultural differences on the basis of different *cultural syndromes* — a pattern of simultaneously present attributes. Within this model, Individualism and Collectivism are differentiated in four attributes: (a) independent or interdependent self-construal; (b) degree of importance given to personal or group goals; (c) priority of individual attitudes or social norms in guiding behaviors; (d) focus on exchange relationships or communal relationships. By intersecting Individualism and Collectivism with the distinction between Horizontal cultures (where egalitarian norms prevail), and Vertical cultures (where status and achievement are emphasized), it is possible to refine the initial model and identify four cultural orientations, characterized by different priorities (Singelis et al., 1995) (Table 1).

TABLE 1
The four cultural orientations and their main priorities

| | Cultural orientation | |
|---|---|---|
| Dimension | *Individualism (I)* | *Collectivism (C)* |
| *Horizontal (H)* | (HI): Independence and Egalitarianism among persons | (HC): Interdependence and Equity among ingroup members |
| *Vertical (V)* | (VI): Status and Interpersonal competition | (VC): Group integrity and Submission to authority |

Horizontal Individualism (HI) abides by universalistic values and also assumes that individuals are mainly interested in reaching or defending their independence from others. Namely, in this pattern, people want to be unique among others who are equal to them, they are highly self-reliant, but not particularly interested in becoming distinguished or having high status. Vertical Individualism (VI) sees people as independent units in a hierarchical world, competing with

others in order to improve their status, and outperform them. In Horizontal Collectivism (HC), the self is considered as interdependent with others in the group and egalitarian norms guide relationships within the ingroup. In the HC pattern, that is, people emphasize connectedness, common goals, and similarities with others even if they do not submit easily to authority. Finally, Vertical Collectivism (VC) is a pattern in which individuals consider themselves as part of a group where members have different status. For instance, people high on VC are interested in preserving ingroup integrity, sacrifice their interests (e.g., for the sake of the ingroup's goals), and submit to authority when asked to, even if they are not convinced of the course of the actions required of them (Dickson, Den Hartog, & Mitchelson, 2003).

## HI, VI, HC, and VC: Their Measurement and Correlates

Singelis et al. (1995) proposed a scale aimed to identify respondents' cultural orientation along the four patterns: VI, HI, VC, and HC. Their main tenet was that the measurement of these four constructs "is more desirable than measuring either the more abstract constructs of individualism and collectivism, or the constituent elements of the constructs" (p. 248). The scale was developed with undergraduates from the University of Illinois and the University of Hawaii (Manoa), with a prevalence of respondents with East Asian and Western European ethnic backgrounds. Religious beliefs were mainly Christianity (75%) or rationalism (a skepticism about religion or no religion) (23%). The initial pool of items consisted of 94 statements, developed in previous studies, and several especially written additional items. The 32-item final version was obtained by dropping all items showing low factor loadings or low item-total correlations. The four-dimensional structure was supported by exploratory and confirmatory factor analyses and the instrument showed convergent validity. Alpha coefficients were as follows: VI = .74, HI = .67, VC = .68, and HC = .74. Results showed the existence of a high correlation between the two Collectivism sub-factors HC and VC ($r$ = .39). The correlation between HI and VI was absent ($r$ = .00), whereas the correlations between the two VI and VC vertical dimensions ($r$ = .14), and between the two HI and HC horizontal dimensions ($r$ = .20) were low.

As regards demographic variables, "West European backgrounds were negatively associated with Vertical Collectivism, and East Asian backgrounds were positively associated with this dimension" (Singelis et al., 1995, p. 259). Gender had a limited influence: women scored lower than men only on VI. Neither religious beliefs nor age seemed to have an effect on the individual adhesion to the four cultural dimensions. In synthesis, the proposed measure was sufficiently reliable, and converged with other indices of Individualism-Collectivism — correlations ranging between |.20| and |.32| (Sinha & Verma, 1994) — and with independent-interdependent self-construal indices — $r$s ranging between |.25| and |.50| (Singelis, 1994). Moreover, the vertical versus horizontal distinction provided interesting differentiations between respondents in different occasions (e.g., verticals were more likely to feel guilty than horizontals; vertical individualists, and not horizontal ones, declared that it is worse to be financially dependent than to be rejected by one's family).

Other studies by Triandis and Gelfand (1998) supported the advisability of distinguishing between four cultural orientations and the validity of the scale. The authors used a 27-item version of Singelis et al.'s scale (1995), multimethod-multitrait procedures, and numerous convergent

measures (e.g., eight collectivist items from Oyserman, 1993; 14 interdependent-independent construal items from Gudykunst, Matsumoto, Ting-Toomey, Nishida, & Karimi, 1994). Among their findings, the positive relationship between Collectivism and sociability is worth noting. On the other hand, Individualism, and particularly the VI dimension, was positively linked with competitiveness, and this appears consistent with the observed relationships between culture and conflict management styles.

Generally speaking, the limitations of the four-dimension model are mainly related to the complexity encountered when measuring Collectivism, and particularly the HC dimension, across nations (Nelson & Shavitt, 2002; Schimmack, Oishi, & Diener, 2005). As reported by Oishi (2000), the alphas of the four factors of the scale noticeably vary across countries, with VC ranging from .24 to .80 and HC ranging from .49 to .86. Moreover, the high correlation between the two dimensions of Collectivism observed in the original study (Singelis et al., 1995) also occurred in the meta-analysis by Schimmack et al. (2005; mean $r$ = .80).

The same limitations were noticed by Gouveia, Clemente, and Espinosa (2003), who considered a Spanish sample. In their study, the hypothesized four-factor model was confirmed and alphas, even those that were only just acceptable (i.e., ranging from .48 to .76), were relatively similar to alphas reported by Singelis et al. (1995). Nevertheless, a high correlation between the two collectivist dimensions HC and VC was found ($\phi$ = .71); a high correlation coefficient between VI and HI ($\phi$ = .37) emerged, and, given that certain items (numbers 1 and 32, see the Appendix for details) gave rise to psychometric difficulties, the authors argued that Horizontal Individualism may include specific features, such as personal control or expressive Individualism — a proclivity for genuine expressions of the self.

## Cultural Orientation and Conflict Management

The relationship between culture and conflict has been explored using two main approaches. On the one hand, culture can be considered as an inseparable part of conflict management (Fry & Fry, 1997; Lederach, 1991); on the other, it can be viewed as an interfering variable that should be controlled. In this sense, culture plays a special role in conflict strategies as one of the sources of "stable preferences for outcome distributions between oneself and another, unknown person" (De Dreu & Carnevale, 2003, p. 251) and, consequently, as one of the main factors which guide resolution processes (Carnevale & Pruitt, 1992).

Cultural orientation may foster conflicts, by leading people to develop contrasting goals (Triandis, 2000), or by giving rise to misunderstandings between individuals with different cultural backgrounds (Kimmel, 2000). Research in this field focused on the interpretation of social conflicts (Huie, 1987) as well as international conflicts (Carnevale & Choi, 2000; Triandis, 1994), and tried to provide international negotiators with behavioral advice (Brett, 2000). The main hypotheses can be summarized as follows: individualistic cultures that emphasize self-enhancement regard conflict as natural, and foster competitiveness between parties; on the contrary, in collectivist cultures conflicts are viewed as disruptive and parties prefer to *cover* them, to adhere to obligation and to preserve the group bonds (Gelfand et al., 2001). Many studies compared conflict styles, adopted by North American, Japanese, and Indian respondents, and people

from other Asiatic regions, and the expected collectivist-individualist (east-west) differences in conflict management emerged (Oyserman et al., 2002).

Among the few that focused on intra-national cultural differences, Kozan and Ergin (1999) investigated the variability of conflict management in Turkey. The authors assessed cultural differences in terms of values endorsement (Schwartz, 1992), and related them to conflict management styles (Rahim, 1983). Rahim's model (Rahim & Bonoma, 1979) distinguished five basic conflict management styles, based upon different levels of concern for self and others, namely, (a) Dominating: a competitive approach, based on the motivation to reach one's own goals at the expense of one's opponent; (b) Obliging: high concern for others and low concern for self — "appropriate when a party […] believes that preserving relationship is important" (Rahim, 2002, p. 220); (c) Integrating: high concern for self and for others, characterized by the search for alternative and innovative solutions able to satisfy both parties; (d) Avoiding: low concern for self and others, a style adopted when the costs related to conflict management outweigh the potential benefits of its resolution; (e) Compromising: a style based on interest in mediating between the goals of the conflicting parties. Results by Kozan and Ergin (1999) showed a persistent relationship between tradition, security, and conformity values and Avoiding style; instead, participants endorsing power values tended to adopt Dominating conflict style, especially with peers. Kozan and Ergin concluded that new studies using an alternative values measure, such as the one proposed by Triandis (VI, HI, VC, and HC; see Triandis & Gelfand, 1998), are needed. Moreover, they argued that Horizontal and Vertical Individualism and Collectivism are parallel to the two-dimensional view of values by Schwartz (1992; see also Oishi, Schimmack, Diener, & Suh, 1998). Starting from this idea, the relation between cultural orientation, measured at an individual level, and preferred conflict management styles was explored.

## Cultural Orientation and Leadership

Leadership is an intrinsic and collective process of every social group (Hogg, 2001) which can be observed in every culture as well as throughout the history of humankind (Northouse, 1997). However, researchers who have tried to identify universally accepted features, behaviors, and processes of leadership have come up against cultural and situational specificities associated with the everyday exercise of leadership (i.e., culture-universal vs. culture-specific approach; see Brodbeck et al., 2000; Dorfman et al., 1997; Scandura & Dorfman, 2004; Smith, Misumi, Tayeb, Peterson, & Bond, 1989; Zander & Romani, 2004). In fact, leadership is mainly an outcome of social cognitive processes and leader efficacy is affected by perceptions and reactions of followers, who judge competence, effectiveness, and fairness of leaders using context-dependent and culture-dependent schemes (Hogg, 2001; Yan & Hunt, 2005; Yukl, 2006). These are some of the main reasons why research on leadership in cross-cultural perspective has become more and more important, especially in order to establish the relations between a leader's behavior and the group's and organizational efficiency (Dickson et al., 2003; Dorfman & Scandura, 2004).

Starting from Hofstede's (198, 1991) work, increasingly complex definitions of culture have been introduced in order to improve research quality in the leadership field (Yukl, 2006). An example is the landmark 62-nation GLOBE project, in which cultures were classified along

nine dimensions, thus reaching subtle levels of differentiation (House et al., 1999). The basic hypothesis of GLOBE was that charismatic leadership would find universal endorsement. Results indicated that, along with universally shared evaluation of traits (e.g., being trustworthy and honest, or being irritable and dictatorial), some attributes were endorsed in some countries but rejected in others (e.g., cautious, independent, sensitive, self-sacrificing), and might be used to support both culture-universal and culture-specific positions (Scandura & Dorfman, 2004).

Individualism-Collectivism distinction is one of the most frequently adopted dimensions in cross-cultural research on management and leadership (Dickson et al., 2003; Dorfman et al., 1997; Tiessen, 1997). Triandis (1993b) proposed that in collectivist cultures successful leaders maintain group harmony and focus on their co-workers personal problems (e.g., a relationship-oriented style), whereas in individualist cultures a goal-oriented and participative style would be more appropriate (e.g., a task-oriented style). Triandis' hypothesis found support and was extended by Dorfman and colleagues (1997). The authors selected five culturally different countries (Japan, South Korea, Taiwan, Mexico, and the United States), and showed that the influence of leadership behaviors and processes (e.g., directive, supportive, and charismatic) on organizational variables (e.g., work satisfaction and commitment) was moderated by workers' level of Collectivism.

Further research suggested that horizontal and vertical features are also linked with leadership relevant features. For example, Nelson and Shavitt (2002) found that U.S. individuals (more vertically oriented) evaluated achievement more highly than Danes (more horizontally oriented) did. Triandis and Gelfand (1998) found authoritarianism positively related with Collectivism, especially with the elements of Collectivism dealing with hierarchy and submission to ingroup authority (VC). Kemmelmeier et al. (2003) in a 7-nation study (i.e., Bulgaria, Japan, New Zealand, Germany, Poland, Canada, and the United States) also found a positive correlation between authoritarianism, VI, and VC scores.

Consequent to these results, various authors have recently called for a thorough examination of the relation between the four cultural dimensions HI, VI, HC, and VC, and leadership (Dickson et al., 2003). The conclusion reached by Dickson et al. is that the "strong deference to and respect for authority that seems to accompany high vertical collectivism suggests links to leadership. […] Preferred and successful ways to lead people are likely to differ for these four groups, but to date there is insufficient research on the relationships between vertical and horizontal IC and leadership to draw any firm conclusions" (p. 744).

Starting from this premise, the relation was explored between cultural orientations, measured at an individual level, and task- vs. relationship-oriented individual leadership styles, as an exploratory step to further studies.

## Aims of the Study and Hypotheses

The aim of the study was twofold. First, to contribute to the Italian validation of the Horizontal and Vertical Individualism and Collectivism scale, developed by Singelis et al. (1995). Second, to investigate the relationships between individual cultural orientation, preferred conflict management, and leadership styles. The following hypotheses were formulated.

*Hypothesis 1*. The factor structure of the scale proposed by Singelis et al. (1995) would be valid also in the Italian context, and show satisfactory psychometric properties. The proposed model envisages four first-order correlated factors (VI, HI, VC, and HC), each one measured by eight indicators.

*Hypothesis 2*. Individualism scores would be positively associated with preference for conflict management styles based on high levels of self-concern. In particular, VI orientation, which emphasizes interpersonal competition, would be positively correlated with the Dominating style (*Hypothesis 2a*). On the contrary, HI would not be associated with any specific conflict management style (*Hypothesis 2b*). HI, in fact, highlights egalitarian norms and independence that may be associated with different conflict management styles, according to specific situations or individual goals.

*Hypothesis 3*. Collectivism scores would be positively correlated with preference for conflict management styles based on concern for others.[1] In particular, VC, which places group integrity before self interest, would be positively associated with Obliging and Avoiding styles (*Hypothesis 3a*). HC, which depicts interdependence and egalitarianism, would be positively correlated with Compromising and Integrating strategies (*Hypothesis 3b*).

*Hypothesis 4*. Individualism scores were expected to be positively correlated with the task-oriented leadership style. In particular, the correlation between VI and task-oriented style would be higher than the correlation between HI and task-oriented style, considering that VI primarily draws attention to the importance of winning and achieving goals better than others (*Hypothesis 4a*).

*Hypothesis 5*. Collectivism scores were expected to be positively correlated with the relationship-oriented leadership style. In particular, the correlation between HC and relationship-oriented leadership style would be higher than the correlation between VC and relationship-oriented leadership style, because HC primarily emphasizes group harmony and the importance of coworkers' well-being (*Hypothesis 5a*).

## METHOD

### Participants

A group of 308 students from the University of Padua took part in the research. One-hundred and twenty-two were male (39.6%) and 185 females (60%) (1 missing value). Most of them attended the Faculty of Psychology (85%). Mean age was 21.04 years ($SD$ = 3.86): 21.81 ($SD$ = 3.77) for men and 20.54 ($SD$ = 3.84) for women, $t(304) = 2.86$, $p < .01$; 78.6 % of participants were born in the North-East of Italy.

### Materials and Procedure

Data were collected by means of a questionnaire handed out individually to the participants and gathered after being completed anonymously. Participants were recruited in a variety of locations, such as libraries and classes, after lessons. The instructions in the cover page of the

questionnaire specified that participation was voluntary without any form of compensation and that all data would be treated confidentially and only for research purposes. Afterwards, participants were briefly informed about the aim of the study. The average respondent took no more than 15 minutes to answer all the items. The questionnaire included the scales listed below. For each item a 5-point Likert-type scale was used, ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

*Individualism and Collectivism*. Singelis et al.'s (1995) scale, made up of 32 items, belonging to four distinct subscales with 8 items each (HI, VI, HC, VC), was translated via the backtranslation procedure (Merenda, 2005) (see the Appendix for the Italian version of the scale). The items were presented in the order proposed by Nelson and Shavitt (2002).

*Conflict Management Style*. ROCI II (Rahim Organizational Conflict Inventories; Rahim, 1983) in Majer's (1995) Italian version was used. The instrument, containing 28 items, was modified according to Hammock, Richardson, Pilkington, and Utley's (1990) suggestions so as to be more suitable for a student sample (e.g., conflicts with peers). In a brief introduction respondents were asked to answer all items referring to the way they *usually* manage the conflicts they are involved in. Five conflict management styles were assessed: Dominating (e.g., "I use my influence to get my ideas accepted"), Integrating (e.g., "I try to work with others to find solutions to a problem which satisfy our expectations"), Obliging (e.g., "I usually try to accommodate the wishes of others"), Avoiding (e.g., "I try to stay away from disagreements with others"), and Compromising (e.g., "I try to find a middle course to resolve an impasse").

*Leadership Style*. Twelve items selected from the Leadership Style Questionnaire published in Northouse (1997) and already validated in the Italian context (Bobbio, Manganelli Rattazzi, & Muraro, 2007) were used: five items assessed the task-oriented style and seven items represented the relationship-oriented one. Sample items include: "I tell group members what they are supposed to do" (task) and "I show concern for the personal well being of others" (relationship). A brief introduction asked respondents to answer all items referring to their *current* or *past* behaviors in leadership positions (e.g., in sport teams, cultural or political groups, etc.).

*Personal Information*. Gender, age, and location of birth were requested.

## Data Analyses

Confirmatory factor analysis was performed in order to test *Hypothesis 1*. Goodness-of-fit was checked, taking into account multiple criteria: $\chi^2$, RMSEA, SRMR, and CFI. Recommended values are as follows: $\chi^2$ not significant, although this rule should be considered with caution because it strongly depends on sample size; RMSEA $\leq .05$ (very good) or between .05 and .08 (acceptable); SRMR $\leq .05$ (very good) or between .05 and .10 (acceptable); CFI $\geq .97$ (very good) or between .95 and .97 (acceptable) (Hu & Bentler, 1999; Schermelleh-Engel, Moosbrugger, & Müller, 2003). Using PRELIS 2.54, kurtosis, skewness, and Mardia's (1970) multivariate kurtosis were computed: kurtosis and skewness are satisfactory if falling between –1.00 and +1.00 (Bollen, 1989); Mardia's coefficient must vary between -1.96 and +1.96 in order to support multivariate normality.

Finally, Pearson's correlations were computed between all the variables in order to test *Hypotheses 2* to *5a*.

## RESULTS

### Factorial Structure of the HI, VI, HC, and VC Scale

Both skewness and kurtosis for the majority of Individualism-Collectivism items fell between –1.00 and + 1.00 (no value was higher than |1.073|). Mardia's (1970) index of relative multivariate kurtosis was equal to 1.058. However, the tests for multivariate skewness and kurtosis showed significant effects: $Z = 13.661$ ($p < .0001$) and $Z = 9.402$ ($p < .0001$), respectively. Given that these results indicated that the assumption of multivariate normality could not be accepted, confirmatory factor analyses was carried out with the *robust maximum likelihood* method, that is considered preferable also for small samples with a non-normal data distribution (Schermelleh-Engel, Moosbrugger, & Müller, 2003).

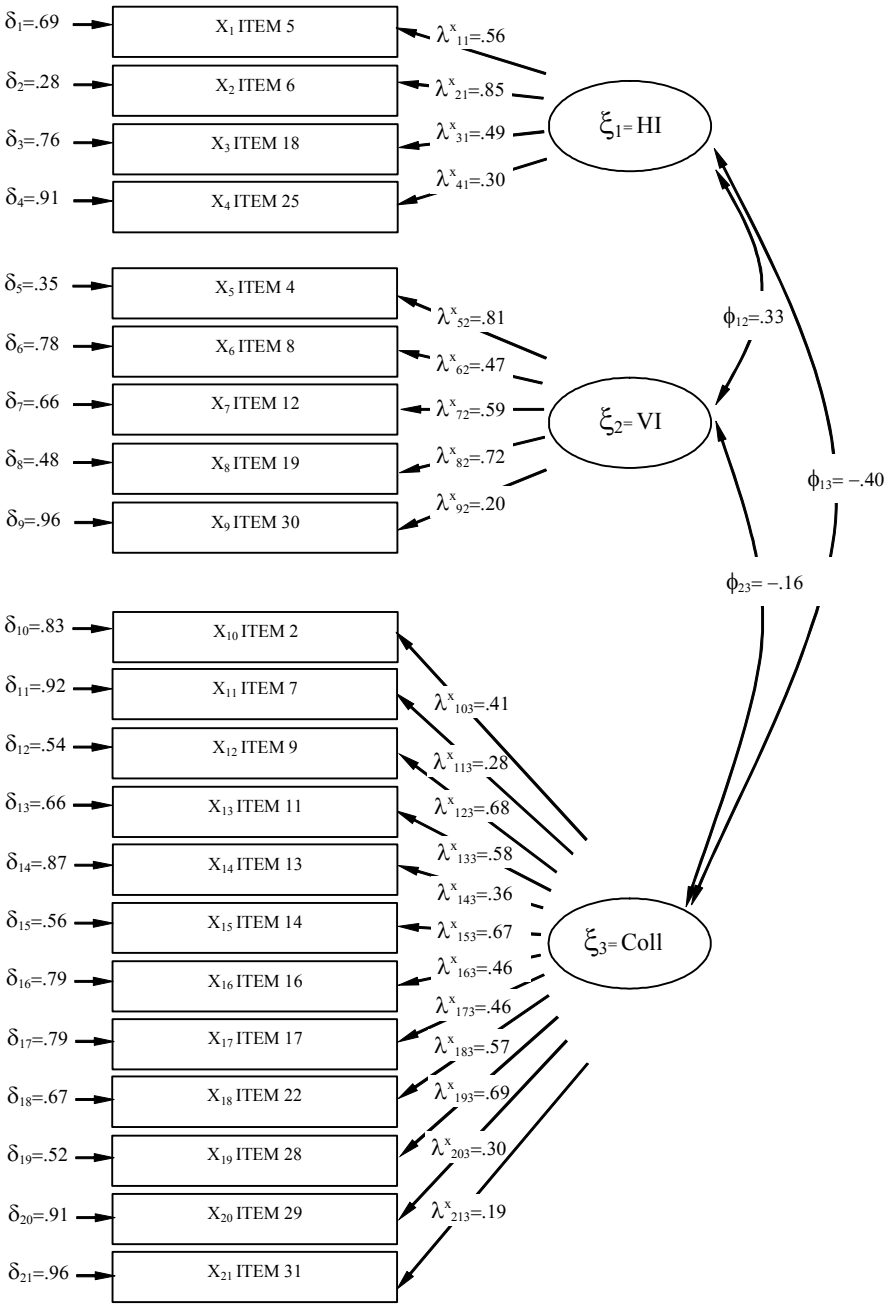
The goodness-of-fit of the original four-factor model (Singelis et al., 1995) with 32 indicators turned out not to be acceptable ($M_1$; Table 2). The model was improved following Bagozzi and Baumgartner's (1994) suggestions. Taking into account error correlations, standardized residuals, and modification indices for loadings, problematic items were deleted one by one, and the fit of the new model was tested at every subsequent step. Altogether eleven items were deleted (see the Appendix for details) and a four-factor solution (1 = HI, 2 = VI, 3 = HC, 4 = VC) with 21 indicators was reached, which showed an acceptable goodness-of-fit ($M_2$; Table 2). Correlations between factors were as follows: $\phi_{12} = .34$ ($p < .01$), $\phi_{13} = –.41$ ($p < .01$), $\phi_{14} = –.31$ ($p < .01$), $\phi_{23} = –.16$ ($p < .05$), $\phi_{24} = –.21$ (*ns*), $\phi_{34} = .98$ ($p < .01$). Reliability (α) was: HI (four items) = .60, VI (five items) = .72, HC (seven items) = .73, VC (five items) = .42.

TABLE 2
Goodness-of-fit indices of confirmatory factor analysis models

| | CFA Models | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ξ | *x* | *S-B-S* $\chi^2$ | *df* | *p*≅ | RMSEA | CFI | SRMR |
| $M_1$ | HI, VI, HC, VC | 32 | 1276.67 | 458 | .000 | .076 | .83 | .110 |
| $M_2$ | HI, VI, HC, VC | 21 | 325.04 | 183 | .000 | .050 | .94 | .079 |
| $M_3$ | HI, VI, Coll | 21 | 327.57 | 186 | .000 | .050 | .94 | .082 |
| $M_4$ | Ind, Coll | 21 | 458.06 | 188 | .000 | .068 | .88 | .095 |

*Note*. S-B-S = Satorra-Bentler Scaled Chi-square; x = number of indicators.

The high correlation between HC and VC dimensions and the unacceptable reliability coefficient for VC led us to abandon the HC-VC distinction and to test a three-factor structure (i.e., HI, VI, and Collectivism) with 21 indicators. The overall goodness-of-fit of this third model was acceptable, even if CFI was slightly lower than the recommended threshold ($M_3$; Table 2). Correlations between latent factors were: $\phi_{12} = .33$ ($p < .01$), $\phi_{13} = –.40$ ($p < .01$), $\phi_{23} = –.16$ ($p < .05$) (see Figure 1). Alpha for Collectivism was satisfactory (12 items) = .76; alpha for HI and VI were the same as for Model 2.




*Note*. For all the coefficients, $p < .05$.

FIGURE 1
$M_3$ — Factorial structure.

As regards items composition of the constructs measured by the scale, it should be noticed that the HI and VI dimensions devised here only partially overlapped the original ones. Items composing HI expressed desire for independence and need for privacy, while items conveying egalitarian norms were excluded. The items in VI emphasized competition with others

and the importance of winning; the societal benefits and emotions connected with competition were less widely represented compared to the original version. The single Collectivism dimension included almost all the items from the original HC scale, and five of the eight items from the original VC. The deleted items were related to the willingness to sacrifice personal interests in order to please one's family.

Additionally, a model with two latent factors (Individualism and Collectivism) and 21 indicators (nine items for Individualism and twelve items for Collectivism) was tested. Goodness-of-fit indices were not satisfactory ($M_4$; Table 2); the model was therefore rejected.

## Descriptive Statistics and Correlations between Variables

Descriptive statistics, reliability, and correlations between measures are summarized in Table 3. The ROCI Compromising dimension was dropped due to the low reliability ($\alpha = .50$). Individualism (i.e., HI plus VI, alpha = .68) and Collectivism composite scores differ significantly from each other (3.23 vs. 3.56, respectively), $t(307) = -7.18$, $p < .0001$. Thus, our participants may be defined as slightly more Collectivist than Individualist.

TABLE 3
Descriptive statistics, correlations, and reliability coefficients ($n = 308$)

| Scale | Label | Mean (SD) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Individualism and Collectivism | 1. HI | 3.39 (.68) | *.60* | | | | | | | | |
| | 2. VI | 3.11 (.72) | .19* | *.71* | | | | | | | |
| | 3. Collectivism | 3.56 (.49) | –.23** | –.14* | *.76* | | | | | | |
| Leadership Style | 4. Task | 2.87 (.76) | .06 | .38** | .03 | *.80* | | | | | |
| | 5. Relationship | 3.71 (.57) | .10 | –.06 | .49** | .14* | *.77* | | | | |
| Conflict Management Style | 6. Integrating | 3.68 (.57) | –.01 | –.05 | .53** | .11 | .65** | *.84* | | | |
| | 7. Avoiding | 2.80 (.79) | –.02 | –.05 | .08 | –.14* | –.02 | –.07 | *.81* | | |
| | 8. Dominating | 2.72 (.95) | –.01 | .42** | –.07 | .51** | –.15 | –.14 | .01 | *.86* | |
| | 9. Obliging | 3.07 (.60) | –.08 | –.15** | .32** | –.08 | .33** | .45** | .28** | –.15** | *.75* |

*Note*. * = $p < .05$; ** = $p < .01$; alpha coefficients in diagonal.

With reference to the correlations between cultural orientations, measured at the individual level, preferred Conflict Management, and Leadership styles, the results obtained were mainly consistent with the hypotheses. As regards Individualism and conflict management (*Hypothesis 2*), VI was positively correlated with the Dominating style (*Hypothesis 2a*) and negatively with the Obliging style, which could be seen as its opposite. As for HI, it did not show any significant correlation; it therefore appears that those who see themselves as independent individuals can adopt various styles according to the situation, without having a preferred strategy (*Hypothesis 2b*).

Consistent with Hypothesis 3, the unique Collectivism score showed positive correlations with the Integrating and Obliging styles, both based on the attempt to satisfy the concerns of the

counterpart. Because it was not possible to compute separate scores for HC and VC, Hypotheses 3a and 3b were not tested.

As regards Individualism and leadership styles (*Hypothesis 4*), only VI was positively correlated with the task-oriented leadership style, while the correlation between HI and this style was nonsignificant (*Hypothesis 4a*). As predicted, Collectivism was significantly and positively associated with the relationship-oriented leadership style (*Hypothesis 5*). Given that it was not possible to distinguish between HC and VC, no further hypotheses were tested (*Hypothesis 5a*).

In the end, even if no specific hypotheses regarding the correlations between Conflict Management and Leadership Style were expressed, results showed a coherent and interesting pattern. Task-oriented leadership was positively correlated with the Dominating conflict management style and negatively with the Avoiding style, while relationship-oriented leadership style was positively correlated with the Integrating and Obliging strategies.

## Discussion

The four-factor structure of the cultural orientation scale developed by Singelis et al. (1995) was not supported by our data (*Hypothesis 1*). In particular, it was not possible to preserve the distinction between HC and VC. The confirmatory factor analyses led us to prefer and retain a three-factor solution ($M_3$; Table 3) with 21 indicators. Our final model included Horizontal and Vertical Individualism (HI, VI) and a single general dimension of Collectivism. It is noteworthy that, unlike what Singelis et al.'s (1995) reported, the HI dimension identified here principally expresses the desire for separation from the group and the need for privacy. On the other hand, VI underlines the importance of competition and victory. The Collectivism dimension includes almost all the horizontal and vertical nuances (i.e., group integrity, interdependence and equity among ingroup members) except for willingness to renounce personal goals if not approved by one's own relatives.

Two issues can be discussed in order to explain this discrepancy: (a) difficulties in measuring Collectivism across nations, and (b) attributes of participants. The first issue is well known in the literature (Nelson & Shavitt, 2002; Oishi, 2000; Schimmack et al., 2005). In fact, the high correlation between the two dimensions of Collectivism that were found mirrors what was already observed in the original study (Singelis et al., 1995) and in the meta-analysis by Schimmack et al. Item formulation might also be improved, because it is known that adaptation of questionnaires may sometimes fail to completely capture the same psychological content as the original (Van de Vijver & Hambleton, 1996). As regards the second issue (i.e., participants' characteristics), Italian respondents, who share a "western" background but also some Mediterranean specificities, may find it difficult to distinguish between different kinds of Collectivism. This preliminary justification is consistent with the results of the validation study carried out in Spain (Gouveia et al., 2003), where the same difficulty in distinguishing between the Collectivism subdimensions emerged clearly. For these reasons, further studies using different samples (e.g., nonstudent adults) are needed in order to test the validity and reliability of the solution proposed here.

With reference to the correlations with other variables included in the questionnaire, the hypotheses were basically supported.

As regards Conflict Management styles, results show interesting response patterns. Participants who endorse hierarchical values and the benefit of competition (VI) tend to prefer conflict styles based on competition and dominance (*Hypothesis 2a*). As predicted, HI does not show any significant correlation with conflict management styles (*Hypothesis 2b*). On the contrary, people who score high on Collectivism seem to prefer integrative or submissive styles (*Hypothesis 3*). No correlation exists between Collectivism and Avoiding style. In this our results differ from previous studies which found positive correlations between these two dimensions (Kozan & Ergin, 1999). This finding may be due to the fact that participants were explicitly asked to answer ROCI's items focusing on the way they usually manage conflicts. Therefore, it seems that when participants refer to already on-going conflicts, a collectivist orientation is positively correlated with conflict management styles based on concern for others. Conversely, when participants refer to potential conflicts that can still be avoided, collectivist participants may prefer the Avoiding style to preserve group harmony, as reported by Kozan and Ergin. Further research might support this interpretation and extend our results by taking into account the interaction between cultural orientation and different typologies of conflict (i.e., intragroup vs. intergroup). For example, Leung and colleagues (Leung, Au, Fernandez-Dols, & Iwawaki, 1992; see also Smith & Bond, 1998) hypothesized that, especially for collectivists, this interaction promotes different management styles. Within Social Identity Theory framework (Tajfel, 1981) as well, cultural orientation has been proposed as a moderator of identification bias (Capozza, Voci, & Licciardello, 2000). Our results would suggest also taking into account Horizontal and Vertical dimensions, when assessing these intergroup models (see Derlega, Cukur, Kuang, & Forsyth, 2002).

As regards the relationship between Cultural Orientation and Leadership Styles, the hypotheses derived from the literature (Smith et al., 1989; Triandis, 1993b) were borne out: a task-oriented style is preferred by respondents high on VI (*Hypothesis 4a*), whereas those high on Collectivism endorse a relation-oriented style (*Hypothesis 5*). These results may indicate different ways of leading groups paying attention to leaders and followers' cultural orientations. This study did not achieve the level of detail of the GLOBE project (House et al., 1999), however, this limitation is counterbalanced by the simpler analytic tool adopted. Of course, further studies are needed in order to support these findings and also to examine the interaction between leaders' cultural orientation, followers' cultural orientation, and leadership effectiveness.

In conclusion, starting from Singelis et al.'s (1995) four-factor model, a three-correlated-factor model of the scale was reached and results were supplied concerning the relation between Cultural Orientation, Conflict Management, and Leadership styles at an intra-country level, that mirror cross-cultural data. Together with the Individualism-Collectivism distinction, results indicate the advisability of differentiating between Horizontal and Vertical components of Individualism. The study improves the interpretative taxonomy available not only for cross-cultural studies involving Italy, but also for studies interested in intra-nation differences (e.g., participants from Northern Italy vs. participants from Southern Italy), and points the way to further research on conflict management and leadership issues.

## ACKNOWLEDGEMENTS

The Authors contributed equally to the work. Portions of the results were presented at the VII Italian Congress of Social Psychology — AIP, Genoa (IT), September 18-20, 2006. The authors wish to thank Anna Maria Manganelli and Alberta Contarello. This article is dedicated to the memory of Malcolm Garfield.

## NOTE

1. On the basis of the literature, a positive correlation between Collectivism and Avoiding would be expected because conflicts threaten ingroup harmony (Kozan & Ergin, 1999). However, because participants were asked to refer to on-going conflicts and to the way they managed them, it is likely that conflicts cannot be always avoided but often need to be managed in some way, employing other strategies as well.

## REFERENCES

Bobbio, A., Manganelli Rattazzi, A. M., & Muraro, M (2007). Empowering leadership style in ambito sanitario. Uno studio sul coordinatore infermieristico [Empowering leadership style among health care workers. A study on the nurse manager]. *Giornale Italiano di Medicina del Lavoro ed Ergonomia*, *29*(1A), 37-49.

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.

Bagozzi, R. P., & Baumgartner, H. (1994). The evaluation of structural equation models and hypothesis testing. In R. P. Bagozzi (Ed.), *Principles of Marketing Research* (pp. 386-422). Cambridge, MA: Blackwell.

Brett, J. M. (2000). Culture and negotiation. *International Journal of Psychology*, *35*, 97-104.

Brodbeck, F. C., Frese, M., Akerblom, S., Audia, G., Bakacsi, G., Bendova, H., et al. (2000). Cultural variation of leadership prototypes across 22 European countries. *Journal of Occupational and Organizational Psychology*, *73*, 1-29.

Capozza, D, Voci, A., & Licciardello, O. (2000). Individualism, Collectivism and Social Identity Theory. In R. Brown & D. Capozza (Eds.), *Social Identity Processes* (pp. 62-80). London: Sage.

Carnevale, P. J., & Choi, D. W. (2000). Culture in the mediation of international disputes. *International Journal of Psychology*, *35*, 105-10.

Carnevale, P. J., & Leung, K. (2001). Cultural dimensions of negotiation. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell Handbook of Social Psychology: Group Processes* (pp. 482-496). Oxford, UK: Blackwell.

Carnevale, P. J., & Pruitt, D. G. (1992). Negotiation and mediation. *Annual Review of Psychology*, *43*, 531-582.

De Dreu, C. K. W., & Carnevale, P. (2003). Motivational bases for information processing and strategic choice in conflict and negotiation. *Advances in Experimental Social Psychology*, *35*, 235-291.

Derlega, V. J., Cukur, C. S., Kuang, J. C. Y., & Forsyth, D. R. (2002). Interdependent construal of self and the endorsement of conflict resolution strategies in interpersonal, intergroup, and international disputes. *Journal of Cross-Cultural Psychology*, *33*, 610-625.

Dickson, M. W., Den Hartog, D. N., & Mitchelson, J. K. (2003). Research on leadership in a cross-cultural context: Making progress, and raising new questions. *The Leadership Quarterly*, *14*, 729-768.

Dorfman, P. W., & Scandura, T. (2004). Leadership research in an international and cross-cultural context. *The Leadership Quarterly*, *15*, 277-307.

Dorfman, P. W., Howell, J. P., Hibino, S., Lee, J. K, Tate, U., & Bautista, A. (1997). Leadership in western and Asian countries: Commonalities and differences in effective leadership processes across cultures. *The Leadership Quarterly*, *8*, 233-274.

Fry, D. P., & Fry, C. B. (1997). Culture and conflict-resolution models: Exploring alternatives to violence. In D. P. Fry & K. Björkqvist (Eds.), *Cultural variation in conflict resolution: Alternatives to violence* (pp. 9-23). Mahawah, NJ: Lawrence Erlbaum Associates.

Gelfand, M. J., Nishii, L. H., Holcombe, K. M., Dyer, N., Ohbuchi, K., & Fukuno, M. (2001). Cultural influences on cognitive representations of conflict: Interpretations of conflict episodes in the United States and Japan. *Journal of Applied Psychology*, *86*, 1059-1074.

Gouveia, V. V., Clemente, M., & Espinosa, P. (2003). The horizontal and vertical attributes of individualism and collectivism in a Spanish population. *Journal of Social Psychology*, *143*, 43-63.

Green, E. G. T., Deschamps, J., & Páez, D. (2005). Variation of individualism and collectivism within and between 20 countries: A typological analysis. *Journal of Cross-Cultural Psychology*, *36*, 321-339.

Gudykunst, W. B., Matsumoto, Y., Ting-Toomey, S., Nishida, T., & Karimi, H. (1994, July). *Measuring self construals across cultures. A derived ethic analysis*. Paper presented at the meeting of the International Communication Association, Sydney, Australia.

Hammock, G. S., Richardson, E. R., Pilkington, C. J., & Utley, M. (1990). Measurement of conflict in social relationships. *Personality and Individual Differences*, *11*, 577-583.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. London: Sage.

Hofstede, G. (1991 ). *Culture and organizations: The software of the mind*. New York: McGraw-Hill.

Hogg, M. A. (2001). A social identity theory of leadership. *Personality and Social Psychology Review*, *5*, 184-200.

House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., Dorfman, P. W., Javidan, M., Dickson, M. W., et al. (1999). Cultural influences on leadership and organizations: Project GLOBE. In W. H. Mobley, M. J. Gessner, & V. Arnold. (Eds.), *Advances in Global Leadership* (pp. 171-233). Stamford, CT: JAI Press.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1-55.

Huie, B. (1987). Cross-cultural conflict on the Texas gulf coast. *Dispute Resolution Forum*, September, 8.

Kemmelmeier, M., Burnstein, E., Krumov, K., Genkova, P., Kanagawa, C., Hirshberg, M. S., et al. (2003). Individualism, collectivism and authoritarianism in seven societies. *Journal of Cross-Cultural Psychology*, *34*, 304-322.

Kimmel, P. R. (2000). Culture and conflict. In M. Deutsch & P. T. Coleman (Eds.), *The Handbook of Conflict Resolution: Theory and Practice* (pp. 453-474). San Francisco: Jossey-Bass.

Kozan, M. K., & Ergin, C. (1999). The influence of intra-cultural value differences on conflict management practices. *The International Journal of Conflict Management*, *10*, 249-267.

Lederach, J. P. (1991). Of nets, nails, and problems: The folk language of conflict resolution in a central American setting. In K. Avruch, P. W. Black, & J. A. Scimecca (Eds.), *Conflict Resolution: Cross-Cultural Perspectives* (pp. 165-186). Westport, CT: Greenwood.

Leung, K., Au, Y. F., Fernandez-Dols, J. M., & Iwawaki, S. (1992). Preferences for methods of conflict processing for two collectivist cultures. *International Journal of Psychology*, *27*, 195-209.

Majer, V. (1995). *ROCI. Rahim Organizational Conflict Inventories. Manuale e adattamento italiano* [ROCI Italian manual and adaptation]. Florence, IT: O.S.

Mardia, K. V. (1970). Measures of multivariate skewness and kurtosis with applications. *Biometrika*, *57*, 519-530.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review*, *98*, 222-253.

Merenda, P. F. (2005) Cross-cultural adaptation of educational and psychological testing. In R. K. Hambleton, P. F. Merenda, & C. D. Spielberger (Eds.), *Adapting educational and psychological tests for cross-cultural assessment* (pp. 321-341). Mahwah, NJ: Erlbaum..

Nelson, M R., & Shavitt, S. (2002). Horizontal and vertical individualism and achievement values: A multimethod examination of Denmark and the United States. *Journal of Cross-Cultural Psychology*, *33*, 439-458.

Northouse, P. G. (1997). *Leadership. Theory and practice*. Thousand Oaks, CA: Sage.

Oishi, S. (2000). Goals as cornerstones of subjective well-being: Linking individuals and cultures. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 87-112). Cambridge and London: The MIT Press.

Oishi, S., Diener, E., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variation in predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin*, *25*, 980-990.

Oishi, S., Schimmack, U., Diener, E., & Suh, E. M. (1998). The measurement of values and individualism-collectivism. *Personality and Social Psychology Bulletin*, *24*, 1177-1189.

Oyserman, D. (1993). The lens of personhood: Viewing the self, others, and conflict in a multicultural society. *Journal of Personality and Social Psychology*, *65*, 993-1009.

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 128,* 3-72.

Rahim, M. A. (1983). *Rahim organizational conflict inventories: Professional manual.* Palo Alto, CA: Consulting Psychologists Press.

Rahim, M. A. (2002). Toward a theory of managing organizational conflict. *The International Journal of Conflict Management*, *13*, 206-235.

Rahim, M. A., & Bonoma, T. V. (1979). Managing organizational conflict: A model for diagnosis and intervention. *Psychological Reports*, *44*, 1323-1344.

Scandura, T., & Dorfman, P. (2004). Leadership research in an international and cross-cultural context. *The Leadership Quarterly*, *15*, 277-307.

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Test of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, *8*(2), 23-74.

Schimmack, U., Oishi, S., & Diener, E. (2005). Individualism: A valid and important dimension of cultural differences between nations. *Personality and Social Psychology Review*, *9*, 17-31.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, *25*, 1-65.

Singelis, T. M. (1994). The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin*, *20*, 580-591.

Singelis, T. M., Triandis, H. C., Bhawuk D., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research*, *29*, 240-275.

Sinha, J. B. P., & Verma, J. (1994). Social support as a moderator of the relationship between allocentrism and psychological wellbeing. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method and applications* (pp. 267-275). Thousand Oaks, CA: Sage.

Smith, P. B., & Bond, M .H. (1998). *Social psychology across cultures*. London: Prentice Hall.

Smith, P. B., Misumi, J., Tayeb, M., Peterson, M., & Bond, M. (1989). On the generality of leadership styles across cultures. *Journal of Occupational Psychology*, *62*, 97-107.

Soh, S., & Leong, F. T. L. (2002). Validity of vertical and horizontal individualism and collectivism in Singapore: Relationships with values and interests. *Journal of Cross-Cultural Psychology*, *33*, 3-15.

Suh, E., Diener, E., Oishi, S., & Triandis, H. C. (1998). The shifting basis of life satisfaction judgments across cultures: Emotions versus norms. *Journal of Personality and Social Psychology*, *74*, 482-493.

Tajfel, H. (1981). *Human Groups and Social Categories.* Cambridge, UK: Cambridge University Press.

Tiessen, J. H. (1997). Individualism, collectivism, and entrepreneurship: A framework for international comparative research. *Journal of Business Venturing*, *12*, 367-384.

Triandis, H. C. (1993a). Collectivism and individualism as cultural syndromes. *Cross-Cultural Research*, *27*, 155-180.

Triandis, H. C. (1993b). *The contingency model in cross-cultural perspective*. San Diego, CA: Academic Press.

Triandis, H. C. (1994). *Culture and social behavior*. New York: McGraw-Hill.

Triandis, H. C. (1999). Cross-cultural psychology. *Asian Journal of Social Psychology*, *2*, 127-143.

Triandis, H. C. (2000). Culture and conflict. *International Journal of Psychology*, *35*, 145-152.

Triandis, H. C., & Gelfand, M. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*, *74*, 118-128.

Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of Personality and Social Psychology*, *59*, 1006-1020.

Van de Vijver, F. J. R., & Hambleton, R. K. (1996). Translating tests: Some practical guidelines. *European Psychologist*, *1*, 89-99.

Voronov, M., & Singer, J. A. (2002). The myth of individualism-collectivism: A critical review. *Journal of Social Psychology*, *142*, 461-80.

Yan, J., & Hunt, J. G. (2005). A cross cultural perspective on perceived leadership effectiveness. *International Journal of Cross Cultural Management*, *5*, 49-66.

Yukl, G. (2006). *Leadership in organizations* (6th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.

Zander, L., & Romani, L. (2004) When nationality matters: A study of departmental, hierarchical, professional, gender and age-based employee groupings' leadership preferences across 15 countries. *International Journal of Cross Cultural Management*, *4*, 291-315.

## APPENDIX
Italian Version of Singelis, Triandis, Bhawuk, and Gelfand's (1995) Scale

| | Item | |
|---|---|---|
| HI | 1 | Preferisco essere franco/a e schietto/a quando discuto con le persone [I prefer to be direct and forthright when I talk with people]. |
| | 5 | Si dovrebbe vivere la propria vita indipendentemente dagli altri [One should live one's life independently of others] (*) |
| | 6 | Quello che mi succede dipende solo da me [What happens to me is my own doing] (*) |
| | 15 | Mi piace essere unico/a e differente dagli altri in molti modi [I enjoy being unique and different from others in many ways] |
| | 18 | Spesso faccio quello che mi va di fare [I often do "my own thing"] (*) |
| | 21 | Sono un individuo unico [I am a unique individual]. |
| | 25 | Mi piace la mia privacy [I like my privacy] (*) |
| | 32 | Quando ho successo, di solito, è per le mie capacità [When I succeed, it is usually because of my abilities] |
| VI | 4 | Vincere è tutto [Winning is everything] (*) |
| | 8 | Mi secca quando altre persone riescono meglio di me [It annoys me when other people perform better than I do] (*) |
| | 10 | Per me è importante svolgere il mio lavoro meglio degli altri [It is important that I do my job better than others ] |
| | 12 | Mi piacciono le situazioni lavorative/di studio che implicano la competizione con gli altri [I enjoy working in situations involving competition with others] (*) |
| | 19 | La competizione è la legge della natura [Competition is the law of nature] (*) |
| | 23 | Quando un'altra persona fa meglio di me divento teso/a e nervoso/a [When another person does better than I do, I get tense and aroused]. |
| | 26 | Senza competizione non è possibile avere una buona società [Without competition, it is not possible to have a good society]. |
| | 30 | Alcune persone danno grande importanza alla vittoria; io non sono una di quelle [Some people emphasize winning; I am not one of them] (R) (*) |
| HC | 2 | La mia felicità dipende in larga parte dalla felicità di quelli che mi stanno intorno [My happiness depends very much on the happiness of those around me] (*) |
| | 9 | Per me è importante mantenere l'armonia all'interno del mio gruppo [It is important to maintain harmony within my group] (*) |
| | 11 | Mi piace condividere le piccole cose con coloro che mi sono vicini [I like sharing little things with my neighbours] (*) |
| | 14 | Il benessere dei miei colleghi/compagni di studio è importante per me [The well-being of my co-workers is important to me] (*) |
| | 16 | Se un mio parente fosse in difficoltà finanziarie, lo aiuterei secondo le mie possibilità [If a relative were in financial difficulty, I would help within my means] (*) |
| | 20 | Se un mio collega/compagno di studio ricevesse un premio, ne sarei orgoglioso/a [If a co-worker gets a prize, I would feel proud]. |
| | 22 | Per me il piacere è passare del tempo con gli altri [To me, pleasure is spending time with others] (*) |
| | 28 | Mi sento bene quando collaboro con gli altri [I feel good when I cooperate with others] (*) |

(appendix continues)

Appendix (continued)

| | Item | |
|---|---|---|
| VC | 3 | Farei ciò che fa piacere alla mia famiglia, anche se detestassi quella attività [I would do what would please my family, even if I detested that activity] |
| | 7 | Di solito sacrifico il mio interesse personale per il bene del mio gruppo [I usually sacrifice my self-interest for the benefit of my group] (*) |
| | 13 | Dovremmo tenere i nostri genitori anziani a casa con noi [We should keep our aging parents with us at home] (*) |
| | 17 | I figli dovrebbero sentirsi onorati se i loro genitori ricevessero un riconoscimento importante [Children should feel honoured if their parents receive a distinguished award] (*) |
| | 24 | Sacrificherei un'attività che mi piace molto se la mia famiglia non la approvasse [I would sacrifice an activity that I enjoy very much if my family did not approve of it] |
| | 27 | Ai bambini bisognerebbe insegnare a mettere il dovere prima del piacere [Children should be taught to place duty before pleasure] |
| | 29 | Detesto essere in disaccordo con altri membri del mio gruppo [I hate to disagree with others in my group] (*) |
| | 31 | Prima di una decisione importante mi consulto con molti membri della mia famiglia e con molti amici [Before taking a major trip, I consult with most members of my family and many friends] (*) |

*Note*. HI = Horizontal Individualism; VI = Vertical Individualism; HC = Horizontal Collectivism; VC = Vertical Collectivism. Item numbers indicate the administration order in the questionnaire. (R) = Reverse-coded. (*) = item included in the final model.