Conflict-handling style measurement: a best-worst scaling application

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Abstract

Purpose – This study aims to develop and validate a best-worst scaling (BWS) measure of preferred conflict-handling styles, named the Conflict-handling BWS (CHBWS).

Design/methodology/approach – The authors conducted three studies. Study 1 consisted of a sample of psychology students \((n = 136)\) from a Canadian university and was designed to assess the convergent validity of the CHBWS by comparing it with the ROCI-II and DUTCH instruments. Study 2 consisted of a sample of psychology students \((n = 154)\) from a US university and was designed to assess the predictive validity of the CHBWS by relating conflict-handling styles to consumer complaint behavior. Study 3 consisted of a random sample of adults registered with an online survey company in Australia \((n = 204)\) and Germany \((n = 214)\). This study was designed to assess the antecedent relationship of Schwartz’s personal values to conflict-handling styles.

Findings – The study shows that best-worst scaling is a valid and advantageous way of measuring conflict-handling styles. The CHBWS demonstrated both convergent and predictive validity, and was able to reproduce the structure of the dual-concerns model. The study also showed that preferred conflict-handling style influences the choice of complaint behavior in a retail service failure situation. Furthermore, the study demonstrated that Schwartz’s personal values can influence the preferred conflict-handling style in two individualistic cultures.

Originality/value – This is the first study to measure conflict-handling style preferences using a BWS approach. Furthermore, it is the first study to relate consumer complaint behavior to preferred conflict-handling style.

Keywords Conflict management, Measurement, Consumer behaviour

Paper type Research paper

It is important for managers to understand the causes, effects and processes of conflicts. Not surprisingly therefore, conflict, and the way people handle conflict, is a major area of study in organizational research (Rahim, 1983; Thomas et al., 2008). A major stream within this research has investigated the ways in which people handle conflict, resulting in a large body of research into peoples’ conflict-handling styles. Conflict-handling styles research has been popular in a wide range of fields and contexts, including management (e.g. Rahim, 1983; Van de Vliert et al., 1995), small business management (e.g. Sorensen,
Much of this research relies on our ability to assess peoples’ preferences for different conflict-handling styles. This has resulted in the development of a number of scales. Most rely on rating scale data (e.g. ROCI-II: Rahim, 1983; DUTCH: Euwema and Van de Vliert, 1990), which can be problematic (Campbell, 1996), especially when measuring trade-offs (Lee et al., 2008). The fact that some respondents use specific parts of a scale systematically, such as an extreme or a midpoint, has been well documented (e.g. Baumgartner and Steenkamp, 2001; Craig and Douglas, 2000). Indeed, this problem is particularly evident when constructs involve inherent trade-offs (e.g. when choosing a conflict-handling style), as the consistent use of one part of a scale can dilute or mask real differences. For instance, Rahim’s (1983) Organizational Conflict Inventory II (ROCI-II), currently the most popular instrument, is a ratings scale. This has often led to positive correlations being obtained between what should be opposing conflict styles (e.g. integrate and dominate) and relatively small amounts of variance in obtained data (Thomas et al., 2008).

Two methods are available that acknowledge the trade-off nature of preferences for conflict-handling styles; namely forced-choice paired comparisons and best-worst scaling. Indeed, Thomas and Kilmann’s (1974) management of differences exercise (MODE) instrument uses forced-choice paired comparisons; respondents are asked to make choices between 30 pairs of conflict-handling style statements. However, the paired comparison method is not an efficient design and results in ipsative ordinal scales, which reduces data analysis options. Best-worst scaling (Finn and Louviere, 1992) offers a more efficient design that can be used to calculate a non-ipsatized metric score (Lee et al., 2008), which allows greater data analysis flexibility and seems likely to be useful when measuring conflict-handling preferences. Thus, the present study was undertaken to see whether BWS could be used appropriately and effectively in such a context.

**Best-worst scaling**

Best-worst scaling, also known as maximum difference scaling, was originally suggested by Finn and Louviere (1992) as a way of adding context to trade-off questions. Best-worst scaling (BWS) requires people to choose the best (or most preferable or important) and worst (or least preferable or important) options, as perceived by the respondent, from subsets of a master list of items. BWS assumes respondents behave as if they examine every pair of items or options in each set and choose the most distinct or maximally different pair. Marley and Louviere (2005) have provided formal proofs of the measurement properties associated with the different cognitive processes people might use to make best and worst choices. As there is only one way to choose something as best (or worst), this method significantly reduces, if not eliminates, the biases (e.g. response style biases such as endpoint use) that affect ratings scales (Cohen and Markowitz, 2002; Cohen and Neira, 2003). As Auger et al. (2007, p. 305) noted, “BWS eliminates differences in the way that human subjects use rating scales, including cultural differences in ratings scales if they exist”. The main advantage BWS has over the paired-comparisons method is the production of a
non-ipsatized metric score, allowing greater data analysis flexibility. Additionally, the use of an appropriate experimental design produces a high level of efficiency when choosing subsets from a master list. The balanced appearance and co-appearance of options across the sets is ensured within a relatively simple design.

The BWS approach also provides a context by asking people to make choices among relevant issues. In this way, a person is aware of the options they are expected to trade-off. BWS can be used in place of paired comparisons or rating scales as long as the options or constructs being measured can be traded off. BWS has been used effectively in diverse areas of research, including public polling (Finn and Louviere, 1992), personal values (Bardi et al., 2009; Lee et al., 2007, 2008), consumer ethical beliefs and corporate social responsibility (Auger et al., 2007), consumer product attribute evaluations (Cohen and Markowitz, 2002; Cohen, 2009), health care (Flynn et al., 2007) and tourism motivations (Lee et al., 2006).

Bi-dimensional conflict-handling theory argues trade-offs are made (e.g. between assertive and passive styles), and therefore the BWS method should be well suited to the measurement of conflict-handling styles. Traditional ratings scales, such as those commonly used to measure conflict-handling styles, do not capture such trade-offs well (Lee et al., 2007). Further, while paired comparisons capture trade-offs, they do not allow advanced statistical analysis (Womack, 1988a). The BWS method combines the ability to measure trade-offs without sacrificing the use of advanced statistical analysis techniques.

**Conflict-handling styles**

Conflict-handling style “describes the different strategies that people may use in dealing with others in potentially adversarial social or business situations” (Kleinman et al., 2003, p. 62). As Macintosh and Stevens (2008) pointed out, the term “style” has been used interchangeably to refer to a behavioral response to a given situation (contextual-based) or to an enduring, relatively stable, general disposition (personality-based). Further, conflict-handling styles have been linked to context-based situations, such as perceived organizational justice (e.g. Rahim et al., 2000), type of conflict (Callanan et al., 2006) and organizational status (e.g. Brewer et al., 2002), and to trait-based constructs, such as personality (e.g. Utley et al., 1989; Moberg, 2001), personal values (e.g. Morris et al., 1998), attachment styles (Cann et al., 2008) and individualism-collectivism (e.g. Komarraju et al., 2008). This suggests disposition and context play roles in determining the conflict-handling style people choose (Ogilvie and Kidder, 2008). However, in this study, “style” refers to a personality-based enduring disposition definition, although much of the methodology used could be applied to contextual-based conflict styles research.

Most conflict-handling styles research has been based on Blake and Mouton’s (1964) seminal work that classified conflict styles on two non-exclusive dimensions: concern for production and concern for people. More recent re-conceptualizations have suggested similar dimensions, such as desire for own concerns and desire to satisfy others concerns (Thomas and Kilmann, 1974); concern about own outcomes and concern about others’ outcomes (Pruitt, 1983) and concern for self and concern for others (Rahim, 1983).

The number of distinct conflict-handling styles that have been seen to fall along the two dimensions has differed, however. Schemata with three styles (Oetzel et al., 2000; Onishi and Bliss, 2006), four styles (Pruitt and Rubin, 1986), five styles (Rahim, 1983;
De Dreu et al., 2001), and seven styles (Euwema et al., 2003) have been empirically supported. However, the most widely used and rigorously empirically supported schema (Van de Vliert and Kabanoff, 1990) is Rahim’s (1983), which has five styles (oblige, avoid, dominate, integrate, and compromise), along two dimensions (concern for self and concern for others), as is shown in Figure 1 and described subsequently:

(1) **Oblige**. People using this style have low concern for self and high concern for the other. This style is characterized by attempts to satisfy the other’s concerns at the expense of one’s own concerns by finding a lose-win solution (Thomas et al., 2008). The use of this style is associated with accepting that an issue is much more important to the other party, attempting to preserve relationships, and giving in to another’s views or demands (Rahim, 2002).

(2) **Avoid**. People using this style have a low concern for self and the other and a lack of concern about satisfaction. The use of this style is associated with preventing conflict, ignoring potential or actual contentious situations and postponing conflict situations (Rahim, 2002).

(3) **Dominate**. People using this style have a high concern for self and a low concern for the other. This style is characterized by attempts to satisfy one’s own concerns at the expense of the other’s concerns by finding a win-lose solution (Thomas et al., 2008). The use of this style is associated with ignoring the needs of the other party, attempting to defeat the other and the use of assertive or aggressive tactics (Rahim, 2002).

(4) **Integrate**. People using this style have a high concern for self and the other. It is characterized by attempts to satisfy each party’s concerns fully by finding a win-win solution (Thomas et al., 2008). The use of this style is associated with behaviors, such as open information sharing, alternative seeking, and cooperation, to maximize each party’s outcomes (Rahim, 2002).

![Figure 1. Conflict-handling styles derived from the dual concerns theory](source: Adapted from Rahim (2002); Thomas et al. (2008))
(5) **Compromise.** People using this style have a moderate concern for self and the other. It is characterized by attempting to satisfy each party’s concerns partially by finding a middle-ground solution (Thomas *et al.*, 2008). The use of this style is associated with give-and-take, avoiding protracted conflict and finding mutually acceptable solutions (Rahim, 2002).

As can be seen in Figure 1, four of the styles are opposed to every other style on at least one of the two dimensions. As such, people trade-off one style against another style. However, the distinction between the centrally located compromise style and the integrate style, which involve either a moderate or high concern for both the self and the other respectively, is still the subject of debate. These styles have similar aims as the desired outcome in both styles is a mutually acceptable solution (Kim *et al.*, 2004). This may make differentiation difficult for negotiators, especially non-experts. Indeed, empirical support has been found for combining the integrate and compromise styles, particularly when using non-expert samples, such as students (e.g. Cann *et al.*, 2008; Cai and Fink, 2002; Hammock *et al.*, 1990; Kim *et al.*, 2004) and less experienced managers (Onishi and Bliss, 2006). Thus, researchers often limit their investigation to four styles (e.g. Nauta *et al.*, 2002; Rahim *et al.*, 2001; Tidd and Friedman, 2002; Wood and Bell, 2008), despite adopting the five-style schema.

**Existing conflict-handling instruments**

Nine instruments have been developed to measure peoples’ preferred conflict-handling styles (Wall and Callister, 1995). The most common are Thomas-Kilmann’s management of differences exercise (MODE) (Thomas and Kilmann, 1974), Rahim’s Organizational Conflict Inventory II (ROCI-II) (Rahim, 1983), and the Dutch test for conflict-handling (DUTCH) (Euwema and Van de Vliert, 1990). The MODE is a paired-comparison method (forced choice), while each of the other instruments uses Likert-type scales to obtain the needed data. Each is briefly described as follows:

- **MODE.** The MODE is a widely used paired-comparison instrument in which respondents are forced to choose between two statements describing different conflict-handling styles (Thomas and Kilmann, 1974). Each style is paired with each of the other four styles three times, resulting in 30 paired comparisons. The frequency of choice for each style is the main reported statistic. Its advantages include control over social desirability and response style biases (Thomas *et al.*, 2008) and ease of administration and scoring (Womack, 1988a). Its main disadvantage is that it results in ordinal scores, which limits the analyses that can be conducted (Womack, 1988a). In addition, it can be difficult for respondents to choose between the subtly different wordings used to measure each style (e.g. “I will let the other person have some of his/her points if he/she lets me have some of mine” and “I will let other people have some of their positions if they let me have some of mine”). This wording may also cause problems in translation. Finally, the MODE is a proprietary instrument, which has limited its use.

- **ROCI-II.** The ROCI-II is the most widely used conflict-handling research instrument. It uses a five-point Likert-type scale and has 28 items designed to capture the five conflict-handling styles suggested by the dual-concerns model (Rahim, 1983). Its advantages are that it was carefully developed and validated with executive samples, it is in a familiar rating scale format, it comes in different
forms for peers, subordinates, and supervisors and it can capture the five-factor schema in some situations (Womack, 1988b). Its disadvantages include problems with scale use bias that are commonly found when Likert-type scales are used to measure trade-offs and it has sometimes failed to reproduce the expected five-factor structure, particularly outside executive populations (e.g. Cann et al., 2008; Hammock et al., 1990).

- **DUTCH.** The DUTCH instrument is a newer instrument for measuring conflict-handling styles (Euwema and Van de Vliert, 1990). Despite similarities with the ROCI-II, the DUTCH is shorter (20 items compared to 28 items) and does not specify a contextual relationship. Its advantages are that it has been shown to have convergence with observed conflict-handling behaviors (with the exception of avoid and compromise; De Dreu et al., 2001). Additionally, like the ROCI-II, it has been validated and found to capture the expected five-factor structure (De Dreu et al., 2001). However, the DUTCH instrument also suffers from the biases that occur when measuring inherent trade-offs with Likert-type scales.

While the current instruments are useful, they suffer from limitations due to their measurement method. Specifically, instruments that use rating scales may not pick up the inherent trade-off nature of conflict-handling styles, producing correlations between styles that reflect response biases, rather than reflecting their true relationships. In contrast, while the paired comparison instrument captures this inherent trade-off, respondents might find the trade-offs difficult as many of the items they are comparing are very similar. Further, the use of a paired comparison instrument limits data analysis due to the ordinal nature of the scoring. Consequently, a measurement approach that overcomes these issues would be a valuable tool for researchers examining conflict-handling styles.

The aims of the present study were to see whether a best-worst scaling instrument (termed the conflict-handling best-worst survey (CHBWS)):

- reproduced the theoretical structure of conflict-handling styles;
- predicted relationships with antecedent and consequence variables in a similar manner to existing instruments; and
- could be applied in different cultural contexts.

As such, the instrument assessment procedure in the current research, which is discussed in subsequent sections, followed that of Lee et al. (2008), in which the BWS instrument is first measured along with existing instruments so as to assess convergent validity and, in the case of the dual-concerns model, structural consistency (study 1). Second, the predictive validity of the instrument is assessed by examining relationships with outcome (consumer complaint behavior; study 2) and antecedent (personal values; study 3) variables.

**Study 1**

*Overview*

Study 1 had two aims. The first was to assess the convergent validity between the CHBWS and the commonly used ROCI-II and DUTCH instruments. The second was to assess the structure of the conflict-handling styles suggested by the three instruments.
Participants and procedures
The sample consisted of 220 undergraduate psychology students at a Canadian university. A total of 136 students completed questionnaires were obtained using an online survey, providing a response rate of 61 percent. The final sample included 101 females and 35 males who were between 19 and 36 years of age (M = 20.2; SD = 2.2). Respondents were recruited in class and given course credit for completing the survey. In-class announcements were made to inform students of the survey and direct them to the study website. All respondents were randomly allocated to one of three versions of the survey, which differed in the order in which the three conflict-handling style instruments were presented. Each survey presented the conflict-handling styles before some background questions (e.g. gender and age) were asked.

Measures
The conflict-handling BWS. While traditional ratings scales ask a respondent to answer multiple items once, BWS asks a respondent to choose between single items a number of times. As such, an initial set of five items, representing the five conflict-handling styles outlined in Table I, was developed based on past research and consultation with several negotiation experts. The instrument has an outcome-based approach, rather than a communication approach, to conflict-handling styles, which is in line with the study’s focus on styles as a disposition.

Consultation with two BWS experts and, subsequently, with a small group of postgraduate students, had highlighted an issue with the items that were to be used to assess the integrate and the compromise styles. The two items were seen as too closely related to be able to appropriately prompt a trade-off, which was in line with prior conflict research. The current study aimed to produce a generalizable conflict-handling style instrument for use in varied contexts. Consequently, the compromise item was dropped from the CHBWS. The CHBWS asks respondents to choose the “best and worst descriptions of you personally, when in a situation that requires negotiation or conflict resolution” from four sets of the various items (e.g. “I try to avoid conflict and negotiations”). The four sets (shown in Appendix 1) each have three conflict-handling styles and are based on an efficient balanced incomplete block design, such that respondents see each of the four conflict-handling styles three times and each pair of styles twice. This design resulted in each respondent seeing each value type three

<table>
<thead>
<tr>
<th>Conflict-handling style</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid</td>
<td>I try to avoid conflict and negotiations</td>
</tr>
<tr>
<td></td>
<td>German translation: <em>Ich versuche, Konflikte und Verhandlungen zu vermeiden</em></td>
</tr>
<tr>
<td>Oblige</td>
<td>I try to give the other person what they want</td>
</tr>
<tr>
<td></td>
<td>German translation: <em>Ich versuche, der anderen Person das zu geben, was sie will</em></td>
</tr>
<tr>
<td>Compromise</td>
<td>I look to meet the other person halfway on issues</td>
</tr>
<tr>
<td></td>
<td>Not translated</td>
</tr>
<tr>
<td>Integrate</td>
<td>I look for the best outcomes for both of us</td>
</tr>
<tr>
<td></td>
<td>German translation: <em>Ich versuche, das beste Ergebnis für uns beide zu erzielen</em></td>
</tr>
<tr>
<td>Dominate</td>
<td>I try to win my position</td>
</tr>
<tr>
<td></td>
<td>German translation: <em>Ich versuche, meine Meinung durchzusetzen</em></td>
</tr>
</tbody>
</table>

Table I.
Items suggested for use in the CHBWS instrument (English and German translation)
times and each pair of value types twice, providing multiple measures in each style score[1]:

(1) **ROCI-II.** This instrument has 28 items that are measured on a five-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5). Respondents were asked to indicate the degree to which each item reflected their typical behavior in a conflict situation with their peers.

(2) **DUTCH.** This instrument has 20 items that are measured on a five-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5). Respondents were asked to indicate the degree to which each item reflected their typical behavior in a conflict situation with their peers.

**Results**

**Confirmatory factor analysis.** Confirmatory factor analysis (CFA) was used to assess the ROCI-II and DUTCH instruments. The unidimensionality of each subscale was assessed by examining model fit and path estimates. If the model fit was poor (chi-square $p$-value < 0.05; Bagozzi, 1994) or there were items with low path estimates (<0.50) (De Jong *et al.*, 2007) items were iteratively deleted until the model fit and the path estimates were acceptable.

The CFA of the ROCI-II instrument suggested the compromise and integrate sub-scales should be combined as their correlation was high ($r = 0.84$). After combining these items, the suggested decision rules were applied to each sub-scale and items were removed if necessary. For the ROCI-II instrument, four items were used to measure the oblige style ($\alpha = 0.83$) and the dominate style ($\alpha = 0.85$), six items were used to measure the avoid style ($\alpha = 0.86$), and seven items were used to measure the integrate style ($\alpha = 0.87$).

Similarly, an analysis of the DUTCH instrument suggested the compromise and integrate sub-scales should be combined, as the correlation was high ($r = 0.91$). After combining these items, the suggested decision rules were again applied to each sub-scale and items were removed if necessary. For the DUTCH instrument three items were used to measure the avoid style ($\alpha = 0.81$), the oblige style ($\alpha = 0.74$) and the dominate style ($\alpha = 0.75$), while four items were used to measure the integrate style ($\alpha = 0.80$).

**CHBWS scoring.** The multiple binary choices made in the CHBWS task were used to produce a metric score for each style based on the square root of the best-worst ratio. Following Lee *et al.* (2008), the CHBWS style scores were calculated as:

$$
\text{CHBWS score}_j = \frac{1}{S} \sqrt{\sum_{s=1}^{S} \frac{\text{Most}_{v_j}}{\text{Least}_{v_j}}}
$$

where:

- $v_j$ is the CHBWS score for the $j$th style type.
- $\text{Most}_{v_j}$ is the weighted sum of the most preferred score for the $j$th style in a set.
- $\text{Least}_{v_j}$ is the weighted sum of the least preferred score for the $j$th style in a set.

As there were three styles in each set, there were eight or $2^3$ possible combinations (sets) of the styles. One of the sets is empty, so there are seven sets in which a choice must be made. If a person chooses consistently, he/she would choose their most preferred style in every set in which it appears (three times),
the second most preferred style in every set in which it appears but the most preferred style does not (one time), and so on, eventually choosing the least preferred style once. Thus, the value type chosen as most preferred received a score of eight, the value type chosen as the least preferred received a score of one, and the remaining style received a score of four (the remaining choice) (Lee et al., 2008).

- Least \( v_j \) is the weighted sum of the least preferred score for the \( j \)th style in a set. Here, the style chosen as the least preferred received a score of eight, the style chosen as most preferred received a score of one and the style not chosen received a score of four.

To enable ease of comparison with the five-point ROCI-II and DUTCH scales, the CHBWS scores were then converted into a five-point scale using a simple linear transformation.

**Descriptive analysis.** The means and standard deviations for respondents who answered the CHBWS and the traditional ROCI-II and DUTCH instruments are shown in Table II. In each case, the integrate style was the most preferred. Paired mean difference tests show that there was no difference between the second- and third-ranked avoid and dominate styles in the CHBWS (\( p > 0.05 \)), while the oblige style was ranked fourth. In the ROCI-II, the oblige style was ranked second, while there was no significant difference between the third and fourth ranked avoid and dominate styles (\( p > 0.05 \)). In the DUTCH, the dominate style was ranked second, while there was no significant difference between the third and fourth ranked avoid and oblige styles (\( p > 0.05 \)). There was less variation in the ROCI-II and DUTCH data than there was in the CHBWS, as can be seen in their relatively smaller standard deviations.

**Convergent validity of the CHBWS.** As can be seen in Table II, each CHBWS conflict-handling style was positively correlated with the corresponding style in both the ROCI-II (from 0.22 for oblige to 0.51 for avoid) and the DUTCH instruments (from 0.50 for dominate to 0.68 for avoid). Further, none of the CHBWS styles were significantly positively correlated with a non-corresponding style from other instruments, whereas they were in the other instruments (from 0.19 for ROCI-II avoid and DUTCH oblige to 0.33 for ROCI-II oblige and DUTCH integrate). This suggests the CHBWS has convergent validity with previously used scales.

**Structure.** The dual-concerns model (Blake and Mouton, 1964) argues each conflict-handling style is a function of two dimensions, as was shown in Figure 1. As each style is opposed on at least one dimension (resulting in the square shaped pattern), each style should be at least somewhat negatively related to each other style. In the CHBWS all but the oblige-integrate pair (\( r = -0.07 \)) were significantly negatively correlated. In the ROCI-II data, none of the six pairs was significantly negatively correlated, as can be seen in the lower half diagonals of Table II. Further, contrary to the theory, the ROCI-II oblige-avoid (\( r = 0.35, p < 0.001 \)) and integrate-oblige (\( r = 0.37, p < 0.001 \)) styles were significantly positively related. In the DUTCH data, only one pair (dominate-avoid [\( r = -0.36, p < 0.001 \)]) was significantly negatively correlated. In addition, the oblige-avoid (\( r = 0.27, p < 0.05 \)) and integrate-oblige (\( r = 0.37, p < 0.001 \)) styles were significantly positively related, contrary to the theory. These results suggest the CHBWS reproduces the dual-concerns model more accurately than either the ROCI-II or the DUTCH instrument.
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<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
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<th>8</th>
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<tbody>
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<td>CHBWS Avoid</td>
<td>2.76</td>
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<tr>
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<td>DUTCH Avoid</td>
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<td>0.47</td>
<td>-0.04</td>
<td>-0.32</td>
<td>-0.16</td>
<td>0.68</td>
<td>0.23</td>
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<td>3.14</td>
<td>0.69</td>
<td>0.05</td>
<td>0.36</td>
<td>0.11</td>
<td>-0.46</td>
<td>0.19</td>
<td>0.62</td>
<td>0.22</td>
<td>-0.22</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUTCH Integrate</td>
<td>3.78</td>
<td>0.64</td>
<td>-0.02</td>
<td>0.09</td>
<td>0.43</td>
<td>-0.45</td>
<td>-0.01</td>
<td>0.33</td>
<td>0.66</td>
<td>-0.15</td>
<td>-0.03</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>DUTCH Dominate</td>
<td>3.41</td>
<td>0.75</td>
<td>-0.12</td>
<td>-0.30</td>
<td>-0.21</td>
<td>0.57</td>
<td>-0.13</td>
<td>-0.26</td>
<td>-0.02</td>
<td>0.50</td>
<td>-0.11</td>
<td>-0.36</td>
<td>-0.15</td>
</tr>
</tbody>
</table>

**Notes:** Means for the CHBWS, ROCI-II and DUTCH scales can range from 1 to 5; correlations between |0.17| and |0.27| inclusive are significant at the \(p < 0.05\) level; correlations |0.28| or greater are significant at the \(p < 0.01\) level; those in italic indicate the correlation between the same style across measures; Different superscripts in the means column represent significantly different means; the means of each instrument were assessed separately.
Multidimensional unfolding (MDU) analysis was used to further investigate the structure of the data. MDU was used as there were only four objects being examined and other multidimensional scaling approaches can be unstable with such a small number of objects (Kruskal and Wish, 1978; Fitzgerald and Hubert, 1987). The alternating least squares algorithm (ALSCAL) contained in SPSS was used and the stress 2 measure was examined to ensure the outcome was not a degenerate solution. The analysis suggested a two-dimensional configuration was sufficient to illustrate conflict-handling preferences in each case.

The maps obtained are shown in Figure 2, where larger distances between styles indicate greater discrimination. Each instrument re-created the general pattern of conflict-handling styles that was predicted by the dual-concerns theory although, in each Figure, the integrate and the oblige styles were closer together than the theory suggested. In the ROCI-II and the Dutch cases, both the integrate and the oblige styles were out of place, whereas, in the CHBWS map, the integrate style was in its correct location and the oblige style was more distinct than it was in the other two instruments. The CHBWS seems to discriminate between these two styles better than either of the ratings scale instruments.

![Figure 2. Study 1 conflict-handling preference proximity maps (Canada)](image)
In summary, the CHBWS had convergent validity when compared with the established ROCI-II and DUTCH scales. In addition, the CHBWS was able to reproduce the theoretical structure at least as well, if not better, than the ROCI-II and DUTCH instruments in this sample.

**Study 2**

Study 2 had two aims. The first was to assess the structure of conflict-handling styles produced by the CHBWS in a different student sample from another country (the US). The second aim was to assess the predictive validity of the CHBWS by examining the relationship between the conflict-handling styles produced by the CHBWS instrument and service failure complaint behavior. In this study, self-report consumer complaint behaviors were examined using two scenarios adapted from prior research undertaken by Maute and Forrester (1993) and Schoefer and Ennew (2005).

**Consumer complaint behavior and conflict-handling styles’ relationship**

Consumer complaint behavior can be defined as “responses triggered by perceived dissatisfaction which is neither psychologically accepted nor quickly forgotten with consumption of a product or service” (Phau and Sari, 2004, p. 407). Dissatisfaction is a negative disconfirmation between expected performance and perceptions of the actual performance rendered (Oliver and Swan, 1989). Complaining behavior has been related to several individual differences, including age (e.g. Bearden and Mason, 1984), attitude towards complaining (e.g. Blodgett et al., 1995; Richins, 1981), personal values (e.g. Rogers and Williams, 1990), and personality (e.g. Bearden and Mason, 1984; Harris and Mowen, 2001).

One of the personality traits most often linked to complaint behavior is extraversion, as extraverts are seen as more likely to engage in some form of complaining (Harris and Mowen, 2001; Richins, 1983). For instance, Harris and Mowen (2001) found extraversion was positively related to people taking legal action after purchasing a lemon car. Extraversion is also seen as an antecedent to conflict-handling styles (Antonioni, 1998; Ma, 2005; Wood and Bell, 2008). Antonioni (1998) found extraversion was positively related to students taking an integrate or dominate style and senior managers taking an integrate style, but negatively related to students taking an avoid style. Similarly, Ma (2005) found extraversion was positively related to people taking an integrate or dominate style and negatively related to people taking an avoid style in a consumer bargaining context.

As complaining behavior is an outcome of conflict, it should be related to peoples’ conflict-handling style preference, particularly if the action behind the complaint is important. Consequently, it was expected that preference for the two styles related to extraversion and high concern for self would be positively related to active complaining behaviors (the dominate style and, to a lesser extent, the integrate style). The dominate style is characterized by putting one’s own concerns above others, whereas the integrate style is characterized by attempts to satisfy each party. Thus, peoples’ active complaining, such as arguing with the provider and giving negative word-of-mouth, would be seen as a necessary step toward obtaining satisfaction. Conversely, a preference for the two conflict-handling styles related to a low concern for self (oblige and avoid) should lead to less complaining. Thus, it can be suggested:
A preference for the dominate style will be more strongly positively associated with active complaining behaviors than preference for: (a) the oblige style or (b) the avoid style.

A preference for the integrate style will be more strongly positively associated with active complaining behaviors than for: (a) the oblige style or (b) the avoid style.

A preference for the avoid style will be more strongly positively associated with avoiding complaining behaviors than for: (a) the dominate style or (b) the integrate style.

A preference for the oblige style will be more strongly positively associated with avoiding complaining behaviors than for: (a) the dominate style or (b) the integrate style.

In addition, it was also expected that the response of a service provider to a potential conflict situation would influence the perception of conflict. That is, situations in which a service provider responded adequately to a failure would not be considered a conflict situation and, as such, there would be little or no relationship with conflict-handling styles. To capture this, two conditions were represented:

1. where there was no attempt to make amends or to recover from a service failure (a clear conflict situation); and
2. where the provider adequately attempted to recover from the failure.

It was expected the hypotheses would not hold in situations in which a provider had successfully recovered from a service failure.

Participants and procedure
The sample consisted of 182 undergraduate students at a US university. A total of 154 completed questionnaires were obtained using an online survey, providing a response rate of 85 percent. The final sample included 104 females and 50 males, aged between 17 and 49 years ($M = 20.6; SD = 3.8$).

As in study 1, respondents were recruited from undergraduate psychology classes and given course credit for completing the survey. In-class announcements were made to inform students of the survey, followed up by an e-mail with a link to the study website. Respondents were randomly allocated to one of four online surveys, using a 2 (scenario: service recovery or service failure) by 2 (order: CHBWS first or CHBWS last) design. A total of 80 responses were obtained for the service failure scenario and 74 responses were obtained for the service recovery scenario. Each survey presented the conflict-handling style questions before the scenarios and included manipulation check questions and some background questions (e.g. gender and age).

Measures
Conflict-handling style. The CHBWS instrument, the only conflict-handling instrument used in this study, was measured in the same way as in study 1.

Complaint behavior. Respondents were randomly presented with one of two service failure scenarios (a last minute flight cancellation, as can be seen in Appendix 2) that were adapted from Maute and Forrester’s (1993) and Schoefer and Ennew’s (2005)
In one scenario, the service provider quickly and courteously solved the service failure, whereas in the other, the service provider was rude and dismissive. Respondents were asked how likely they were to undertake a set of complaining behaviors as a result of the failure using a five-point Likert-type scale ranging from very unlikely (1) to very likely (5). Two behaviors were taken from Maute and Forrester’s (1993) service failure behavior scale to represent:

- **Negative word-of-mouth (NWOM):** (e.g. “make negative comments about the airline to other people nearby”; “tell your friends not to fly with ABC Airlines”).
- **Argument:** (e.g. “communicate the reasons for your dissatisfaction to the airline employee”; “argue with the airline employee”).
- **Avoidant behavior:** (e.g. “be upset, but not respond in any way”; “wait and hope that things improved”).

Three items were used as manipulation checks to see whether the two scenarios were perceived as having different levels of service failure or recovery. As expected, the service recovery scenario had significantly higher means for the positive manipulation checks than did the service failure scenario (e.g. “how well did the employee handle the situation?” on a scale of not at all well (1) to very well (5) (M = 4.42 vs 1.59; t = 20.73; p < 0.001) and “how helpful was the employee?” on a scale of not at all helpful (1) to very helpful (5) (M = 4.09 vs 1.58; t = 18.40; p < 0.001). Also, as expected, the service recovery scenario had a significantly lower mean than did the service failure scenario for the negative manipulation check (“how dissatisfied would you be in that situation?”) on a scale that ranged from not at all dissatisfied (1) to very dissatisfied (5) (M = 2.65 vs 4.40; t = -10.27; p < 0.001). Thus, the two scenarios differed significantly in terms of their level of service failure or recovery, as was expected.

**Results**

**Descriptive analysis.** The means and standard deviations for the CHBWS instrument are shown in Table III. The integrate style was the most preferred. Paired mean difference tests show there was no significant difference between the second and third ranked avoid and dominate styles (p > 0.05) or between the dominate style and the fourth ranked oblige style (p > 0.05).

**Structure.** As in study 1, all of the correlations were negative and there were significant negative correlations for five of the six style pairs, the exception was the oblige-integrate pair (r = -0.09, ns). Following the procedures outlined in study 1, a MDU analysis was also used to investigate the styles’ structure and a two-dimensional configuration was found to be sufficient (σ2 = 0.046). As can be seen in Figure 3, the CHBWS re-created the general pattern of conflict-handling styles predicted by the dual-concerns model. Although the map was similar to the map obtained study 1, the integrate and oblige styles were closer than suggested by the theory.

**Predictive validity (complaint behaviors)**

The relationships between the CHBWS styles and complaining behavior in response to the service failure scenarios, where there was a clear conflict situation, were examined first. As can be seen in Table III, the significant correlations were in the expected direction for the dominate, avoid and oblige style preferences, but were not significant for the integrate style preference.
In order to test the difference between the correlations, Steiger’s (1980) $Z$ was calculated and compared against the critical Steiger’s $Z$-statistic (one-tailed). Support was found for all of the hypotheses contrasting the dominate, avoid, and oblige styles ($H1a$ and $H1b$, $H3a$, $H4a$), but only partial support was found for those hypotheses contrasting the integrate style ($H2a$ and $H2b$, $H3b$, $H4b$). Supporting $H1a$ and $H1b$, the dominate style was more strongly positively related to arguing ($r = 0.27$) and NWOM ($r = 0.33$) than was the oblige style ($r = -0.14$; Steiger’s $Z_{(77)} = 2.09$, $p < 0.05$; $r = -0.26$; Steiger’s $Z_{(77)} = 3.04$, $p < 0.01$, respectively) or the avoid style ($r = -0.26$; Steiger’s $Z_{(77)} = 3.04$, $p < 0.01$; $r = 0.01$; Steiger’s $Z_{(77)} = 1.87$, $p < 0.05$, respectively). Supporting $H3a$, the avoidance of complaining behavior correlation with the avoid style ($r = 0.23$) was significantly greater than with the dominate style ($r = -0.36$; Steiger’s $Z_{(77)} = 3.41$, $p < 0.01$). Supporting $H4a$, the avoidance of complaining behavior correlation with the oblige style ($r = 0.25$) was significantly greater than with the dominate style ($r = -0.36$; Steiger’s $Z_{(77)} = 3.15$, $p < 0.01$).
In contrast, only one of the four contrasts with the integrate style was significant and another partially significant. Supporting H4b, the avoidance of complaining behavior correlation with the oblige style \( (r = 0.25) \) was significantly greater than with the integrate style \( (r = 0.07; \text{Steiger's } Z_{(77)} = 2.04; p < 0.05) \). Partially supporting H2b, the arguing complaining behavior correlation \( (r = 0.11) \), but not the NWOM correlation \( (r = -0.13) \), with the integrate style was significantly greater than the avoid style \( (r = -0.26; \text{Steiger's } Z_{(77)} = 1.90, p < 0.05; r = 0.01; \text{Steiger's } Z_{(77)} = -0.72, \text{ns}) \).

Con contradicting H3b, the avoidance of complaining behavior correlation with the avoid style \( (r = 0.23) \) was not significantly greater than with the integrate style \( (r = -0.07; \text{Steiger's } Z_{(77)} = 1.53, \text{ns}) \).

As expected, the hypotheses were not supported in situations in which the service failure was recovered. Table III shows that none of the correlations were significant in this context. This suggests an appropriately recovered service failure does not activate peoples' preferred conflict-handling style when they consider complaining behavior.

In summary, the CHBWS was able to reproduce the theoretical structure of the Dual-Concerns model in this sample, as it did in study 1. The predictive validity of the CHBWS was also supported as there were significant relationships between conflict-handling styles and service failure complaint behavior, although the results obtained for the integrate style were inconsistent.

**Study 3**

The third study had two aims. The first was designed to assess the generalizability of the CHBWS to an adult non-student sample from two different countries (Australia and Germany). The second was to examine the external validity of CHBWS in this wider context by examining the relationship between conflict-handling styles and personal values, which is an antecedent to style preference (Morris et al., 1998).

**Personal values as an antecedent to conflict styles**

Values are “enduring beliefs that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state” (Rokeach, 1973, p. 5). They are desirable trans-situational goals that serve as guiding principles in peoples’ lives (Schwartz, 1992). Values are stable in adults and motivate peoples’ behavior (e.g. Rokeach, 1973; Schwartz, 1992). The link between values and both attitudes and behavior has been the focus of a large body of research across many different disciplines such as psychology (e.g. Bardi and Schwartz, 2003; Sagiv and Schwartz, 1995) and conflict management (e.g. Bond et al., 2004; Kozan and Ergin, 1999).

Schwartz (1992) argued that two pairs of conflicting higher order motivational dimensions underlie the structure of values. He termed the first dimension openness to change – conservation, as it encompassed the conflict between being motivated by “intellectual and emotional interests in unpredictable and uncertain directions” versus the preservation of “the status quo and the certainty it provides in relationships with close others, institutions and traditions” (Schwartz, 1992, p. 43). He called the second dimension self-enhancement – self-transcendence, as it encompassed the conflict between being motivated by concern for the consequences of actions for the self and concern for the consequences of actions in the social context. Ten value types are located along these dimensions in a quasi-circular structure that suggests congruency between adjacent value types and conflict between opposite value types. The various
relationships between value types have been confirmed in more than 100 studies undertaken in more than 50 countries (e.g. Schwartz, 1992, 1994; Schwartz and Sagiv, 1995). Thus, when a higher importance is placed on personal outcomes (e.g. achievement and power) different decisions are likely to be made than when a higher importance is placed on social or ingroup outcomes (e.g. benevolence and conformity).

Conflict-handling styles are likely to be related to the self-enhancement – self-transcendence dimension, rather than the openness to change – conservation dimension. People who place a high importance on self-enhancement are motivated by individual outcomes that underlie power, achievement, and elements of hedonism (Schwartz, 1992). Specifically, power relates to a desire for social status, control, and dominance of people and resources, which indicate a high concern for self and low concern for others. Similarly, achievement relates to the desire for personal success, indicating a high concern for self. Hedonism relates to enjoying life to the fullest, which again indicates a high concern for self. This suggests a congruence between self-enhancement and the dominate style, a relationship supported in previous research (Bilsky and Jehn, 2002; Bond et al., 2004). Consequently, it was hypothesized that:

H5. A preference for the dominate style (high concern for self, low concern for others) will be: (a) positively related to the self-enhancement dimension, and (b) negatively related to the opposite self-transcendence dimension of the motivational structure of personal values.

Conversely, self-transcendence includes benevolence and universalism values. Benevolence is the preservation and enhancement of the interest and well-being of those with whom we have close contact, which indicates high concern for others. Similarly, universalism is concerned with an understanding and enhancement of the state of being for all people, which indicates concern for both others and the self. Indeed, prior research has found that self-transcendence values were positively related to the integrate style of handling conflict (Bilsky and Jehn, 2002). Consequently, it was hypothesized that:

H6. A preference for the integrate style (high concern for self, high concern for others) will be: (a) positively related to the self-transcendence dimension, and (b) negatively related to the opposite self-enhancement dimension of the motivational structure of personal values.

Participants and procedures
The data for study 3 were collected over the internet by a commercial panel provider with members in Australia and Germany. A limit of 200 completed surveys was set for each country due to financial constraints, as the panel provider charges a fee for each respondent. Panel members were recruited by e-mail and paid by the panel provider in “points” that can be used toward online purchases.

The sample was drawn to reflect the age and gender composition of the adult population (ranging from 18 to 60 years old) in each country. All respondents were required to be permanent residents of Australia or Germany. The sample in Australia ($n = 204$) included 113 females and 91 males, whereas the sample in Germany ($n = 214$) included 107 females and 107 males. The age of the respondents in Australia ranged from 18 to 59 years, with a mean of 39.9 years (SD = 11.2), whereas respondents in Germany ranged in age from 18 to 59 years, with a mean of 39.7 years (SD = 10.7).
The data were collected as part of a larger study that included questions about consumer bargaining, prior to the focal questions for this study. The CHBWS was presented before the values questions, which were also measured in a best-worst format (Lee et al., 2008), and the background questions. The questionnaire was initially drafted in English and translated into German following the translation-back-translation method recommended by Brislin (1970), except for the values items, for which the translation was taken from previously translated versions of the Schwartz Values Survey sent to the researchers by Shalom Schwartz.

Measures

Conflict-handling style. The CHBWS instrument, the only conflict-handling instrument used in this study, was measured in the same way as in studies 1 and 2.

Personal values. Schwartz’s (1992) personal values were measured using Lee and et al.’s (2008) Schwartz values best-worst scale (SVBWS) instrument. This BWS task has been shown to reproduce the values structure proposed by Schwartz (1992). It includes 11 sets of six value statements derived from a balanced incomplete block design. Following Lee et al. (2008), the square root of the best-worst ratio was calculated to give trade-off scores that do not require ipsatization.

Results and discussion

Descriptive analysis. The means and standard deviations for the 204 Australian and 214 German respondents are shown in Table IV. As in studies 1 and 2, the integrate style was the most preferred in both countries. The Australian and German samples did not have significant differences in the means of the conflict-handling styles, which had the same rank order.

Structure. The structural results were very similar to those found in study 1 and study 2. As can be seen in Table IV, all of the correlations were negative once again and all but the Australian integrate-oblige pair \((r = -0.03, \text{ ns})\) were significantly negatively correlated. As in the previous studies, MDU analyses were used to assess the structure in each country. A two-dimensional configuration was again sufficient to illustrate conflict-handling preferences in each country \((\alpha_2 = 0.04 \text{ for Australia and } \alpha_2 = 0.03 \text{ for Germany})\). As can be seen in Figure 4, the CHBWS reproduced the structure of the dual-concerns model, although, as in study 1 and study 2, the integrate and oblige styles were closer than the theory suggested.

Predictive validity. As can be seen in Table V, \(H5a\) was supported in both countries. The dominate style was significantly positively related to self-enhancement in both Australia \((r = 0.22, p < 0.01)\) and Germany \((r = 0.31, p < 0.01)\).
However, \( H5b \) was not supported in either country, although the dominate style was negatively related to self-transcendence in Australia (\( r = -0.13, \text{ns} \)) and Germany (\( r = -0.13, \text{ns} \)). Table V also suggests \( H6a \) and \( H6b \) were supported in each country. The integrate style was significantly positively related to self-transcendence in both Australia (\( r = 0.19 \)) and Germany (\( r = 0.24 \)) and significantly negatively related to self-transcendence in Australia (\( r = -0.19 \)) and Germany (\( r = -0.21 \)) (all significant at \( p < 0.01 \)).

In addition, only three of the 24 unexpected relationships were significant. The relationship between the integrate style and openness to change was positive in the Australian sample (\( r = 0.16 \)); the relationship between the dominate style and conservation was negative in the German sample (\( r = -0.14 \); and the relationship between the avoid style and conservation was positive in the German sample (\( r = 0.16 \)) (all significant at \( p < 0.05 \)). This suggests the relationships between the CHBWS and Schwartz’s higher order value dimensions are strong and, generally, as expected.

In summary, the CHBWS was able to reproduce the theoretical structure of the dual-concerns model in adult consumer samples in Australia and Germany. The external validity of the CHBWS in these samples was also supported as expected relationships between conflict-handling styles and Schwartz’s higher order value dimensions as an antecedent to conflict-handling style preference were found.
General discussion
If conflict-handling styles are to be studied in management or general populations, appropriate instruments are needed. Several instruments have been developed to do this. However, each suffers from weaknesses, such as response bias and high correlations between what should be conflicting styles for rating scales and inefficient design and ordinal characteristics for paired comparisons. These problems are overcome by the use of best-worst scaling, which uses an efficient design to produce scores that have metric characteristics and produce the expected pattern of correlations, without standardization. Further, best-worst tasks generally take less time for respondents to complete than other approaches and can be useful in cross-cultural contexts as they prevent scale use bias from impacting the data (Lee et al., 2008).

The current research demonstrated that the CHBWS, which has convergent validity with two previously developed conflict-handling instruments, better re-created the theorized structure of the dual-concerns model (Blake and Mouton, 1964). Further, the CHBWS predicted relationships with both antecedent (personal values) and outcome (complaining behavior) variables, suggesting it fitted well within its nomological net.

In all three studies, multidimensional unfolding (MDU) analysis found a two-dimensional map of conflict-handling styles was relevant. In study 1, the CHBWS reproduced the structure suggested by the dual-concerns model more clearly than either the ROCI-II or the DUTCH instruments. Similarly, the MDU analyses undertaken in studies 2 and 3 produced similar, although more triangular structures, that were similar to the avoid – dominate – integrate structure suggested by Oetzel et al. (2000) and Oetzel and Ting-Toomey (2003). Overall, the structure found was similar to previous multidimensional scaling analyses (e.g. De Dreu et al., 2001).

The current research suggests the depiction of the dual-concerns model in which the compromise style occupies the center of the grid does not accurately reflect its relationship with the integrate style. The CFA undertaken in study 1 suggested that, at least in this non-expert student sample, the compromise and integrate styles could not be distinguished using either the ROCI-II or the DUTCH instruments. As was discussed in the literature review, while a five-factor structure has been found (e.g. De Dreu et al., 2001; Rahim and Magner, 1995), four-factors are often found, or simply used, because of a lack of practical distinction between the compromise and integrate styles (e.g. Cann et al. 2008; Cai and Fink, 2002; Rahim et al., 2001).

The current research is the first we are aware of to relate conflict-handling styles to consumer complaining behaviors. This is a valuable contribution to the literature as complaint behavior is an often researched field in marketing and, as complaining is an outcome of conflict, it makes intuitive and theoretical sense to examine conflict-handling styles as its antecedent. Here, people who preferred conflict-handling styles that had a low concern for self (avoid and oblige) tended to avoid complaint behavior. The opposite was also partially true, as people who preferred a dominate, but not an integrate, conflict-handling style tended to complain. It seems the higher level of concern for other reflected in the integrate style may interact with the high concern for self to reduce the drive to complain.

The CHBWS was also related to self-reported Schwartz (1992) personal values. While this relationship has been researched previously (e.g. Bond et al., 2004; Bilsky and Jehn, 2002; Kozan and Ergin, 1999; Morris et al., 1998), the current research is
unique as it used BWS to capture the trade-offs in Schwartz’s values and in
conflict-handling styles. As was noted by Kozan and Ergin (1999), Schwartz’s values
often have significant positive correlations between opposing values, but the SVBWS
does not (Lee et al., 2008). As was expected, the integrate conflict style was positively
related to self-transcendence and negatively related to self-enhancement, while the
dominate style resulted in the opposite relationships. The stark difference between the
relationships of the integrate and dominate styles and these values offers some support
for our conjecture that concern for others may be more important than concern for self
when those preferring an integrate style are subjected to a service failure.

Limitations and future research
As with all research, there are limitations within this series of studies. First, the studies
were conducted online. Although this does offer advantages, such as enforcing
instructions and reducing missing data, the CHBWS should be tested with traditional
data collection methods, such as pencil-and-paper and telephone interviews. Second,
the BWS method is a single-item, multiple-response method, while ratings scales are
often multiple-item, single-response methods, which means reliability coefficients are
not appropriate. However, as Bergkvist and Rossiter (2007) pointed out, a measure of
reliability is not necessary if predictive validity can be demonstrated, provided the
measure is concrete and represents the construct being measured. Third, although the
correlations between the CHBWS and complaining behaviors were generally
statistically significant, the correlations were not high, with most weaker than
0.35. It would be useful to examine these behaviors in a real-world setting, or by using
recalled recent incidents rather than through the use of scenarios. Fourth, we assumed
that each of the scales in the current study measured the personality-based enduring
disposition of the respondents’ conflict-handling style. However, it is possible these
measures also reflected some situational differences, with some measures asking about
a negotiation or conflict resolution situation and others asking about a conflict
situation with their peers. Future research should examine the extent of situational
variation in conflict-handling styles. Fifth, although the CHBWS performed well when
compared with two commonly used Likert-type scale instruments, survey time
constraints did not provide an opportunity to investigate its convergent validity with a
paired-comparison instrument (e.g. the MODE (Thomas and Kilmann, 1974)).
According to the authors’ website (www.cpp.com/detail/detailprod.asp?pc = 62), the
MODE takes an average 15 minutes to complete, which was more than the time
allocated for any of the three online surveys. Future research should investigate the
convergent validity of the CHBWS with the MODE instrument. Finally, the data
reported in these studies were obtained from respondents in similar cultures. It would
be useful to test the CHBWS approach in a variety of cultures, as problems with rating
scales are exacerbated in cross-cultural research contexts, particularly as people in
different countries often use different parts of ratings scales (Baumgartner and
Steenkamp, 2001) and may have different conflict-handling styles (Posthuma, 2005).
From a cross-cultural point-of-view, it is important that the wording of the items
capture the underlying meaning of each of the conflict-handling styles, rather than
relying on exact lexical translation. Differences in meanings can be captured by using
the translation-back-translation technique proposed by Brislin (1970). As was done in
Study 3, any discrepancies can then be discussed and resolved with the translators.
Note
1. A more formal discussion of BWS, including formal proofs of the measurement properties associated with different cognitive processes that respondents might use to make best and worst choices, was provided by Marley and Louviere (2005).

References


**Appendix 1. Conflict best-worst scaling instrument**

In this section we will ask you to pick which of the following are the best and worst descriptions of you personally when in a situation that requires negotiation or conflict resolution with your peers.

While more than one may be accurate please choose the best and worst description of you.

In total there are four different sets. Even though some sets may seem similar please answer all sets (Figure A1).

**Appendix 2. Service recovery/failure scenarios**

[Introduction to scenarios]

Imagine that it is the end of the semester. To celebrate, you and your best friend have booked a last minute trip to Mexico with ABC Airlines. It will be your first time there. Upon arrival at the airport you notice considerable confusion at the ABC Airlines check-in counter.

[Service recovery scenario]

When you reached the counter, an ABC Airlines employee apologized for the inconvenience. The employee explained that the airline’s computer system had malfunctioned and that your flight had to be cancelled. After describing the steps that the airline was taking to correct the problem, the employee gave you a meal and taxi voucher and offered to book a seat for you on the same flight the next day as soon as the computer problem was fixed.
After almost 20 minutes, when you were finally able to speak with an airline employee, you were informed that your flight had been cancelled. The employee did not apologize for the cancellation and told you that he was too busy to explain the nature of the problem to every single passenger. He advised you that it was against the airline's policy to compensate passengers for cancelled flights.
flights and suggested that you call back later to determine if the problem had been resolved and to book a seat on the next available flight.

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