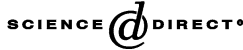


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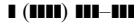


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Culture, gender, organizational role, and styles of conflict resolution: A meta-analysis[☆]

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Abstract

The popularity of self-report five-style conflict resolution instruments, spawned by Blake and Mouton's [(1964). *The managerial grid*. Houston, TX: Gulf Publishing] dual concerns theory, resulted in a plethora of research studies examining possible differences in culture, gender and organizational role. Using the Managerial Grid, dual concerns theory postulates that conflict involves balancing the desire to meet production goals (x) versus concern for personal relationships (y). Five styles of managing conflict are then revealed: smoothing, withdrawing, compromising, problem-solving, and forcing. Numerous studies using instruments derived from this theory validate its basic premises, but results have provided confusing results.

Given the disparity of results, a meta-analysis was conducted to provide a clearer overall picture for the variables of culture (individualistic versus collectivistic), gender, and organizational role (superior, subordinate, and peer). Based upon 123 paired comparisons within 36 empirical studies, the results of the meta-analysis indicate: (1) individualistic cultures choose forcing as a conflict style more than collectivistic cultures; (2) collectivistic cultures prefer the styles of withdrawing, compromising, and problem-solving more than individualistic cultures; (3) in individualistic cultures, compromising is endorsed more frequently by females; (4) females are more likely to endorse the use of compromising than males, regardless of culture; (5) males are more likely to report using forcing than females in individualistic

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1 cultures; and (6) with regard to organizational role, males are more likely than females to
 2 choose a forcing style with their superiors.

3 Further research is needed, particularly on the variable of cultural status.

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5 *Keywords:* Conflict; Conflict resolution; Conflict resolution style; Gender; Culture; Organizational role;
 6 Meta-analysis; Managerial grid; Dual concerns theory; Conflict styles; Blake and Mouton; Conflict
 7 management survey; CMS; Rahim organizational conflict inventory; ROCI-I; ROCI-II; Employee conflict
 8 inventory; ECI; Thomas and Kilmann; Management-of-differences exercise; MODE

11 1. Introduction

13 Multiculturalism, to flourish, relies on effective, expedient management of
 14 disputes. Addressing conflict effectively becomes more urgent as social change
 15 accelerates. (Duryea, 1992, p. 1)

17 On a global level, people are increasingly concerned with creating and maintaining
 18 peace. Understanding conflict and how to resolve it are two issues directly related to
 19 accomplishing this goal, given that resolution of conflict helps to sustain peaceable
 20 relations (Blumberg, 1998). Cultural differences both within and across countries can
 21 result in conflictive communication; therefore, communication strategies such as
 22 conflict resolution may provide an important means of bridging diverse cultural
 23 perspectives (Dubinskas, 1992; Gabrielidis, Stephan, Ybarra, Pearson, & Villareal,
 24 1997; Hofstede, 1983; Holt, 2000; Ting-Toomey et al., 1991; Ting-Toomey et al.,
 25 2000). Goodall (1996), for example, states:

27 Professionals and academics are being called upon to articulate some new
 28 revolutionary ‘communication’ breakthrough capable of teaching us how diverse
 29 peoples can learn to live together meaningfully without destroying each other
 30 and—in the process—the planet itself. (pp. 1–2)

31 Perhaps never before has this been more important, given the September 11, 2001
 32 attack on the United States’ World Trade Center and Pentagon and its consequences
 33 (Kliman & Llerena-Quinn, 2002; Schuman, 2002). Clearly, conflict and violence are
 34 at the heart of the world’s problems, on both microcosmic and macrocosmic levels;
 35 thus the study of conflict resolution vis-à-vis culture is an important endeavor. In
 36 addition, gender would appear to be a significant way that human beings differ in
 37 relationship to conflict resolution style. Similarly, within the workplace, how one
 38 chooses to resolve a conflict may be affected in large part by the status of the other
 39 party—whether superior, subordinate or peer to oneself. Despite the fact that
 40 intuitively, individuals from various cultural backgrounds, of different genders, and
 41 within the workplace would appear to solve conflicts in very different ways, there are
 42 no conclusive findings. In fact, the results of myriad studies using one of the many
 43 five-style conflict resolution instruments and measuring the variables of culture,
 44 gender, and organizational role, whether alone or in combination, yield confusing
 45 results. Therefore, this study used meta-analytic techniques to contribute a more

1 complete picture of possible conflict resolution style differences among cultures,
 3 between genders, and with regard to organizational role.

5 1.1. Background

7 Conflict resolution, defined as “the process used by parties in conflict to reach a
 9 settlement” (Sweeney & Carruthers, 1996, p. 328), first gained professional interest in
 11 the 1960s due to seminal research conducted by Blake and Mouton (1964). Initially
 13 using a population of managers, then eventually extending their ideas to the general
 15 population, Blake and Mouton’s dual concerns theory proposed that individuals
 17 have two primary motivations with regard to interpersonal conflict: the desire to
 19 obtain one’s own goals (concern for production) versus the desire to retain
 21 interpersonal relationships (concern for people). By mapping these two concerns on
 23 the “Managerial Grid,” five discrete styles for resolving conflict resulted: smoothing
 25 (high concern for people and low concern for production); withdrawing (low concern
 27 for both people and production); compromising (medium concern for production
 29 and people); problem-solving (high concern for production and people); and forcing
 31 (high concern for production versus low concern for people). For example, an
 33 individual who is ultimately concerned with meeting production goals, and is willing
 35 to sacrifice the desires of others (relationships) to reach these goals would fall under
 the “forcing” style of conflict resolution. At the opposite end of the grid, someone
 who is far more concerned with preserving the goodwill of others may choose not to
 press their particular goals in a conflict, resulting in the style of “smoothing.”
 Another person might feel both relationships and production are equally high in
 importance, exhibiting the style of “problem-solving,” in which win-win solutions
 are generated. On the other hand, for someone who dislikes conflict of any kind,
 neither meeting production goals nor retaining relationships may be important
 enough to risk engaging; the style of “withdrawing” would then be a probable
 choice. Finally, for someone who is willing to give up some of both—goals and
 relationship—in order to resolve conflict, there is a style in the middle referred to as
 “compromising.” “When these basic styles are understood, one can predict for each
 how a man [*sic*] operating under that style is likely to handle conflict” (Blake &
 Mouton, 1970, p. 419).

35 In this article, “five-style paradigm” will refer to the set of beliefs Blake and
 37 Mouton (1964) and authors with subsequent conflict resolution instruments share:
 39 that conflict comes from the opposing forces of production (trying to meet one’s own
 41 goals) versus people (attempting to honor the needs of others), and that five basic
 43 styles of dealing with conflict are the result: smoothing, withdrawing, compromising,
 45 problem-solving, and forcing. If dual concerns theory is valid, and if the instruments
 utilizing this theory are valid and reliable, then true differences regarding culture,
 gender, and organizational role should become clear through meta-analytic
 techniques. It is important to note, however, that one’s *cognitive* choices on a self-
 report instrument are not the same as one’s behavior. For the purposes of this
 research, conflict choice is viewed as a cognitive orientation, and “all measures

including choice of conflict style will be assessed cognitively rather than behaviorally” (Sorenson, Morse, & Savage, 1999, p. 30).

Blake and Mouton’s (1964) theory became a popular means of conceptualizing and simplifying a complex issue, given that the grid enabled numeric assignment to each conflict style. Several conflict resolution self-report instruments were subsequently spawned from dual concerns theory, the four most prominent being Hall’s (1969) Conflict Management Survey (CMS); Rahim’s (1983) Rahim Organizational Conflict Inventories I and II (ROCI-I and ROCI-II); Renwick’s (1975) Employee Conflict Inventory (ECI); and Thomas and Kilmann’s (1974) Management-of-Differences Exercise (MODE). While the labels provided for each conflict style vary among instruments (e.g., smoothing is also known as accommodating, obliging and yield-lose), the general principles of the grid (people concerns versus production needs) and basic descriptions of the styles appear very similar (Fig. 1). For purposes of simplification, the names of the styles as originally provided by Blake and Mouton will be utilized throughout this article.

It is important to note an implicit value judgment within Blake and Mouton’s (1964) original theory (Dena, 1994). That is, problem-solving was considered the superior mode of solving conflict, being high in concern for people as well as production. This assumption formed the basis for many popular treatises on “win-win” business strategy, including *Getting to Yes* (Fisher & Ury, 1981). Blake and



Fig. 1. Overlay of conflict resolution styles and authors derived from dual concerns theory. Although the majority of this figure is original, the idea was based on “Fig. 1, Composite of the Hall, Pruitt, Rahim, and Thomas two-dimensional models with associated conflict styles” (Sorenson et al., 1999, p. 27).

1 Mouton admit this style is more popular as a choice for respondents from the United
2 States than any other countries; the ethnocentric bias appears to be very clear:
3 “Regardless of national grouping, managers agree that the 9, 9 [problem-solving]
4 Grid style represents the soundest way to manage” (p. 16). In other cultures,
5 however, problem-solving may not be the preferred choice, nor the best means of
6 solving conflict (Kilmann & Thomas, 1978; Lewicki, Weiss, & Lewin, 1992). For
7 example, researchers have provided evidence that, depending upon the particulars of
8 the situation, other styles may be preferred (Elangovan, 1998; van de Vliert,
9 Euwema, & Huismans, 1995).

10 By the late 1970s, the vanguard of conflict resolution researchers had begun to
11 eliminate this bias toward problem-solving in updated work (Kilmann & Thomas,
12 1978). Early research by Thomas (1976), one of the most prolific and well-researched
13 conflict resolution experts, stated:

14
15 People who practice the withdrawing style tend to behave as if they were
16 indifferent both to their own concerns and to the concerns of others. The
17 withdrawing orientation is often manifested through nonassertive and unco-
18 operative behavior. Those who avoid conflict tend to prefer apathy, isolation and
19 withdrawal to facing conflicts. (p. 892)

20
21 However, two years later, Thomas, in research with Kilmann, indicates opposition
22 toward value judgments being placed on any one style (Kilmann & Thomas, 1978).
23 Withdrawing, in fact, has been found to be the superior style for many Asians (Chua
24 & Gudykunst, 1987; Ting-Toomey, 1988), perhaps because it is considered more
25 respectful not to argue.

26
27 Given the wide assortment of research studies that have examined conflict
28 resolution styles, conducted over a span of nearly half a century, an overall
29 evaluation to assess possible culture, gender, and organizational role differences is an
30 important contribution to the field. This research is unique; to the authors’
31 knowledge, no research has yet been done using rigorous statistical procedures via
32 meta-analysis to analyze the results of conflict resolution self-report instruments
33 within the five-style paradigm.

34 35 36 37 *1.2. Variables of interest*

38
39 Rankings of the five styles of handling conflict were examined with special
40 emphasis on the following variables: cultural status (comparing inter-country, as
41 well as among ethnic minorities of the United States; for the purposes of this
42 research study, the term “Americans,” along with an ethnic identifier, is being used
43 to denote United States citizenship, e.g. “African Americans”); gender (including
44 females and males); and organizational role (peer, subordinate, and supervisor—the
45 three levels typically present in hierarchical work settings).

1 *1.3. Cultural status*

3 With regard to cultural status, the growing diversity of the United States has
 5 resulted in a multicultural workforce of its citizens (Gabrielidis et al., 1997; Kozan,
 7 1990; Lagao, 1996; Oetzel, 1998). Given this increasing multiculturalism, Yinger
 9 (1994) cautions, “How the United States develops as a multi-ethnic society will be of
 11 critical importance...for its own quality of life” (p. 35). Indeed, many researchers
 13 validate the fact that diversity can result in increased conflict. As individuals attempt
 to communicate and work together, they may react negatively to the cultural
 practices of others (Gudykunst et al., 1996; Pearson & Stephan, 1998; Ting-Toomey
 et al., 2000). Yet until recent years, this crucial element was ignored in studies
 assessing conflict resolution styles, according to researchers such as Gudykunst
 (1998):

15 Most, if not all, of the cross-cultural [conflict resolution] studies comparing the
 17 United States with other cultures have focused on European Americans. There
 19 also are differences across ethnic groups in the United States. ...For instance,
 21 ...there are several...areas where European Americans’ and African Americans’
 styles of communication may be problematic when they communicate with each
 other, particularly in a conflict situation. (pp. 253–254)

23 The decrease in the popularity of conflict resolution self-report instruments, most
 25 “in vogue” in the United States from the late 1960s into the early 1980s, may be due,
 27 in part, to such a lack of cross-cultural inclusiveness. However, a number of research
 29 studies, primarily in the past two decades, have measured styles across cultures and/
 or countries, thus providing the self-report conflict resolution five-style paradigm
 with current relevance, and an updated appeal (see D’Silva & Whyte, 1998; Elsayed-
 Ekhoully & Buda, 1996; Gabrielidis et al., 1997; Gudykunst et al., 1996; Lee, 1990;
 Lee & Rogan, 1991; Oetzel, 1998; Pearson & Stephan, 1998; Smith & Haar, 1990;
 Ting-Toomey et al., 2000; Trubisky, Ting-Toomey, & Lin, 1991).

31 The concept of individualism and collectivism provides one means of distinguish-
 33 ing broad differences in cultural values (Hofstede, 1980). While many theories have
 35 branched off of this concept, such a distinction continues to be the basis of
 37 discussions concerning how styles of conflict resolution may vary across cultures
 39 (Elsayed-Ekhoully & Buda, 1996; Oetzel, 1998; Ting-Toomey et al., 1991, 2000).
 According to Ting-Toomey (1988), members of individualistic cultures prefer direct
 and assertive methods when resolving conflict. Typically, when comparing
 communication styles inter-country, such countries as the United States, Canada,
 Germany, Australia, and England are considered individualistic (Elsayed-Ekhoully &
 Buda, 1996; Hofstede, 1980, 1983; Trubisky et al., 1991). Individualistic cultures,
 41 characterized as more concerned with self than others, are hypothesized to prefer the
 43 conflict styles of problem-solving, compromising and forcing. Such styles involve
 45 strong verbal communication, less emphasis on internal aspects of communication,
 and less concern with the needs of others (Hofstede, 1983; Rahim, 1992; Rahim &
 Blum, 1994).

1 On the other hand, in collectivistic cultures such as China, Japan, Korea, the
 3 Middle East, and Mexico, the needs of one's group are considered more important
 than oneself (Hofstede, 1980, 1983), and conflict communication will reflect this.
 5 Styles high in relationship preservation, such as smoothing and compromising, are
 thus hypothesized to be preferred over forcing (Elsayed-Ekhouly & Buda, 1996;
 7 Rahim, 1992; Rahim & Blum, 1994). Withdrawing may also be employed in an effort
 to "save face," rather than embarrass others (Ting-Toomey, 1988). Several research
 9 studies corroborate these hypotheses. For example, Kagan, Knight, and Martinez-
 Romero (1982) found that subjects from Mexico (collectivistic) reported using
 withdrawing and smoothing more than European American (individualistic)
 11 subjects, who preferred more active, confrontational strategies such as forcing and
 problem-solving (see also Gabrielidis et al., 1997; Soto-Fulp, 1996). Pearson and
 13 Stephan (1998) found Brazilians (collectivistic) to be more likely to report the use of
 smoothing and withdrawing with members of their in-group, while United States
 15 subjects reported treating out- and in-groups the same. Other studies of conflict
 resolution instruments utilizing the five-style paradigm have yielded differing results.
 17 For example, Lagao (1996) found no significant differences in reported conflict styles
 between European Americans (individualistic) and Filipinos (collectivistic).

19 Other research results validate the postulation that ethnic minorities *within* the
 United States may not use the same conflict resolution styles as European Americans
 21 (Haslam, Turner, Oakes, McGarty, & Hayes, 1992; Pearson & Stephan, 1998; Ting-
 Toomey, 1986). African Americans have been hypothesized as individualistic in
 23 conflict style; however, regardless of job level status, an African American male may
 never feel comfortable using certain styles of conflict, such as forcing, due to fear of
 25 being negatively stereotyped (Firebaugh, & Davis, 1988; Haslam et al., 1998). Ting-
 Toomey (1986) conducted research comparing conflict resolution style choices of
 27 African American and European American subjects, finding African American
 males reported less use of forcing and problem-solving conflict strategies than
 29 European American males. Interestingly, African American *females* were *more* likely
 to choose the forcing conflict style than African American males or European
 31 Americans of either gender. Algert (1998), however, studied conflict style preferences
 with European Americans, African Americans, and Latin Americans, and found no
 33 significant differences among all three. Dena (1994) found significant differences
 between European Americans and Latin Americans, but the results were counter-
 35 intuitive—the *European Americans* preferred the styles of smoothing and with-
 drawing. In Kim and Kitani's (1998) research, a comparison of European American
 37 and Asian American students bears out individualistic versus collectivistic theory in
 that Asian American (collectivistic) students preferred smoothing and withdrawing;
 39 however, contrary to theory, they also preferred problem-solving.

41 Comparisons with the United States and Middle Eastern countries, the latter of
 which are considered collectivistic, have yielded notable differences in conflict
 43 resolution styles as well. Elsayed-Ekhouly and Buda (1996) compared conflict styles
 between United States and Arab Middle Eastern [*sic*] executives, finding United
 States executives' conflict style preferences to be forcing, in keeping with predictions,
 45 but also smoothing, and compromising. The Arab Middle Eastern executives

1 preferred withdrawing, considered typical of collectivistic cultures, but also problem-
 3 solving. Similarly, [Kozan \(1990\)](#) found that Turkish/Jordanian managers and
 5 United States managers all chose problem-solving as their primary style, but the
 7 former “prefer[red] obliging [smoothing] the least and in this regard differ[red]
 9 significantly from the US managers” (p. 179; see also [Agee & Kabasakal, 1993](#)). The
 11 contradictory results of such studies indicate the need for a meta-analysis to more
 13 thoroughly understand true cultural differences as measured by instruments within
 15 the conflict resolution five-style paradigm.

1.4. Gender

11 Socially appropriate behavior differs for females and males in many countries
 13 around the world; thus, it is probable to assume that females and males would prefer
 15 to resolve conflicts with different conflict style choices ([Shockley-Zalabak, 1981](#)). In
 17 the United States, historically, males have been socialized to communicate in direct,
 19 confrontational ways, assuming the dominant power position; females have been
 21 socialized to take care of others, and play a more receptive role ([Gilligan, 1977](#);
 23 [Stockard & Lach, 1989](#); [Zammuto, London, & Rowland, 1979](#)). [Kolb \(1993\)](#) states:

Existing research and our own experience suggest that the voices of women are
 often hushed in formal negotiation. Conflict and competition are important in
 formal negotiation, and therefore, it may not be a comfortable place for many
 women. (p. 139)

Given this difference, styles such as forcing (high in production, low in
 relationships) or problem-solving (high in production and relationships) have been
 postulated as popular choices for males on conflict resolution self-report instruments
 ([Mills & Chusmir, 1988](#)). Females, for whom relationships may be of greater
 importance, and for whom aggressive behavior is less condoned ([Ting-Toomey,
 1986](#)), would seem more likely to prefer such styles as smoothing (high in
 relationships, low in production), withdrawing (low in production and relation-
 ships), and compromising (medium in production and relationships). As [Ting-
 Toomey \(1986\)](#) states, “[M]ales typically engage in more direct, ‘up-front’ strategies.
 ...Females typically engage in either indirect, ‘smoothing’ communication strategies
 to diffuse the conflict topic, or engage in avoidance or withdrawal strategies” (p. 79).

In the first two decades after the inception of conflict resolution self-report
 instruments, conflict studies used a respondent base of primarily males. [Renwick
 \(1977\)](#) was one of the first researchers to examine differences in conflict resolution
 styles between male and female management personnel in the United States. While
 Renwick argued from a feminist point of view that females ought to be no less apt to
 choose aggressive styles than males, her results indicated males tended to rate the
 forcing style higher than females. [Mills and Chusmir \(1988\)](#), studying managers in
 the United States, found similar results: “[N]ot surprisingly, men were slightly more
 likely to compete [force] at work” (p. 307). [Nelson and Lubin \(1991\)](#) determined that
 females were significantly higher on smoothing, when asking United States
 politicians about their conflict styles. [Content \(1986\)](#) found female principals in

1 the United States reported higher use of the compromising mode than male
2 principals. Cardona (1995) found females from a Midwestern university population
3 in the United States to report more use of withdrawing than males. Rahim (1983)
4 created norming data with one of his instruments (ROCI-II), using a population of
5 1219 United States executives. Interestingly, his data indicated *males* rated
6 smoothing higher, while females preferred problem-solving, withdrawing and
7 compromising (however, only 50 female subjects were included). Zammuto et al.
8 (1979) reported supervisors in United States companies who were asked to rate their
9 subordinates' use of conflict resolution styles rated males as more frequently using
10 compromising; females were rated as predominantly using *forcing*. Muir's (1991)
11 research, in which middle managers in the United States were studied, was intended
12 to corroborate Rahim's general findings. However, she was unable to duplicate his
13 results—no significant differences were discovered. Likewise, no significant
14 differences were found between genders by Shockley-Zalabak (1981), in studying
15 managers at Colorado companies; or in Sternberg and Soriano's (1984), and
16 Sternberg and Dobson's (1987) research with United States college students. Such
17 contradictory results indicate a meta-analysis of all data on male and female conflict
18 style choices may reveal true differences, if they exist. Correlating gender with culture
19 may also prove important, given perceived gender differences within various
20 ethnicities indigenous to the United States, as well as in comparison with other
21 countries.

23 1.5. Organizational role

25 Given the history of Blake and Mouton's (1964) Managerial Grid, and its origins
26 in analyzing company conflict, the plethora of studies exploring conflict resolution
27 style differences within the organizational hierarchy (superiors, peers, and
28 subordinates), is unsurprising (see Conrad, 1985; Harris, 1988; Mills & Chusmir,
29 1988; Musser, 1982; Oetzel, 1998, 1999; Rahim, 1986, 1992; Rahim & Buntzman,
30 1989; Renwick, 1975, 1977). Theoretically, given power differences, superiors are
31 generally predicted to prefer problem-solving, compromising and forcing, peers are
32 predicted to be less aggressive with superiors than each other, but more so with
33 subordinates, and subordinates are predicted to tend toward the least aggressive
34 styles—withdrawing and smoothing (Mills & Chusmir, 1988; Musser, 1982; Oetzel,
35 1999; Rahim & Buntzman, 1989; Renwick, 1975, 1977). That is, given inherent
36 power differences, a subordinate may not be willing to engage in any conflict style
37 that challenges a superior, while a superior may have more leeway to use aggressive
38 techniques, particularly in order to meet company production goals (Rahim &
39 Buntzman, 1989). Peers are considered most likely to use compromising with each
40 other, given the equality of power.

41 Research would appear to bear organizational role predictions out to a certain
42 extent (Mills & Chusmir, 1988; Musser, 1982; Oetzel, 1999; Phillips & Cheston, 1979;
43 Rahim & Buntzman, 1989). For example, Phillips and Cheston (1979) studied
44 business managers, and found that superiors were more likely to choose the use of
45 forcing with subordinates than vice versa, while compromising was the style most

1 likely to be chosen for use with one's peers. Several researchers have found
2 subordinates to prefer the styles of withdrawing or smoothing when in conflict with
3 superiors, perhaps due to the risk of negative consequences such as job loss (Kahn,
4 Wolfe, Quinn, Snoek, & Rosenthal, 1964; Phillips & Cheston, 1979; Rahim, 1986).
5 However, Renwick's (1975) research with United States business companies found
6 the top three styles for superiors to be problem-solving, compromising and
7 *smoothing*, contrary to theorized predictions. Renwick also measured subordinates'
8 conflict style rankings, finding the top three styles to be compromising, problem-
9 solving, and *forcing*. Similarly, Rahim (1983) found subordinates most likely to
10 prefer the use of problem-solving and *forcing*. Paulson's (1986) research with middle
11 managers from the United States, on the other hand, found no significant
12 differences. Such conflicting results again indicate the need for a thorough overall
13 evaluation of the findings via meta-analytic techniques.

15 17 2. Method

19 2.1. Location of studies

21 In order to make a thorough assessment of studies, both published and
22 unpublished, utilizing instrumental derivatives of Blake and Mouton's (1964)
23 Managerial Grid, electronic searches were conducted of *Psychological Abstracts*, the
24 Social Sciences Citation Index, *Dissertation Abstracts*, *The International Journal of*
25 *Conflict Management* and *The Journal of Conflict Resolution*. Search words used in
26 the indices included: "Managerial Grid"; "Blake and Mouton"; "conflict resolution
27 styles"; "conflict resolution instruments"; "mediation"; "conflict styles"; and the
28 names of all authors with instruments utilizing five styles of resolving conflict. This
29 initial search yielded over 3000 articles, but less than 200 could be considered
30 empirical studies. A thorough examination was conducted of this grouping. In
31 addition, "snowball sampling" was used: references at the end of these articles were
32 perused to obtain additional studies (Oetzel, 1998). The search included all studies
33 published and non-published through 2002. Findings support the supposition that
34 dual concerns theory's five-style paradigm is one of the most frequently used
35 theoretical paradigms in organizational conflict resolution research.

37 2.2. Exclusion criteria

39 For the purposes of this meta-analytic investigation, a research study was included
40 if (1) the study used dual concerns theory, the Managerial Grid, or the five conflict
41 resolution styles explicitly or implicitly via related instruments, (2) the conflict
42 resolution styles were self-reported, and (3) the study provided enough statistical
43 information for the calculation of an effect size, the standardized difference in scores
44 for two different groups, calculable from the means and standard deviations of
45 scores and group sizes.

1 One hundred and one studies were considered for selection in the meta-analysis.
2 When a study's results were presented in two publications, as determined by sample
3 sizes and means and standard deviations, the peer-reviewed study was included and
4 the other excluded (three studies). When a particular study did not provide means
5 and standard deviations or the equivalent, an attempt was made to contact the
6 author(s). Thus, studies were excluded if the authors could not be found (nine
7 studies), the authors did not respond to inquiries (13 studies), or the authors
8 responded and no longer had the data available (five studies). Studies were excluded
9 if they measured conflict resolution styles for a single group and did not provide the
10 gender or cultural composition of the group with a *t*-test (22 studies). Studies were
11 excluded if they were incompatible because they were not self-reported scores on a
12 Likert-type scale for conflict resolution styles that could translate to the [Blake and](#)
13 [Mouton \(1964\)](#) Managerial Grid (six studies). The factor analysis of one exemplar of
14 this type of excluded study, [Putnam and Wilson's \(1982\)](#) Organizational Commu-
15 nication Conflict Instrument (OCCI), resulted in three, rather than five styles. When
16 a study did not report its non-significant findings or there were unexplained
17 inconsistencies in sample sizes, it was excluded (seven studies). Of the excluded
18 studies, 45 were from journals, 17 were unpublished dissertations or theses, and three
19 were from book chapters.

21 2.3. Final data set

23 Thirty-six studies constituted the final meta-analysis data set. Of the included
24 studies, 21 were from journals, 13 were unpublished dissertations, one was a book
25 chapter, and one was a conference paper. These 36 studies included a total of 123
26 groups, for which there were two through five means and standard deviations. Five
27 studies reported results for pairs, providing six comparisons of either two or five
28 effect sizes.

29 2.4. Coding of studies

31 For each study, the conflict resolution instrument, the mean and standard
32 deviation for each group measured (or alternately the *t*-value, *F*-value or correlation
33 coefficient associated with two groups), the number of individuals in each tested
34 group and the number of each gender in each tested group were captured. Codings
35 were made for several additional elements as well, to facilitate testing possible
36 interactions, including type of participant (student, worker, manager, teacher,
37 principal) and the type of individual with whom the participant was in conflict.

39 The first 30 studies were coded on coding sheets by three individuals. The first five
40 studies were coded in common by all three coders for interrater reliability. The
41 means and standard deviations reported by the three coders were the same for the
42 five studies. The remaining studies were entered directly into either a Microsoft[®]
43 Excel spreadsheet or the Microsoft[®] Access database. Once all studies were entered
44 into the Microsoft[®] Access database, the means and standard deviations were
45 checked against the published studies.

1 2.5. Statistical moderators

3 The type of instrument used to measure conflict resolution style and the year the
5 study data were collected were possible moderators; however there were too few
7 studies to conduct a moderator analysis of them.

7 2.6. Computational procedures

9 A Microsoft[®] Access database Data was used to enter the data for each study.
11 The following data were collected: the instrument used to measure the conflict
13 resolution style; the gender; and the context of the culture. In order to calculate *d*-
15 scores, the means and standard deviations for each group were used or calculated,
17 or, when necessary, derived from the *t*-values, *F*-values, or correlations associated
19 with compared groups.

15 After all studies were entered, groups were matched to form pairs for analysis.
17 Three major variables were selected for further analysis: culture, gender, and
19 organizational role. The decisions concerning placement of groups into individualistic
21 and collectivistic categories were based on prior research (Elsayed-Ekhouly &
23 Buda, 1996; Hofstede, 1980, 1983; Oetzel, 1998; Ting-Toomey et al., 1991, 2000). For
25 each study in which culture was included, all possible individualistic/collectivistic
27 culture combinations were generated, such that collectivistic cultures were the
29 referent group. If the cultural classification of a group was not identified, the group
31 was excluded. For each study in which gender was included, all possible female-male
33 combinations were generated, such that males were the referent group. If a group
35 included both genders, that group was excluded. For each study in which
37 organizational role was included, all possible peer-subordinate, subordinate-superior
39 and superior-peer combinations were generated, such that subordinates, superiors,
41 and peers were the referent groups for the three comparisons, respectively.

31 2.7. Correction of artifacts

33 Sampling error was calculated using Eq. (1) from Hedges and Olkin (1985):

$$35 s_e^2 = \frac{N_1 + N_2}{N_1 N_2} + \frac{d^2}{2(N_1 + N_2)}. \quad (1)$$

37 The formula adjusts for differences in the sample sizes used to generate each *d*-
39 value.

39 Because the measurement instruments were imperfect and the differences in true
41 scores were sought, it was necessary to correct for unreliability. Reliability
43 information was available for eight of the twelve instruments in the usable studies.
45 Test-retest reliabilities were available for seven of the twelve instruments, accounting
47 for 92% of all effect sizes. Where the test-retest reliability was not available (as for
49 Danes, Leichtenritt, Metz, & Huddleston-Casas, 2000; Gabrielidis et al., 1997; Kim
51 & Kitani, 1998; Miyazaki, Moroi, & Stephan, in press; Renwick, 1977; Zammuto et
53 al., 1979), an estimate of the test-retest reliability was calculated based upon the item

1 Table 1
 2 Test-retest reliability of conflict resolution instruments

3 Methodology	Smoothing	Withdrawing	Compromising	Problem-solving	Forcing
5 CMS	0.53	0.61	0.41	0.54	0.66
6 MODE	0.62	0.68	0.66	0.63	0.61
7 ROCI-II	0.81	0.79	0.60	0.83	0.76
8 van de Vliert	0.66	0.71	0.71	0.75	0.81

11 counts for the unknown instrument and the reliabilities per item for each known
 12 instrument (see Table 1). The mean effect sizes were corrected for unreliability using
 13 the following Eq. (2) from Hunter and Schmidt (1990):

$$15 \quad \delta = \frac{dk}{\sum \left(\frac{N_1 + N_2}{2} \right) (a)}, \quad (2)$$

17 where a is the correction for the effect size and k is the number of comparisons.

19 3. Results

21 3.1. Interpreting meta-analytic results

23 The point of a meta-analysis is to cumulate the results of several studies in order to
 24 determine true effects in the population. Applying meta-analytic results is not as
 25 straightforward, however, as generalizing to the entire population because more
 26 variables than the effect size need to be considered. Thus, additional values are
 27 reported to aid in the interpretation of meta-analytic results. For each of the conflict
 28 resolution styles and comparison types (culture, gender, organizational role), we
 29 reported the mean of the observed effect size (d) and the true effect size (δ) corrected
 30 for sampling error and unreliability in the measuring instruments. The effect size is a
 31 measure of the standardized difference between the two groups. The variability of
 32 the effect sizes were reported in the observed and corrected standard deviations of
 33 the effect sizes (s_d and s_δ , respectively). The number of groups used to calculate the
 34 mean effect size (k) is to a meta-analysis what N is to typical empirical studies; even
 35 though the underlying studies may have hundreds of participants, a meta-analysis is
 36 based upon k . Just as an empirical researcher is hesitant to make generalizations
 37 based upon four participants, so meta-analysts are hesitant to generalize results
 38 when $k < 5$. We listed the actual number of studies from which the effect sizes were
 39 calculated (k') because some studies supplied more than one comparison. The N
 40 from each empirical study is summed into $\sum N$.

41 Three less familiar types of measures determine degree of confidence regarding
 42 meta-analytic results. First, when the lower and upper bounds of the credibility
 43 interval (CV) include zero, the operation of a moderator is likely. In other words,
 44 within the particular population being studied, there are likely multiple subgroups

1 with distinct effect sizes. As a hypothetical example, within culture, males and
2 females might provide distinct subgroups. The lower and upper bounds of the second
3 measure, the confidence interval (CI), suggest the variability of the true effect size.
4 When the confidence interval includes zero, the direction of the true effect cannot be
5 determined. For instance, with a confidence interval including zero, there would be
6 no difference regarding conflict style preferences between males and females. The size
7 or amplitude of the third measure, the Failsafe N (N_f), is the theorized number of
8 contradictory effect sizes that would be required to change the results' interpretation
9 from true to negligible differences between the comparison groups. In this study, a
10 difference of 0.20 was chosen. The criterion for Failsafe N was set to the current
11 number of comparisons ($N_f = k$). Therefore, true differences existed between the
12 compared groups when (1) the number of compared groups exceeded three, (2) the
13 effect size exceeded 0.20, (3) the confidence interval did not include zero, and (4) the
14 Failsafe N exceeded the number of comparisons.

15 3.2. Culture and gender

16
17 Between 14 and 17 comparisons were used to determine differences in conflict
18 resolution style by culture. All conflict resolution styles except smoothing exhibited
19 generalizable results. Withdrawing ($d = -1.66$) and compromising ($d = -1.19$)
20 showed the largest effects, signifying that persons in collectivistic cultures tend to
21 choose withdrawing and compromising more than persons in individualistic cultures.
22 In addition, both withdrawing and compromising had credibility intervals suggesting
23 multiple populations, e.g., gender, were represented. Problem-solving followed the
24 same pattern as withdrawing and compromising, with collectivistic cultures
25 reporting more use than individualistic cultures. Forcing showed the opposite effect,
26 with persons in individualistic cultures exhibiting more forcing than those in
27 collectivistic cultures ($d = 1.13$), as shown in Table 2.

28
29 Based upon a probable moderator operating in the individualistic to collectivistic
30 comparisons for withdrawing and compromising, the studies were divided in which
31 gender of respondents was reported. For gender within individualistic cultures, the
32 corrected effect sizes were between -0.42 and 0.73 , with only one style,
33 compromising, showing generalizable results. In individualistic cultures, females
34 endorsed the use of the compromising style more frequently than males ($d = 0.73$).
35 Only two studies reported conflict resolution style scores by gender for collectivistic
36 cultures, thus a meta-analysis was premature. Preliminary results suggested that
37 withdrawing was self-ascribed more by males than females in collectivistic cultures
38 ($d = -0.39$) (Fig. 2).

39
40 Gender provided the greatest number of comparisons for the meta-analysis.
41 Between 27 and 29 comparisons were used to determine differences in conflict
42 resolution style by gender. As shown in Table 2, the five corrected effect sizes ranged
43 from -0.31 to 0.64 . Smoothing and withdrawing showed essentially no effect for
44 gender. Compromising was reported more for females than for males ($d = 0.64$).
45 Although the corrected sampling error accounted for all of the observed variance, as
the Failsafe N indicates, it would take very few studies with contrary results to

1 Table 2
Effect sizes for conflict resolution styles for gender and culture

3	Conflict resolution style	<i>d</i>	δ	<i>K</i>	<i>k'</i>	<i>i</i>	$\sum N$	<i>s_d</i>	<i>s_δ</i>	CV	CI	<i>N_f</i>
5	<i>Culture (individualistic–collectivistic)</i>											
	Smoothing	-0.12	-0.26	14	10	7	4648	0.69	0.00	{-0.26, -0.26}	{-0.26, -0.26}	4
7	Withdrawing	-0.73	-1.66	17	11	7	5694	0.88	0.74	{-4.50, 1.18}	{-1.78, -1.54}	124
	Compromising	-0.46	-1.19	15	9	5	5349	0.78	0.58	{-3.41, 1.02}	{-1.29, -1.10}	75
	Problem-solving	-0.27	-0.61	17	11	7	5694	0.68	0.00	{-0.61, -0.61}	{-0.61, -0.61}	35
9	Forcing	0.49	1.13	17	11	7	5694	0.56	0.00	{1.13, 1.13}	{1.13, 1.13}	79
	<i>Gender within individualistic culture (female–male)</i>											
11	Smoothing	0.02	0.05	12	9	5	2626	0.14	0.00	{0.05, 0.05}	{0.05, 0.05}	9
	Withdrawing	0.08	0.18	11	9	5	2407	0.13	0.00	{0.18, 0.18}	{0.18, 0.18}	1
13	Compromising	0.28	0.73	11	9	5	2407	0.23	0.00	{0.73, 0.73}	{0.73, 0.73}	29
	Problem-solving	0.02	0.05	11	9	5	2407	0.20	0.00	{0.05, 0.05}	{0.05, 0.05}	8
15	Forcing	-0.18	-0.42	11	9	5	2407	0.11	0.00	{-0.42, -0.42}	{-0.42, -0.42}	12
	<i>Gender within collectivistic culture (female–male)</i>											
17	Smoothing	0.10	0.22	4	2	2	410	0.05	0.00	{0.22, 0.22}	{0.22, 0.22}	0
	Withdrawing	-0.17	-0.39	3	2	2	227	0.05	0.00	{-0.39, -0.39}	{-0.39, -0.39}	3
	Compromising	0.17	0.42	3	2	2	227	0.16	0.00	{0.42, 0.42}	{0.42, 0.42}	3
19	Problem-solving	0.41	0.92	3	2	2	227	0.14	0.00	{0.92, 0.92}	{0.92, 0.92}	11
	Forcing	-0.17	-0.39	3	2	2	227	0.07	0.00	{-0.39, -0.39}	{-0.39, -0.39}	3
21	<i>Gender (female–male)</i>											
	Smoothing	0.01	0.03	28	19	7	5050	0.21	0.00	{0.03, 0.03}	{0.03, 0.03}	23
23	Withdrawing	-0.01	-0.03	27	18	6	4638	0.22	0.00	{-0.03, -0.03}	{-0.03, -0.03}	23
	Compromising	0.25	0.64	29	19	6	4799	0.23	0.00	{0.64, 0.64}	{0.64, 0.64}	63
25	Problem-solving	0.09	0.21	29	20	7	5203	0.29	0.00	{0.21, 0.21}	{0.21, 0.21}	2
	Forcing	-0.13	-0.31	29	19	7	4869	0.22	0.00	{-0.31, -0.31}	{-0.31, -0.31}	16

27 *Note:* Bolded figures are generalizable. *d* = mean effect size; δ = corrected effect size; *k* = number of effect
 29 sizes in mean effect size; *k'* = the number of studies from which the *k* effect sizes were derived; *i* = number
 31 of Conflict Resolution instruments; $\sum N$ = sum of participants in each group; *s_d* = SD of mean effect size;
s_δ = SD of corrected effect size; CV = range of Credibility Interval; CI = range of Confidence Interval;
N_f = Failsafe *N*.

33 possibly negate the findings for problem-solving (two studies) and forcing (16
 35 studies).

37 **3.3. Gender and organizational level**

39 Several studies examined conflict style preferences among peers, subordinates, and
 41 superiors in the workplace. Three sets of comparisons were utilized: peers to
 43 subordinates, subordinates to superiors, and superiors to peers. Table 3 and Fig. 4
 45 show the results of this meta-analysis. In general terms, in comparing conflict
 resolution styles with one’s peers to one’s subordinates, withdrawing (*d* = 0.93) and
 compromising (*d* = 1.32) were used more with peers than subordinates, and forcing
 was reported as being used less with peers than with subordinates (*d* = -1.17). The
 wide credibility intervals for compromising and forcing suggested the presence of a

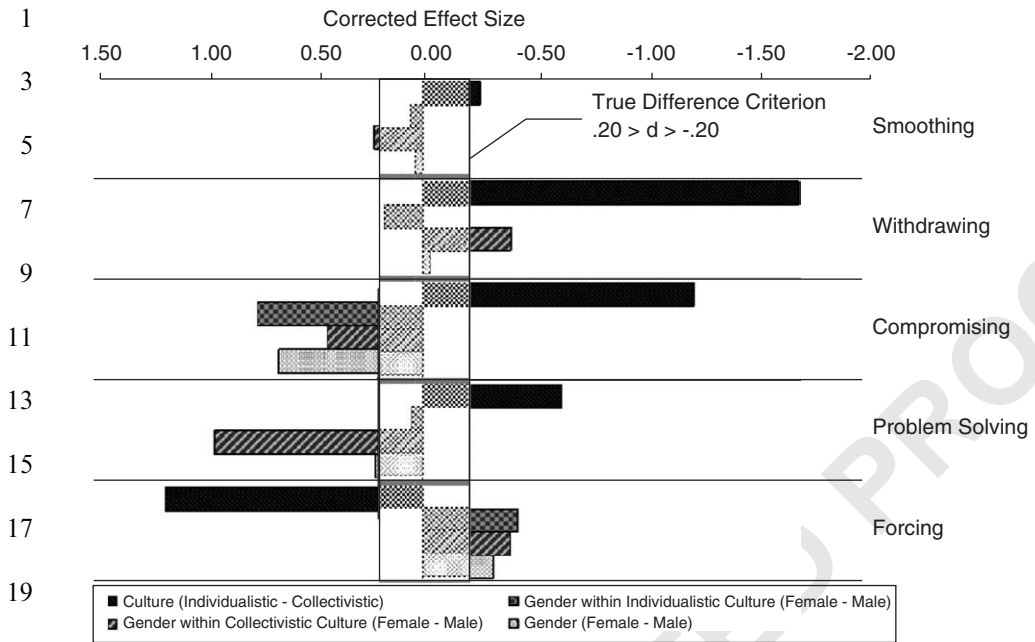


Fig. 2. Corrected Effect sizes of conflict resolution styles for culture, gender within culture, and gender. For each style, positive effect sizes indicate the first named group chose the style more frequently; negative effect sizes indicate the second named group chose the style more frequently.

moderator, such as gender or culture; however, there were insufficient studies to complete this analysis.

With regard to subordinates versus superiors, all of the styles appear to be generalizable. Smoothing ($d = -1.51$) and withdrawing ($d = -1.89$) were endorsed more with superiors than with subordinates. Compromising ($d = 1.51$), problem-solving ($d = 1.08$), and forcing ($d = 0.81$) are endorsed more for use with subordinates than with superiors. All styles, with the exception of problem-solving, have credibility intervals spanning zero, suggesting that a moderator was operating.

The styles used by respondents in conflict with superiors as compared to their peers reflected strong results, as shown in Table 3. Only forcing failed to reach the Failsafe N benchmark. Smoothing ($d = 2.84$) and withdrawing ($d = 0.77$) were reported to be used more with superiors than with peers. The relationship was in the opposite direction for compromising and problem-solving, as these styles were used less with superiors than with peers ($d_s = -3.04$ and -0.68 , respectively). Compromising was the only conflict resolution style whose credibility interval suggested a moderator was present. As Fig. 3 demonstrates, respondents preferred smoothing and withdrawing styles when in conflict with superiors as opposed to peers or subordinates. On the other hand, compromising was the style chosen for conflict with peers, when compared with superiors or subordinates.

As noted previously, there were insufficient data to complete a meta-analysis dividing organizational information by gender or culture. There were adequate data

Table 3
Effect sizes for conflict resolution styles comparing organizational levels

Conflict resolution style	d	δ	k	k'	i	$\sum N$	s_d	s_δ	CV	CI	N_f
<i>Organizational level (peers–subordinates)</i>											
Smoothing	-0.09	-0.20	15	4	1	1560	1.19	1.12	{-4.49, 4.09}	{-0.39, 0.00}	0
Withdrawing	0.42	0.93	15	4	1	1560	0.50	0.00	{0.93, 0.93}	{0.93, 0.93}	55
Compromising	0.51	1.32	11	3	1	948	1.81	2.35	{-7.71, 10.36}	{0.88, 1.77}	62
Problem-solving	0.15	0.34	15	4	1	1560	0.84	0.00	{0.34, 0.34}	{0.34, 0.34}	10
Forcing	-0.51	-1.17	15	4	1	1560	1.28	1.08	{-5.31, 2.98}	{-1.35, -0.98}	72
<i>Organizational level (subordinates–superiors)</i>											
Smoothing	-0.68	-1.51	17	5	2	1978	1.77	2.18	{-9.89, 6.87}	{-1.86, -1.16}	111
Withdrawing	-0.84	-1.89	17	5	2	1978	1.37	1.11	{-6.16, 2.38}	{-2.07, -1.71}	143
Compromising	0.59	1.51	4	3	2	682	0.90	1.30	{-3.50, 6.51}	{1.10, 1.92}	26
Problem-solving	0.49	1.08	17	5	2	1978	0.66	0.00	{1.08, 1.08}	{1.08, 1.08}	75
Forcing	0.35	0.81	17	5	2	1978	1.36	1.31	{-4.23, 5.84}	{0.60, 1.02}	52
<i>Organizational level (superiors–peers)</i>											
Smoothing	1.28	2.84	20	5	1	2412	0.81	0.00	{2.84, 2.84}	{2.84, 2.84}	264
Withdrawing	0.34	0.77	20	5	1	2412	0.62	0.00	{0.77, 0.77}	{0.77, 0.77}	57
Compromising	-1.18	-3.04	7	3	1	1116	2.46	3.51	{-16.52, 10.44}	{-3.87, -2.21}	99
Problem-solving	-0.31	-0.68	20	5	1	2412	0.67	0.00	{-0.68, -0.68}	{-0.68, -0.68}	48
Forcing	-0.12	-0.27	20	5	1	2412	0.61	0.00	{-0.27, -0.27}	{-0.27, -0.27}	7

Note: Bolded figures are generalizable. d = mean effect size; δ = corrected effect size; k = number of effect sizes in mean effect size; k' = the number of studies from which the k effect sizes were derived; i = number of Conflict Resolution instruments; $\sum N$ = sum of participants in each group; s_d = SD of mean effect size; s_δ = SD of corrected effect size; CV = range of Credibility Interval; CI = range of Confidence Interval; N_f = Failsafe N .

to compare gender within referent organizational level for many of the conflict resolution styles. In other words, the meta-analysis answered the question: How do females and males differ regarding conflict resolution style with peers, superiors, and subordinates? It is important, however, to use caution when discussing the results because so few groups were used in the comparisons. Only one of the comparisons met all four criteria for true differences—forcing with superiors had an effect size of -0.70 , meaning that males chose this style more than females.

Putting aside the criteria for the number of comparisons, the same pattern emerged for forcing with peers ($d = -1.31$) and subordinates ($d = -0.90$) vis-à-vis males. In addition, females chose smoothing more with subordinates ($d = 0.71$) than males. Finally, females were also more likely to report the use of problem-solving with peers ($d = 0.63$) and subordinates ($d = 1.37$) than males (see Table 4 and Fig. 4).

4. Discussion

Although this meta-analysis was conducted with a relatively small number of groups for comparisons from even fewer studies, it produced results that clarify and

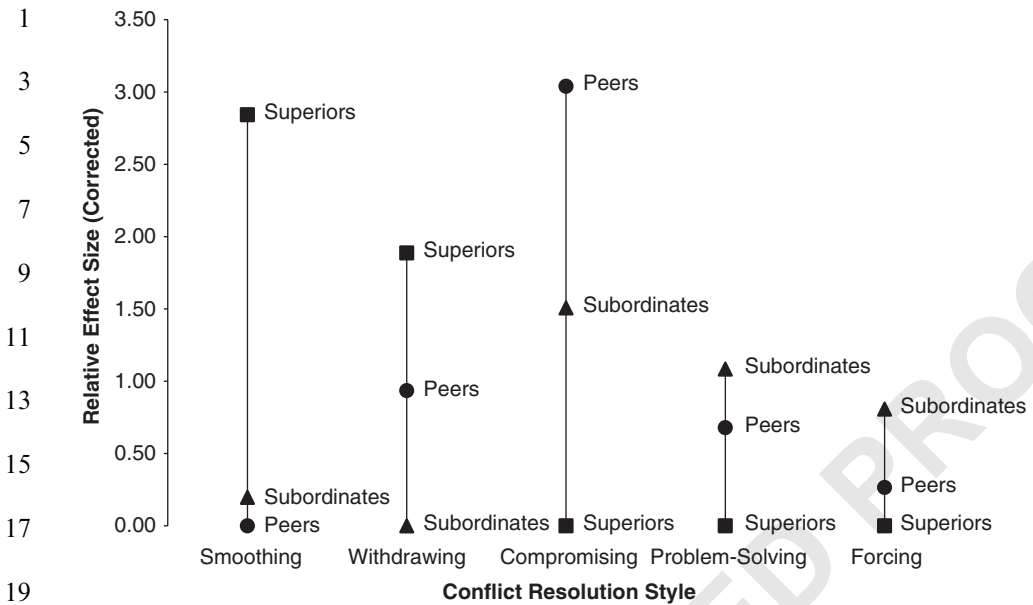


Fig. 3. Corrected effect sizes of conflict resolution styles for comparison of organizational level.

quantify the comparative use of conflict resolution styles by culture, gender within culture, gender, comparative organizational level, and gender within organizational level.

Results for culture indicate individuals within a collectivistic orientation prefer withdrawing and compromising more than those with an individualistic cultural orientation. Second, the latter choose forcing more than the former. In all three findings, the group means differ by more than one standard deviation, strong evidence of true differences. The results regarding withdrawing corroborate prior research and discussion on the subject, given that individuals within collectivistic cultures prefer strategies that “save face” (Ting-Toomey, 1988). Similarly, compromising, in which one gives up some of one’s needs, can be understood within the collectivistic paradigm, given that the needs of the group supercede one’s own (Hofstede, 1980, 1983). The finding that forcing, high on concern for production, and low on concern for others, is endorsed by individuals from individualistic cultures by over one standard deviation, also backs up the theorized emphasis on “me” as opposed to “we” in such cultures (Hofstede, 1980, 1983). A final interesting result within culture concerns problem-solving. Contrary to original theory (Blake & Mouton, 1964), collectivistic cultures prefer problem-solving more than individualistic cultures by over half a standard deviation. This is ironic, considering Blake and Mouton’s contention that “[m]anagers from South America and Japan identify themselves as the least likely to possess the 9, 9 [problem-solving] style” (Dena, 1994, p. 33). In fact, collectivistic cultures are more concerned with creating a “win-win” situation.

Table 4

Effect sizes for conflict resolution styles for gender within organizational level (females–males)

Conflict resolution style	d	δ	k	k'	i	$\sum N$	s_d	s_δ	CV	CI	N_f
<i>Peers</i>											
Smoothing	0.14	0.31	6	3	1	656	0.14	0.00	{0.31, 0.31}	{0.31, 0.31}	3
Withdrawing	0.04	0.08	6	3	1	656	0.26	0.00	{0.08, 0.08}	{0.08, 0.08}	4
Compromising	0.15	0.38	1	1	1	137	0.00	0.00	{0.38, 0.38}	{0.38, 0.38}	1
Problem-Solving	0.29	0.63	2	2	1	290	0.35	0.37	{-0.80, 2.06}	{0.45, 0.81}	4
Forcing	-0.57	-1.31	2	2	1	290	0.02	0.00	{-1.31, -1.31}	{-1.31, -1.31}	11
<i>Subordinates</i>											
Smoothing	0.32	0.71	2	2	1	249	0.16	0.00	0.71, 0.71	0.71, 0.71	5
Withdrawing	-0.23	-0.52	2	2	1	249	0.00	0.00	-0.52, -0.52	-0.52, -0.52	3
Compromising	-0.34	-0.87	1	1	1	96	0.00	0.00	-0.87, -0.87	-0.87, -0.87	3
Problem-Solving	0.63	1.37	2	2	1	249	0.03	0.00	1.37, 1.37	1.37, 1.37	12
Forcing	-0.39	-0.90	2	2	1	249	0.17	0.00	-0.90, -0.90	-0.90, -0.90	7
<i>Superiors</i>											
Smoothing	0.10	0.22	7	4	1	1437	0.27	0.00	0.22, 0.22	0.22, 0.22	1
Withdrawing	-0.05	-0.11	7	4	1	1437	0.22	0.00	-0.11, -0.11	-0.11, -0.11	3
Compromising	0.07	0.18	6	3	1	1284	0.17	0.00	0.18, 0.18	0.18, 0.18	1
Problem-Solving	0.17	0.37	7	4	1	1437	0.34	0.00	0.37, 0.37	0.37, 0.37	6
Forcing	-0.31	-0.70	6	3	1	1095	0.24	0.00	-0.70, -0.70	-0.70, -0.70	15

Note: Bolded figures are generalizable. d = mean effect size; δ = corrected effect size; k = number of effect sizes in mean effect size; k' = the number of studies from which the k effect sizes were derived; i = number of Conflict resolution instruments; $\sum N$ = sum of participants in each group; s_d = SD of mean effect size; s_δ = SD of corrected effect size; CV = range of credibility interval; CI = range of confidence interval; N_f = failsafe N .

Regarding gender comparisons, the results indicate differences in the self-reported use of compromising and forcing; however, compromising is the only style for which differences in gender exceed the study criteria for true differences. Females report using compromising more than males by a sizable margin (over half a standard deviation). Such results support societal notions in the United States concerning gender differences, where females may be more likely than males to give up part of their own needs in order to compromise (Kolb, 1993; Ting-Toomey, 1986). That there are *no differences* between females and males in reported use of smoothing and withdrawing, however, is contrary to popular notions that females are more willing to smooth over conflict or withdraw from it altogether.

When gender and culture are analyzed together, results indicate, as in the results for gender alone, that compromising is used more frequently by females in both individualistic and collectivistic cultures, although the difference is greater for individualistic females (three-quarters of a standard deviation). In addition, both individualistic and collectivistic males choose forcing more than their female counterparts (nearly half a standard deviation for each). This reinforces the idea that males are more likely to use aggressive tactics in order to achieve their own ends (Kolb, 1993; Ting-Toomey, 1986). Interestingly, collectivistic *males* report preferring

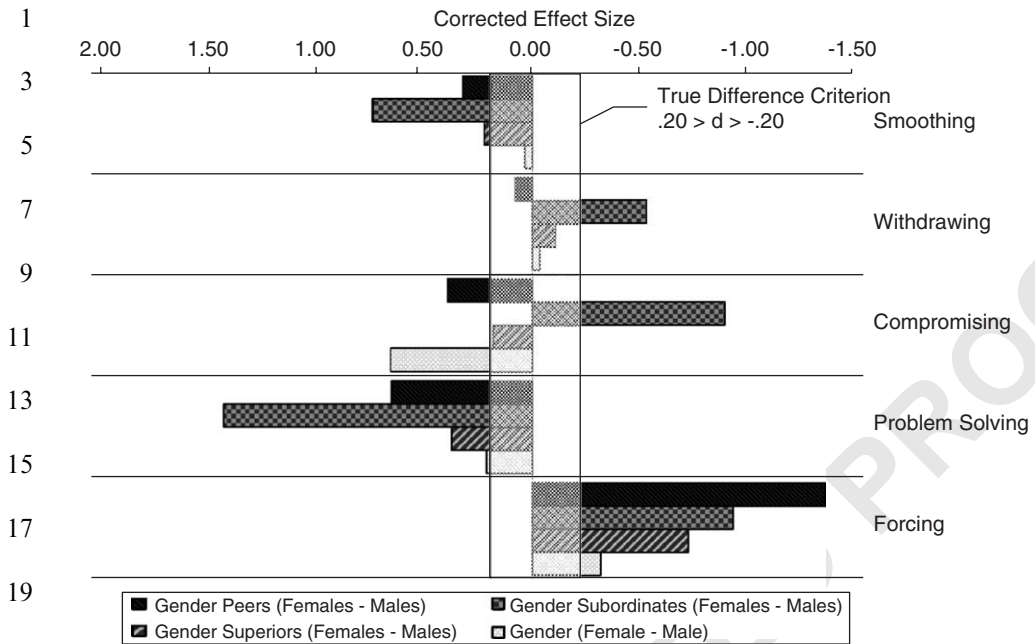


Fig. 4. Corrected effect sizes of conflict resolution styles for gender by organizational role of referent.

withdrawing and collectivistic *females* report preferring problem-solving. However, the results regarding collectivistic cultures are very tentative.

With regard to organizational role, patterns of difference are stronger than for culture or gender. Employees endorse the use of smoothing as a conflict resolution style more with superiors than with peers by nearly *three* standard deviations. Such results corroborate current literature: The more power or status *another* worker has in a job situation as compared to the respondent, the more likely the respondent's own goals will be sacrificed in order to preserve the relationship when conflict arises (Kahn et al., 1964; Phillips & Cheston, 1979; Rahim, 1986). Compromising shows an equally strong effect, in that the style is preferred more with one's peers than one's superiors (three standard deviations). This backs up organizational theory concerning the sharing of power, "whereby both parties give up something to make a mutually acceptable decision" (Rahim & Buntzman, 1989, p. 197). That is, peers would seem more likely to compromise and "share" with each other, than with superiors, who have greater power.

Employees report using the withdrawing conflict style more with peers than with subordinates by almost a standard deviation. This also supports literature and research; simply, workers in conflict with *peers* may be more concerned with negative outcomes than when in conflict with *subordinates*, given that the latter have less power and status (Kahn et al., 1964; Phillips & Cheston, 1979; Rahim, 1986; Rahim & Buntzman, 1989). Similarly, employees report preferring the forcing conflict style

1 more with subordinates than with peers by over a standard deviation. As past
2 research indicates, the *lower* the status of the other worker versus oneself, the less
3 inclined an employee will be to use passive styles, and the greater the inclination to
4 endorse the use of aggressive conflict styles (Rahim & Buntzman, 1989). Somewhat
5 weaker results indicate the most aggressive conflict resolution style, forcing, is used
6 less with peers than with subordinates. This is again in keeping with organizational
7 modes of behavior. As Lee (1990) states, employees in conflict “tend to use different
8 influence tactics, depending upon the relative status of the agent and target. More
9 often assertive [forcing, problem-solving] tactics...were used to influence subordi-
10 nates rather than peers or superiors” (p. 331).

11 Regarding gender across organizational role, the pattern of females choosing
12 problem-solving more than males and males choosing forcing more than females is
13 maintained regardless of organizational role. Kolb (1993) notes: “[T]here are
14 significant differences in the ways men and women approach negotiation and the
15 styles they use in searching for an agreement [in the workplace]” (pp. 138–139; see
16 also Soto-Ful, 1996).

19 4.1. Limitations

21 First and foremost, a significant number of studies could not be included for
22 analysis due to insufficient information. In fact, two-thirds of the studies using self-
23 report conflict resolution style instruments were not viable. The five-style paradigm,
24 upon which the “old guard” of conflict resolution theory and subsequent
25 instruments are based, achieved its zenith during the 1970s and early 1980s.
26 Historically, this era preceded the advent of stringent statistical standards in
27 measurement and publication of study results. Thus, many of the studies did not
28 publish the means and/or standard deviations for style preferences, which are the
29 necessary statistics for a meta-analytic calculation. Second, there are some
30 indications that the five-style paradigm has become outdated, as several interesting,
31 rigorous studies from the more recent past have employed newer evolutions of
32 conflict resolution self-report instrumentation (Knapp, Putnam, & Davis, 1988;
33 Sternberg & Dobson, 1987; Sternberg & Soriano, 1984; Thomas, 1988; Trubisky et
34 al., 1991; van de Vliert & Hordijk, 1989; van de Vliert et al., 1995). As van de Vliert
35 et al. (1995) indicate, it is entirely possible that the five styles are too parsimonious to
36 realistically represent the continuum of conflict resolution strategies. In addition, van
37 de Vliert et al. argue that conflict styles may operate *together*, rather than discretely:
38 “Rather than a single behavior [resulting from one conflict style], handling conflict is
39 a conglomeration of behavioral components” (p. 271; see also Elangovan, 1998;
40 Musser, 1982; Volkema & Bergmann, 1995). Researchers have also critiqued the
41 validity and distinctness of each style. Van de Vliert and Hordijk (1989) found that
42 “the social-psychological consequences of compromising and problem-solving tend
43 to be the same, however different the behaviors may be” (p. 681). That is, there may
44 not be a solid justification for viewing compromising as a strategy equally
45 differentiated from the other four styles.

1 Social desirability is important to mention when discussing self-report instru-
2 ments, due to the invalid assumption “that cognition is [necessarily] associated with
3 choice of [conflict] style” (Sorenson et al., 1999, p. 26; see also Cosier & Ruble, 1981;
4 Drake, Zammuto, & Parasuraman, 1981; Elangovan, 1998; Kabanoff, 1987; Musser,
5 1982; Putnam & Wilson, 1982; Thomas & Kilmann, 1975). That is, what a
6 respondent *reports* for preference regarding conflict resolution style may be far
7 different from the style *utilized* in real-life situations. With regard to another self-
8 report instrument, the Argumentativeness Scale, Nicotera (1996) states,

9 [S]ince the act of argument is sanctioned more for men than women, women
10 answering the scale may be reluctant to rate themselves as argumentative. Such
11 reluctance may or may not reflect their actual level of trait argumentativeness. (p.
12 25)

13 Similarly, females filling out a self-report conflict resolution instrument may be
14 less inclined than males to report using conflict styles considered “unfeminine,” such
15 as forcing. Instead, females may self-report preferring styles that emphasize a
16 relational perspective, such as smoothing and compromising (Ting-Toomey, 1986).
17 However, their actual *behavior* may not mirror such societal mores.

18 Some researchers in conflict resolution eschew the implicit assumption that
19 conflict *can* and/or *should* be resolved, arguing that in many cases, conflict
20 “resolution” may only be a temporary solution, leaving deeper issues unresolved.
21 Thus the idea of full agreement may not be realistic and in fact, in many
22 circumstances, conflict resolution engagement may not produce long term successful
23 results or generate cooperative work relationships (Rubin, 1993).

24 4.2. Conclusion

25 In conclusion, within conflict resolution research, the five-style paradigm as
26 created by Blake and Mouton (1964) and developed into self-report instruments by a
27 number of researchers, appears to yield significant, if limited, results regarding
28 differences among cultures, between genders, and among organizational roles, when
29 tested via meta-analytic techniques.

30 In a very practical sense, understanding cultural background and how this affects
31 preferences regarding conflict resolution style may create greater understanding and
32 less conflict in the workplace, as well as in communities at large. For example, a
33 client of the first author who supervises nursing staff in a large, diverse hospital
34 setting received several complaints from other staff members about a Chinese-born
35 nurse. This nurse would react with disapproval and withdrawal when emergency
36 situations necessitated the use of conflictual barked orders. A deeper grasp of
37 cultural differences enabled the supervisor and all of the health workers to better
38 understand each other’s behavior; this in turn allowed for greater respect and a more
39 cohesive work environment.

40 Future research may wish to concern itself with the creation of a statistically
41 rigorous conflict resolution instrument that will measure conflict *behavior*, rather
42 than simply self-reported conflict style preferences. In addition, research contrasting
43
44
45

respondents' own interpretation of conflict style versus perception by others of their conflict style is important. Often, an individual's perception of their style of resolving conflict may be far different from the receiver's perception. For example, consider the following conversation within a peer mediator focus group:

Peer Mediator 1: “[We] were accused of not understanding her [an African American woman in mediation]. The other person was white, the rest of us were white, how could we understand her, [yet] part of how I saw her, my perception, was that she was a *very* powerful woman. And she *was*—even and including her body language. And she intimidated this white woman.”

Peer Mediator 2: “We gave her feedback that [her behavior] was aggressive and she told us, ‘No, in fact, I’m *passive*.’”

Peer Mediator 1: “In *her* culture she is [passive], but in our culture she is a very powerful woman.” (Holt, 2000, p. 64)

Research specifically concerning conflict resolution styles may thus wish to include an emphasis on perceptions and actual behavior, as a means of updating the five style paradigm. Such research is vital, given its potential for creating greater understanding among cultures, between genders and within organizations.

5. Uncited references

Antonioni (1998); Brubaker & Verdonk (1999); Gudykunst & Ting-Toomey (1988); Haslam, McGarty, Oakes, & Turner (1992); Richardson (1995); Ting-Toomey (1985).

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Appendix. Citation, number of groups contributed, and comparisons made for studies included in meta-analysis

Citation	Nbr of groups	Comparisons
Algert, N.E. (1998). Peer conflict: Similarities and differences among three adolescent groups. (Doctoral dissertation, Texas A&M University,	15	a,b,c,d

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43 *Note.* Comparisons: a: Gender (Female–Male); b: Culture (Individualistic–Collectivistic); c: Gender within
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1 Organizational Level (Peers–Subordinates); f: Organizational Level (Subordinates–Superiors); g:
 2 Organizational Level (Superiors–Peers); h: Gender Peers; i: Gender Subordinates; j: Gender Superiors;
 3 k: Gender Peers Individualistic; l: Gender Subordinates Individualistic; m: Gender Superiors
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