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Thomas, Kenneth W.

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Kenneth W. Thomas and Gail Fann Thomas
Naval Postgraduate School, Monterey, California, USA, and
Nancy Schaubhut
CPP, Mountain View, California, USA

Abstract
Purpose – This study aims to provide a more detailed examination of the way conflict styles vary by organization level and gender.

Design/methodology/approach – The authors drew a stratified, random sample from a national database on the Thomas-Kilmann Conflict Mode Instrument, selecting 200 fully-employed men and 200 fully-employed women at each of six organizational levels – from entry-level positions to top executives. This design allowed them to test for linear and curvilinear relationships between style and organization level, as well as to compare gender differences in styles across organization levels.

Findings – Results showed moderate effect sizes for both organization level and gender, with negligible interaction effects. Assertiveness (competing and collaborating) increases monotonically at progressively higher organization levels, while unassertive styles (avoiding and accommodating) decrease. Compromising shows a curvilinear relationship to organization level, decreasing at both the highest and lowest levels. The strongest gender finding was that men score significantly higher on competing at all six organization levels. Thus, there was no evidence that conflict styles of men and women converge at higher organization levels.

Originality/value – The study provides a more detailed picture of conflict style differences by organization level and gender. Among other things, these differences suggest the usefulness of multiple sets of norms for conflict style instruments and the need for conflict training and team building to take into account the typical style patterns at a given organization level.

Keywords Conflict management, Gender, Senior management

Paper type Research paper

Overview
This study was designed to advance our knowledge of the way conflict styles vary by organization level and gender. Previous studies have tended to investigate these variables separately, so that little is known about their comparative effect sizes or possible interaction. Studies have generally shown that each variable impacts conflict styles (as detailed below), although findings have varied as to which styles are influenced and by how much. A major reason for the discrepant findings, as Holt and DeVore (2005) note, has been the use of small convenience samples. This study used a relatively large, stratified random sample from a national database. The design allowed a more definitive assessment of the individual and interactive effects of both gender and organization level on conflict style. We also used a more fine-grained
measure of organization level, sampling men and women at six levels - from entry level to top executives. This expanded set of levels allowed us to better examine the shape of the relationship between organization level and conflict styles - to see, for example, whether a given style increases monotonically and linearly with organization levels.

The influence of organization level and gender on conflict style is important for a number of reasons. Level and gender are salient and ubiquitous features in organizations. Moderate or strong effects on conflict styles would have significant implications. Conflict researchers would need to be aware of those relationships, at a minimum, to control for their effects when studying the influence of other variables. Moreover, practitioners in training and organization development commonly use conflict style instruments for diagnostic purposes. Sizeable effects of gender and level would have a number of implications for them as well. For example, measures of conflict style may require separate statistical norms for different organization levels and genders. Trainers and coaches working with a given organizational level would also benefit from knowing the typical conflict styles used by men and women at that organization level and how those styles are likely to differ at the next level up. It would also be helpful to know how style preferences differ across genders, and whether those differences apply to executives as well as lower-level personnel. This knowledge would help trainers fine-tune their training to those realities. Organization development practitioners, likewise, would benefit from knowing where they are most likely to encounter different patterns of conflict styles.

Conflict styles
This paper adopts the conflict style terminology used by Thomas (1976, 1988, 1992; Thomas and Kilmann, 2002), shown in Figure 1. (For a description of terminological differences between this and other frameworks derived from Blake and Mouton, see Holt and DeVore, 2005.) Briefly, conflict involves a situation in which people's concerns - the things they care about - appear to be incompatible. In that situation, intentions can be described along two independent dimensions - cooperativeness (attempting to satisfy the other's concern) and assertiveness (attempting to satisfy one's own concern). Five conflict styles are defined in terms of those dimensions. Competing (low cooperativeness, high assertiveness) is the attempt to satisfy one's own concern at the other's expense. Its opposite is accommodating (high cooperativeness, low assertiveness), which sacrifices one's own concern in favor of the other's. Avoiding (low cooperativeness, low assertiveness) neglects both people's concerns by sidestepping or postponing a conflict issue. Collaborating (high cooperativeness, high assertiveness) is an attempt to find an integrative or win/win solution that fully satisfies both people's concerns. Finally, compromising (intermediate in both cooperativeness and assertiveness) is an attempt to find a middle-ground settlement that only partially satisfies each person's concern.

Organization level and conflict styles
We have argued that the manner in which conflict styles vary across organizational levels is an important applied issue. However, we found few studies addressing this issue.
Blake and Mouton (1964) asked 716 managers in one large industrial organization to identify other managers' dominant conflict styles after interacting for 30 hours on tasks in small groups. These managers were mostly male and occupied eight organizational levels, from front-line supervisor to board chairman. Style identifications were made by group consensus. The authors calculated a "managerial achievement quotient" (MAQ) for each manager—a measure of organizational level attained relative to the manager's age. Proportions of managers with collaborating and competing styles increased markedly from low-MAQ managers to high-MAQ managers, while proportions of compromising, accommodating and avoiding managers declined. Thus, the authors concluded that these more assertive styles aided promotion to higher levels.

Using a self-assessment methodology, Chusmir and Mills (1989) studied men and women managers at three levels of management—supervisors/forepersons, middle-level, and top-level. The sample involved 99 males and 102 females from banking/mortgage, not-for-profit, and industrial organizations in southeastern Florida. Subjects completed the Thomas-Kilmann Conflict Mode Instrument (Thomas and Kilmann, 1974) twice—once to focus on situations "at work (not at home)" and once in their personal life with spouse or significant other. At work, managers at higher levels reported more competing and less accommodating than managers at lower levels. This was true for both sexes, although the relationship was stronger for men. (In contrast, there were no significant style differences at home that could be accounted for by management level or gender.) In sum, this study found that organization level was positively related to one assertive conflict style, competing, but not to collaborating. Likewise, level was related negatively to one unassertive mode, accommodating, but not to avoiding.
Brewer et al. (2002) compared the conflict styles of managers/supervisors and non-supervisors. The study involved 118 men and women in three finance-related institutions. Individuals were given descriptions of three hypothetical personality conflict issues and three “value” issues (ethical/legal personnel issues). After each set of hypothetical examples, subjects were asked to describe a similar conflict they had experienced with peers. They then completed the ROCI-II, Form C (Rahim, 1983a, b) to describe their own conflict style during that episode. Style scores were averaged across the two episodes. After controlling for gender, results showed that organizational level was positively related to collaborating and negatively related to avoiding. Thus, managers were found to score higher on one assertive conflict style, collaborating, but not on competing. Likewise, managers scored lower on one unassertive style, avoiding, but not on accommodating.

The theme running through these studies involves greater assertiveness at progressively higher organization levels. However, the three studies yield different results, with Blake and Mouton (1964) pointing to increases in both competing and collaborating, Chusmir and Mills (1989) to increased competing, and Brewer et al. (2002) to increased collaborating. Moreover, each study has significant limitations for our purposes. The Brewer et al. study did not involve higher organizational levels. All three studies were restricted to a single industry or group of regional companies. The Blake and Mouton findings date from an earlier industrial era with an almost all-male sample from a single company, while the two more recent studies used relatively small samples and tested only two or three organization levels.

Gender and conflict styles
In contrast to the scarcity of studies on organization level, there have been many studies of gender differences in conflict style (Holt and DeVore, 2005). Earlier studies of conflict styles often included relatively few women. Holt and DeVore (2005) note that even Rahim’s (1983b) relatively large national sample of 1,219 subjects contained only 50 women. Interest in gender differences has grown as women have become an increasing proportion of the US workforce over the last three decades and as more women have entered academia. Women’s numbers at executive and top executive levels have also grown steadily, although they continue to be under-represented at those levels (Appelbaum et al., 2003).

While there have now been many studies testing for gender differences in organizational settings, results have been contradictory (Holt and DeVore, 2005; Putnam and Poole, 1987). As noted earlier, most of these studies used relatively small convenience samples. To test for underlying trends in those studies, Holt and DeVore (2005) conducted a recent meta-analysis of self-report data on conflict styles from 36 studies of organization members. Overall, they found that males in individualistic cultures (including the US) reported somewhat higher levels of competing, while females reported higher levels of compromise.

In general, we note that there is fairly consistent agreement in the empirical literature that gender differences in conflict style, when they are found, tend to involve higher competing by men. There are more varied findings on what other styles women prefer -- whether compromising (Holt and DeVore, 2005), accommodating (Sone, 1981), or avoiding (Cardona, 1995). We also note that there has been little direct evidence that bears directly upon gender differences at higher management levels. The Chusmir and
Mills (1989) study, which included men and women managers at three levels, found no significant gender effect after controlling for organization level. However, their data show some covariation between gender and organization level, which could explain that finding. Some studies have found smaller gender differences among managers than non-managers (e.g. Korabik et al., 1993) or have found smaller differences among more experienced managers (e.g. Sorenson et al., 1995), suggesting that male and female conflict styles may converge at higher levels.

Research questions
Our study is exploratory rather than hypothesis testing. There is considerable uncertainty involving the effects of organization level and gender on conflict styles. Likewise, there is no predominant theoretical framework from which to deduce hypotheses. The relationship of level to conflict style, for example, involves a complex set of dynamics. Conflict styles can be viewed as trait-like skills that contribute to performance and promotion to higher levels (e.g. Blake and Mouton, 1964). Conflict styles at higher levels can also be interpreted as learned adaptations to the role demands of those positions (e.g. Chusmir and Mills, 1989). Differences at higher levels may also reflect the self-confidence that comes from the past successes and promotions that got one to a higher level (e.g. Finkelstein, 2003), as well as access to greater power resources. Finally, promotion processes themselves are subject to evaluators' assumptions and biases, which may favor different conflict styles (reference?).

Our study was designed to provide clearer answers to three broad research questions:

RQ1. How do conflict styles vary by organization level?
RQ2. How do conflict styles vary by gender?
RQ3. How do gender and organization level interact?

Methodology
Our study made use of a national database on the Thomas-Kilmann Conflict Mode Instrument (TKI) maintained by its publisher, CPP, Inc. We selected a relatively large, stratified random sample of working adults at six organization levels, with equal numbers of men and women at each level. As mentioned earlier, this design offers advantages over previous studies. The sample ensures statistical independence of gender and organization level, allowing us to better measure their separate as well as interactive effects on conflict style. The sampling of six organizational levels, from entry-level employees to top executives, allows testing for linear and curvilinear relationships. Moreover, the relatively large, heterogeneous sample reduces the likelihood of sampling error.

Sample
The TKI is available in either printed or online versions. (For evidence of the equivalence of pencil-and-paper and online versions of instruments, see Gosling et al., 2004, and Naglieri et al., 2004.) People who complete the online version are asked voluntarily to complete a page of demographic items. Demographic data and conflict style scores are retained in the publisher's database for establishing norms and other
applied research. Data in this research were from the period 2002 to 2005. Sub-samples of 200 male and 200 female participants who had completed the demographic items were randomly selected from each of the six organizational levels described below, for a total sample size of 2,400.

Mean age for the sample was 40.2 years. The ethnic breakdown was 69 percent Caucasian, 11 percent African American, 7 percent Hispanic, 5 percent Asian or Pacific Islander, 2 percent Indian, 1 percent American Indian or Alaskan Native, 1 percent Middle Eastern, 1 percent other, and 3 percent multiple ethnicities. Education levels reported were 1 percent some high school, 4 percent high school diploma or GED, 1 percent trade/technical training, 13 percent some college (no degree), 5 percent associate degree, 39 percent bachelor's degree, 26 percent master's degree, 7 percent professional degree (MD, JD, DDS), and 4 percent doctorate. Most participants (95 percent) felt satisfied with their current work. All were full-time employees representing 293 different occupations.

**Measures**

The TKI (Thomas and Kilmann, 1974, 2002) is an established measure of conflict styles that is widely used in managerial training and organization development interventions. The measure contains 30 forced-choice items, each of which asks subjects to choose one of two statements as most characteristic of their behavior. For example, one pairing is between "I sometimes avoid taking positions that would create controversy" (avoiding) and "If it makes other people happy, I might let them maintain their views" (accommodating). Another is between "I am firm in pursuing my goals" (competing) and "I try to find a compromise solution" (compromising). Each style is paired with each of the other four styles three times, so that scores on any style can range from 0 to 12. Kilmann and Thomas (1977) reported four-week test-retest reliabilities as follows: competing 0.61, collaborating 0.63, compromising 0.66; avoiding 0.68, and accommodating 0.62.

Included in the demographic data were the subject's gender and organizational level. For gender, data were coded as 0 for female and 1 for male. Organization level included: entry-level positions; non-supervisory employee; supervisor; manager; executive; and top executive. For analytic purposes, organization level was scaled as an ordinal variable ranging from 1 (entry-level) to 6 (top executive).

**A note on forced choice and ipsativity**

Because of its forced-choice design, scores on the five TKI styles are ipsative, meaning that they sum to a constant – 30, the number of items. The forced-choice format and ipsativity have caused some psychometric and statistical confusion over the years. By design, the TKI's format violates key assumptions underlying conventional psychometrics and statistics. Most importantly, the five scale scores are not independent, since they sum to a constant. Factor analysis is not appropriate on forced-choice measures, as each item loads on two scales. Because there are only four degrees of freedom among the five scale scores, Cronbach's alpha is not an appropriate index of scale reliability either, since the upper limit of the sum of the five Cronbach alpha reliability estimates is four rather than five (Hicks, 1970). For ipsative measures, test-retest reliabilities are a more accurate measure of the reliability of the scales.
Thomas and Kilmann adopted forced choice for two reasons. The first was to control for response biases. Social desirability had been a problem with previous conflict instruments (Thomas and Kilmann, 1975; Kilmann and Thomas, 1977). The TKI's design forces respondents to choose between pairs of statements that were matched by ratings of social desirability, making it more difficult to answer items on that basis. However, the forced-choice format also eliminates common response biases involving Likert scale usage, such as leniency and strictness. Essentially, the overall mean for the five styles is constant, so that response biases cannot introduce common variance across the styles.

The second rationale for the forced-choice format was to ensure that the instrument taps the relative frequency of the five styles (Kilmann and Thomas, 1977). Blake and Mouton (1964) focused their original construct on relative use, or preferences, among the five styles, conceptualizing them in terms of a response hierarchy, and measuring relative use with a ranking. Likewise, Thomas' (1976) structural model of conflict was organized around the relative frequency or “mix” of the conflict styles in a given situation. Note that relative frequency is an inherently ipsative construct: as the relative frequency of one style increases, the relative frequency of the remaining styles must show a corresponding decrease. The average inter-correlation among five ipsative variables should be $-0.25$ (Radcliffe, 1970), which is the case with the TKI. The forced-choice items and ipsative scoring, then, capture the tradeoffs between the five styles. Any difference in conflict styles between two organization levels, for example, will show not only what one level scores higher on, but also what specific styles have been used less to allow that to happen.

In contrast, more recent conflict style instruments have tended to use Likert-style items, with their five style scales assumed to be statistically independent. This assumption allows researchers the convenience of using standard psychometric statistics, but diverges somewhat from the original construct of relative frequency. Essentially, the overall mean for the five styles is allowed to vary across individuals. Far from showing an average intercorrelation of $-0.25$ between styles, these instruments tend to show positive intercorrelations. For example, four studies described by Munduate et al. (1999) using Rahim’s (1983a, b) ROCI-II show that average style intercorrelations are in the $+0.10$ to $+0.20$ range. The difference between $-0.25$ and $+0.15$ indicates that the five Likert scales pick up a sizeable amount of common variance — likely from response styles and from the overall amount of conflict (Kilmann and Thomas, 1977). We note that this common variance can be eliminated by standardizing individuals’ responses around their means and using these standardized scores to indicate relative preferences. However, this procedure would require researchers to adapt their statistics to ipsative data.

**Results**

Overall sample means and standard deviations for the five conflict styles are as follows, from highest to lowest scores: compromising 7.35 (SD = 2.24), collaborating 6.45 (2.25), avoiding 6.02 (2.43), accommodating 5.39 (2.26) and competing 4.78 (2.80). Table 1 shows the same statistics for the sample disaggregated by gender and organization level. These means were tested for significance using a 2 (gender) by 6 (organizational level) balanced ($n = 200$ per cell) analysis of variance (ANOVA). Using a Bonferroni adjustment (Meyers et al., 2006), the level of significance was set at 0.01 (0.05/5) to protect against the study-wise Type 1 error that occurs when five dependent
<table>
<thead>
<tr>
<th>Entry level</th>
<th>Competing</th>
<th>Collaborating</th>
<th>Compromising</th>
<th>Avoiding</th>
<th>Accommodating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Women</td>
<td>3.81</td>
<td>2.70</td>
<td>6.09</td>
<td>2.30</td>
<td>7.17</td>
</tr>
<tr>
<td>Men</td>
<td>4.94</td>
<td>2.82</td>
<td>6.11</td>
<td>2.37</td>
<td>7.04</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>3.95</td>
<td>2.68</td>
<td>6.31</td>
<td>2.18</td>
<td>7.77</td>
</tr>
<tr>
<td>Men</td>
<td>4.97</td>
<td>3.01</td>
<td>6.05</td>
<td>2.27</td>
<td>7.13</td>
</tr>
<tr>
<td>Supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>4.15</td>
<td>2.64</td>
<td>6.12</td>
<td>2.08</td>
<td>7.72</td>
</tr>
<tr>
<td>Men</td>
<td>5.02</td>
<td>2.83</td>
<td>6.38</td>
<td>2.25</td>
<td>7.46</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>4.34</td>
<td>2.72</td>
<td>6.28</td>
<td>2.29</td>
<td>7.53</td>
</tr>
<tr>
<td>Men</td>
<td>5.08</td>
<td>2.74</td>
<td>6.57</td>
<td>2.06</td>
<td>7.65</td>
</tr>
<tr>
<td>Executive:</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>4.61</td>
<td>2.55</td>
<td>6.94</td>
<td>2.09</td>
<td>7.75</td>
</tr>
<tr>
<td>Men</td>
<td>5.51</td>
<td>2.82</td>
<td>6.66</td>
<td>2.23</td>
<td>7.40</td>
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<tr>
<td>Top executive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>5.16</td>
<td>2.53</td>
<td>7.17</td>
<td>2.28</td>
<td>7.14</td>
</tr>
<tr>
<td>Men</td>
<td>5.89</td>
<td>2.85</td>
<td>6.71</td>
<td>2.32</td>
<td>6.62</td>
</tr>
</tbody>
</table>

Table 1: Conflict style means by organization level and gender.
variables are analyzed separately. The effect size of selected differences was assessed using Cohen's $d$, the ratio of the observed difference to the standard deviation. Results for gender are shown in Table II. Males had higher scores on the competing scale, and females scored higher on the remaining scales. All but the difference on collaborating were statistically significant at the 0.01 level. The effect size of the gender difference for competing was a moderate 0.32, but all remaining effect sizes were relatively small.

Means by organizational level are given in Table III and the 2 x 6 ANOVA results and a one-way ANOVA for the analysis of the organizational level linear and curvilinear effects is shown in Table IV and Table V. Results for each conflict style are discussed below.

<table>
<thead>
<tr>
<th>Table II.</th>
<th>Style means by gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>M 5.23, F 4.33, M - F 0.90, F(1, 2388) 64.02, Prob. 0.001, Effect size 0.32</td>
</tr>
<tr>
<td>Collaborating</td>
<td>M 6.41, F 6.48, M - F -0.07, F(1, 2388) 0.67, Prob. 0.415, Effect size -0.03</td>
</tr>
<tr>
<td>Compromising</td>
<td>M 7.20, F 7.51, M - F -0.32, F(1, 2388) 12.23, Prob. 0.001, Effect size -0.14</td>
</tr>
<tr>
<td>Avoiding</td>
<td>M 5.88, F 6.16, M - F -0.28, F(1, 2388) 8.09, Prob. 0.004, Effect size -0.12</td>
</tr>
<tr>
<td>Accommodating</td>
<td>M 5.28, F 5.51, M - F -0.23, F(1, 2388) 6.16, Prob. 0.013, Effect size -0.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table III.</th>
<th>Style means by organization level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>Entry 4.38, Non 4.46, Supv 4.58, Mgr 4.71, Exec 5.05, Top 5.52</td>
</tr>
<tr>
<td>Collaborating</td>
<td>Entry 6.10, Non 6.18, Supv 6.25, Mgr 6.42, Exec 6.80, Top 6.94</td>
</tr>
<tr>
<td>Compromising</td>
<td>Entry 7.10, Non 7.45, Supv 7.59, Mgr 7.54, Exec 7.58, Top 6.87</td>
</tr>
<tr>
<td>Avoiding</td>
<td>Entry 6.55, Non 6.40, Supv 6.29, Mgr 6.03, Exec 5.42, Top 5.45</td>
</tr>
<tr>
<td>Accommodating</td>
<td>Entry 5.88, Non 5.51, Supv 5.29, Mgr 5.31, Exec 5.16, Top 5.21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table IV.</th>
<th>Organizational level analysis: 2 x 6 (gender by organizational level) ANOVA results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>F(5,2388) 9.94, prob. 0.001, Gender by organizational level F(5,2388) 0.33, prob. 0.897</td>
</tr>
<tr>
<td>Collaborating</td>
<td>F(5,2388) 9.69, prob. 0.001, Gender by organizational level F(5,2388) 1.94, prob. 0.084</td>
</tr>
<tr>
<td>Compromising</td>
<td>F(5,2388) 7.10, prob. 0.001, Gender by organizational level F(5,2388) 1.19, prob. 0.313</td>
</tr>
<tr>
<td>Avoiding</td>
<td>F(5,2388) 16.76, prob. 0.001, Gender by organizational level F(5,2388) 2.52, prob. 0.028</td>
</tr>
<tr>
<td>Accommodating</td>
<td>F(5,2388) 5.56, prob. 0.001, Gender by organizational level F(5,2388) 0.67, prob. 0.643</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table V.</th>
<th>Organizational level analysis: one-way ANOVA results for organizational level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>F(1,2394) 43.25, prob. 0.001, Curvilinear F(1,2394) 4.88, prob. 0.027</td>
</tr>
<tr>
<td>Collaborating</td>
<td>F(1,2394) 44.87, prob. 0.001, Curvilinear F(1,2394) 2.25, prob. 0.134</td>
</tr>
<tr>
<td>Compromising</td>
<td>F(1,2394) 0.76, prob. 0.384, Curvilinear F(1,2394) 30.44, prob. 0.000</td>
</tr>
<tr>
<td>Avoiding</td>
<td>F(1,2394) 75.98, prob. 0.001, Curvilinear F(1,2394) 0.98, prob. 0.981</td>
</tr>
<tr>
<td>Accommodating</td>
<td>F(1,2394) 21.42, prob. 0.001, Curvilinear F(1,2394) 5.29, prob. 0.021</td>
</tr>
</tbody>
</table>
Competing
For competing, the linear effect is significant, \( F(1, 2394) = 43.25, p = 0.001 \), and the gender by organizational level interaction is not significant, \( F(5, 2388) = 0.33, p = 0.897 \). Because competing shows the strongest effect strength for gender differences, Figure 2 is offered to show means for males and females separately. Note that the lines are almost parallel. When male and female data are aggregated (see Table III), the relationship between organizational level and competing is positive and perfectly monotonic, Spearman's rho (5) = 1.00, \( p < 0.01 \), indicating a clear trend for higher scores on competing at each higher organizational level.

Collaborating
The results for collaborating also show a significant linear effect, \( F(1, 2394) = 44.87, p = 0.001 \), and non-significant interaction, \( F(5, 2388) = 1.94, p = 0.084 \). Again when data are collapsed across male and female sub-samples (see Table III), the relationship between organizational level and competing is positive and perfectly monotonic, rho (5) = 1.00, \( p < 0.01 \), showing a gradual trend for higher scores on collaborating at each higher organizational level.

Compromising
Compromising, the most widely used conflict style in this sample, is the only style that does not have a linear relationship with organizational level, rho (5) = -0.029, \( p > 0.01 \). However, its curvilinear relationship is significant, \( F(1, 2394) = 30.44, p = 0.001 \). Table III above and Figure 3 below show the use of compromising is highest at the middle four levels of the organizational hierarchy and lowest at the entry and top executive levels.

Avoiding
For avoiding, the linear effect of organization level is negative and significant, \( F(1, 2394) = 75.98, p = 0.001 \), and the gender by organization level interaction is not significant, \( F(5, 2388) = 2.52, p > 0.01 \) (observed \( p = 0.028 \)). When male and female
Figure 3. Conflict style means by organization level

Table VI. Organizational level contrasts

<table>
<thead>
<tr>
<th>Style</th>
<th>Top executives</th>
<th>Entry level</th>
<th>Difference</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>5.52</td>
<td>4.38</td>
<td>1.14</td>
<td>0.41</td>
</tr>
<tr>
<td>Collaborating</td>
<td>6.94</td>
<td>6.10</td>
<td>0.84</td>
<td>0.37</td>
</tr>
<tr>
<td>Compromising</td>
<td>6.87</td>
<td>7.10</td>
<td>-0.23</td>
<td>-0.10</td>
</tr>
<tr>
<td>Avoiding</td>
<td>5.45</td>
<td>6.55</td>
<td>-1.10</td>
<td>-0.45</td>
</tr>
<tr>
<td>Accommodating</td>
<td>5.21</td>
<td>5.88</td>
<td>-0.67</td>
<td>-0.29</td>
</tr>
</tbody>
</table>

Data are aggregated (see Table III), the degree of linear relationship is substantial, $\rho(5) = -0.943, p < 0.01$.

**Accommodating**
The linear relationship of accommodating and organizational level is significant, $F(1,2394) = 21.42, p = 0.001$, and the gender by level interaction is not significant, $F(5,2388) = 0.67, p = 0.64$. For both males and females there is a trend for individuals at higher organizational levels to be less accommodating. When the male and female data are aggregated (see Table III), the linear relationship between accommodating and organization level is negative and substantial, $\rho(5) = -0.886, p < 0.01$.

**Overview of organization level differences**
In order to compare organizational-level effect sizes for the five conflict styles, means for entry-level employees ($N = 400$) were contrasted with top executives ($N = 400$). Table VI shows Cohen's $d$ for these selected contrasts. Except for compromising, effect sizes were moderate, ranging from 0.29 to 0.45. Figure 3 further compares the variation in the five conflict variables by organizational level. The trend towards less
differentiation in conflict styles at the executive and top executive levels is striking. Figure 3 also illustrates that four of five conflict styles related to organizational level in a linear fashion. Shown at the top of Figure 3 and discussed earlier, the most widely chosen conflict style, compromising, resulted in the only nonlinear relationship with organizational level.

Discussion
Overall, the results provide a clearer and more detailed picture of conflict style differences as they vary by organization level and gender.

Organization level
Patterns shown in Figure 3 are relatively consistent for four conflict styles. The most general conclusion is that people report a steady increase in assertiveness at higher organizational levels. The two most assertive styles, competing and collaborating, show a monotonic increase across the six levels. The two least assertive styles, avoiding and accommodating decline across the first five levels, then are roughly equal for executives and top executives. The general pattern involving these four styles is consistent with the results of Blake and Mouton (1964) and reveals some relationships that did not emerge in studies by Chusmir and Mills (1989) and Brewer et al. (2002). The results also highlight the consistency of the pattern across six organization levels. All four of these styles show statistically significant linear trends, with moderate effect sizes ranging from 0.29 to 0.45.

As noted earlier, this pattern of increasing assertiveness is likely the result of a complex set of causal dynamics: more assertive individuals having a performance advantage and thus being promoted faster, promoted individuals adapting to assertiveness requirements at higher levels, past promotions and successes generating greater self-confidence, access to more power resources at higher levels, and selection biases that favor assertive candidates for promotion. Our study cannot sort out these dynamics; it can only document the strength of their combined effects and the consistency of this pattern across levels.

Compromising, which is intermediate in assertiveness, showed a curvilinear relationship to organization level - a previously unreported finding. This style is reported as the most frequent one at levels below top executives. Its use is relatively constant from non-supervisory personnel to executives, but is lower at the very lowest (entry level) and highest (top executive) levels. Compromising is regarded positively in our pragmatic culture, and is generally regarded as a fair and expedient way of producing acceptable settlements on less-than-crucial concerns (e.g. Thomas, 2002). It appears that compromising declines at entry-level positions as part of a profile of very low assertiveness (with an especially high level of accommodating), and at top executive positions as part of a profile of very high assertiveness (with an especially high level of competing).

Gender differences
Our findings show that men score moderately higher than women on competing. This gender difference is not about assertiveness in general: for the sample as a whole, women score equal to men on collaborating, the other highly assertive style. Women score significantly higher on the three remaining styles – compromising, avoiding, and
accommodating. However, the effect size for competing (0.32) is considerably stronger than for these latter three styles, indicating that the gender difference on competing is driving differences in these other styles.

Again, the gender difference in competing is likely the combined effect of a complex set of factors involving personality, sex role socialization, and the enforcement of sex roles within organizations. While our study cannot differentiate these influences, it does demonstrate the strength of the resulting gender difference. In terms of effect size, the gender difference in competing is substantial — roughly comparable to the difference in competing scores between supervisors and top executives in Table III. Importantly, the gender difference is also consistent across all six organization levels. Thus, we find no evidence for the suggestion that the conflict styles of men and women converge at higher organizational levels. In general, our data show negligible interaction effects between gender and organization level in shaping conflict style, so that their effects are additive and independent.

Practical implications
Conflict instruments are used heavily in training, coaching and organization development interventions. Participants learn the choices available in conflict situations (the five styles), learn in contingency-model fashion that each style is useful in appropriate situations, identify their pattern of preference among the styles, and are helped to choose and implement the conflict styles more thoughtfully (e.g. Shell, 2001). Typically, these interventions are also customized by emphasizing the advantages and risks of selected styles and by building key behavioral skills. Here, we offer some implications of our findings for targeting the typical style differences revealed in our findings.

In discussing the practical implications of our findings, however, it is important to remember that our findings are only broad tendencies and that there is still a great deal of style variation among individuals of a given gender at a given organization level. Thus, it is still important to use conflict instruments to measure the actual constellation of styles for individuals and teams rather than reifying our findings into hard-and-fast stereotypes.

Implications regarding norms
The moderate differences in conflict styles by organization level and gender raise the issue of what statistical norms to use for conflict style applications. For practical reasons, these instruments (especially print versions) tend to use a single set of norms. For these “standard” norms, we recommend using norms that are weighted across levels to reflect the population for which the instrument is intended. Given the changing gender composition of organizations, it also seems appropriate to give equal weight to men and women in these standard norms. The latest, 2007 printing of the TKI contains updated norms calculated in this manner. However, we also recommend making sets of more specialized norms available for practitioners working with specific groups. For example, it would be helpful for organization development consultants or coaches working with top management teams to have access to specific norms for executives and top executives. The same would be true for coaches who work exclusively with women managers.
Implications regarding top management
Executives and top executives score higher than other groups in the two most assertive styles — collaborating and competing. Training and coaching at this level can emphasize complexities and finer points involved in the constructive use of these styles. Importantly, research by Van de Vliert et al. (1999) indicates that collaborating and competing have the greatest impact on conflict-handling effectiveness. As main effects, greater collaboration produces more constructive outcomes, while greater competing by itself tends to produce dysfunctional outcomes. However, competing tends to aid effectiveness when collaborating is high. Specifically, favorable outcomes are strongly related to sequences of strongly asserting one's needs (competing) followed by collaborative overtures to find an integrative way of meeting the needs of both people (Van de Vliert, 1997). Here, Pruitt and Rubin (1986) recommended stance of "firm flexibility" can help top managers clarify what it is useful to be firm about — being firm on the importance of achieving one's own concerns but collaborative and flexible with respect to how that should be accomplished. Finkelstein's (2003) study of business failures is useful in showing the potentially disastrous consequences when otherwise-competent executives take a competitive stand on key issues, suppressing dissent, and ignoring evidence that a decision is going badly. Research on effective top management teams by Eisenhardt et al. (1997) also provides a useful stopping rule for collaboration — "consensus with qualification". Rather than continuing to try to force consensus when collaboration stalls, the decision is given to the team member who has clearest authority on the issue, to try to incorporate the best thinking of the team. Finally, examples of effective top executives like Jack Welch of GE and Andy Grove at Intel (Pascale, 1990) illustrate how top executives can promote a broader organization culture that encourages the assertive airing of diverse views in the service of learning and decision-making.

Implications regarding individual contributors
At the other end of the spectrum, entry-level and non-supervisory employees score higher than other groups on the unassertive styles — avoiding and accommodating. This finding suggests that conflict-oriented training and interventions at this level should provide a dual emphasis — first challenging the unassertive patterns that discourage employees from speaking up on significant conflict issues, then providing training in constructive forms of assertiveness. This approach has been especially prominent in safety and sexual harassment training, where there are obvious dangers from unassertive behavior — injuries, damage to equipment, legal action, or a hostile work environment. However, this message has also become important with respect to day-to-day decision-making. O'Toole and Lawler (2006) have documented the dramatic changes in the jobs of individual contributors over the last 30 years. The average job is much more likely to be knowledge work today, involving significantly more decision making, coordination, and participation in cross-functional teams. Constructive airing of divergent concerns has therefore become more important to job effectiveness. Classic works that warned of the dangers of unassertiveness and conformity in decision groups, like Janis' (1972) "groupthink" and Harvey's (1974) "Abilene Paradox", although formerly used mostly for managers, are now useful for knowledge workers as well. Finally, our findings on the relative unassertiveness of individual contributors provide a warning for supervisors and managers. It will not be enough for them to
merely listen for divergent views; often, they must make a special effort to elicit those views.

**Implications regarding supervisors and managers**

Supervisors and managers fall in between individual contributors and top management in their assertiveness scores. Hill's work (2003) shows that much of the supervisor's developmental challenge involves the task of managing direct reports' work expectations – setting and raising standards, providing feedback for substandard performance, and holding people accountable. Conflict style instruments are used heavily in supervisory training to help supervisors deal assertively and constructively with the conflicts inherent in this process. Supervisors are given positional power bases to enable unilateral (i.e. competitive) actions, but also need some training in collaborative approaches and firm flexibility.

Up one level from supervisors, managers' work is especially centered on the coordination and integration required in today's flatter, more horizontally-interdependent organizations. An important developmental challenge here is learning to negotiate and problem-solve with people over whom they have no formal authority. Training for intra-organizational negotiations is common here, and needs to focus on forms of assertiveness that do not damage trust and relationships. Since much of managerial coordination occurs in cross-functional teams, managers are also frequently exposed to team-building interventions. Here, we recommend including team-building sessions focused specifically on conflict styles. The approach we favor (Thomas and Thomas, 2004) builds trust by first emphasizing the value of each conflict style and the intended contributions of people with different styles, but then focuses on identifying the specific challenges and remedies for effective problem solving within the team, based on an assessment of the most prominent conflict styles used within the team.

**Implications regarding gender**

Here we will focus on women, who tend to score lower than men on competing at all organizational levels. Recent research suggests that this difference may largely reflect a reluctance to assertively claim value on issues related to their personal interests (Amanatullah, 2006; Babcock and Laschever, 2007). In a recent simulation study using Executive MBA students, Amanatullah (2006) found that women were more reluctant than men to use overtly competitive tactics in salary negotiations for themselves, settling for significantly lower salaries. When negotiating on behalf of others, however, they were as competitive as men and negotiated equal salaries. If this interpretation of our finding is correct, it suggests that women's lower competing score would not be a factor in their negotiations on behalf of their unit or the organization as a whole, so that it would not reduce their overall performance or value to their organization. On the contrary, a 2001 Society of Human Resource Management study using 360-degree performance review data showed that women were rated higher than men on 42 of 52 executive competencies, including influencing and negotiating (Corporate Leadership Council, 2004). Moreover, a Catalyst (2004) study showed that companies with higher numbers of women in their top management teams experienced significantly higher financial performance.

The most likely downside of women's lower competing scores, then, seems to be that women tend to end up with lower pay and fewer promotions, which then
Conflict styles of men and women

Contribute to higher turnover rates. Amanatullah (2006) found that women did not consider themselves less deserving of higher salaries. Rather, she found that their reluctance to negotiate forcefully on their own behalf stemmed largely from fear of male backlash for violating the female role—a fear confirmed by male subjects' unfavorable ratings of competitive tactics by women. Amanatullah's (2006) research suggests that women often find themselves in a no-win situation when negotiating on their own behalf. If they are competitive, they tend to be seen as competent but lacking social skills. If they are not competitive, they may be seen as more socially skilled, but lacking competence or leadership potential.

Limited gains may come from coaching women in forms of assertiveness that are effective but less overtly competitive. Examples are principled negotiation (Fisher and Ury, 1981) and firm flexibility (Pruitt and Rubin, 1986) — both of which avoid extreme elements of hard or power bargaining. However, the fundamental problem seems to involve the "Catch-22" sex role expectations for women in organizations. Deloitte and Touche successfully addressed this problem by holding workshops that challenged gender assumptions, making changes to evaluation systems, tracking female turnover, and holding unit managers accountable for female turnover rates. From 1991 to 2000, the company estimated that it had saved about $250 million in hiring and training costs through reduced turnover (Corporate Leadership Council, 2004).

Limitations and suggestions for future research

While relatively large and heterogeneous, our sample was nevertheless limited to US organizations. Thus, our study is restricted to an individualistic culture and may not generalize beyond such cultures (e.g. Holt and DeVore, 2005). The study is also subject to the limitations of self-report instruments, with people answering global questions about their behavior. Because the data are cross-sectional, causal direction between the variables cannot be determined. Finally, our study included no measures of performance, so that the effectiveness of the conflict style patterns cannot be assessed.

We emphasize the need for future research that teases out the strengths of the various dynamics involved in the relationship between organization level and assertive conflict styles. Given the amount of past research devoted to collaboration, our findings especially suggest the need for researchers to pay greater attention to the role of competing in individual and organizational effectiveness, to the degree to which competing is an individual difference versus a learnable behavior, and to developing training guidelines for helping individuals compete effectively—that is, both prevailing in a situation but also in ways that reduce the costs of competing (for example, Thomas, 2002). Finally, there is a need for more focused research on the causes, specific manifestations, and consequences of the gender-based difference in competing that this study documents — to test and extend our interpretation of this finding.

References


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Further reading

About the authors
Kenneth W. Thomas is an Emeritus Professor at the Naval Postgraduate School in Monterey, CA, USA. He has also served on the faculties at UCLA, Temple University, and the University of Pittsburgh, where he directed the doctoral program. Academically, he is best known for some classic theoretical and empirical contributions to the literature on conflict styles. He is also co-author of the Thomas-Kilmann Conflict Mode Instrument and of two training booklets to accompany it: Introduction to Conflict Management and Introduction to Conflict and Teams (all published by CPP, Inc.). He has also published in the area of empowerment and intrinsic motivation and authored the book, Intrinsic Motivation at Work. He is a member of the Academy of Management, American Psychological Association, and Association for Psychological Science. Kenneth W. Thomas can be contacted at: kthomas@nps.edu

Gail Fann Thomas is an Associate Professor in the School of Business and Public Policy at the Naval Postgraduate School in Monterey, California. She serves on the Board of Directors for the Association of Business Communication and was Associate Editor for the Journal of Business Communication. Her areas of interest are executive communication and interagency collaboration. She has published articles in such journals as the Journal of Business and Technical Communication, Journal of Applied Behavior Science, and the Journal of Business Communication. She also co-authored the booklet, Introduction to Conflict and Teams.

Nancy Schaubhut is a Research Associate for CPP, Inc. where she is involved in assessment research, revision, and development. She is co-author of the Strong Interest Inventory Manual and an upcoming book on MBTI® type. She has presented at numerous conferences, including Society for Industrial and Organizational Psychology, American Psychological Association, and National Career Development Association.

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