

Studying Ethical Judgments and Behavioral Intentions Using Structural Equations: Evidence from the Multidimensional Ethics Scale★

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ABSTRACT. The linkage between ethical judgment and ethical behavioral intention was investigated. The Multidimensional Ethics Scale (MES) was used to measure ethical judgment ratings of hypothetical behaviors in retail, sales, and automobile repair scenarios. Confirmatory factor analysis on a sample of 300 undergraduate business students showed that a model with three latent variables representing three correlated ethical dimensions of moral equity, relativism, and contractualism, three

correlated scenario latent variables, and correlated residuals presented a good fit to the data. Further, structural models of the relationship of ethical judgment to behavioral intentions revealed that behavioral intentions were more highly related to the scenario factors than to the ethical dimensions across three scenarios. Adding a method factor to the model improved goodness-of-fit and changed some structural model conclusions.

KEY WORDS: ethical judgment, confirmatory factor analysis, structural equation models

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Introduction

One result of the recent wave of corporate scandals in corporate America, as well as the successful government prosecution thereof has been an increased interest in business ethics and its implication for ethical decision-making processes. Most ethical decision-making models (e.g., Jones, 1991; Rest, 1986) show ethical judgment as the central step in a multistep ethical decision-making process. For example, in Jones' (1991) well-known model of ethical decision making based on Rest's (1986) classic work of moral reasoning, ethical judgment is the central component and direct antecedent of ethical behavioral intentions.

In Jones' (1991) model (see Figure 1), the ethical decision-making process starts with environmental factors, such as culture, organization, and society, where ethical issues emerge. Being aware that an issue has some ethical implication is the first critical step of *ethical awareness* (Box 1 in Figure 1). An ethical issue is defined as one "where a person's actions, if performed freely, may harm or benefit others" (Jones, 1991,

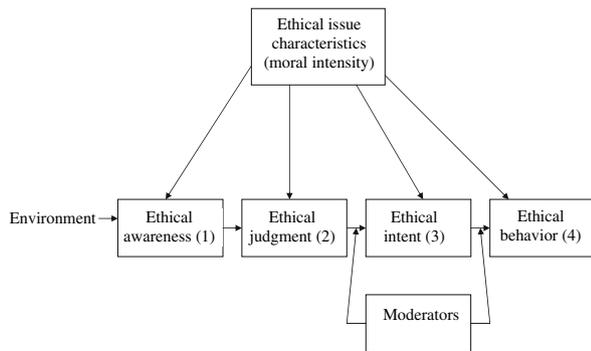


Figure 1. Jones (1991) ethical decision-making model.

p. 367). Once such an ethical issue is recognized, the next step is to form an ethical judgment (Box 2 in Figure 1) wherein the decision maker needs to evaluate the ethicality of the action or actions in response to an ethical issue. *Ethical judgment* is defined as a cognitive process in which an individual is to “judge which course of action is morally right” (Trevino, 1992, p. 445). In the next step, an intention (Box 3 in Figure 1) is established regarding which action to take. *Ethical intention* is defined as giving priority to what is morally right over other consideration. Finally, ethical behavior is the last step in the decision-making process, wherein the decision maker engages in the chosen behavior (Box 4 in Figure 1). An *ethical behavior* is defined as one that is both “legal and morally acceptable to the larger community,” whereas an unethical behavior is defined as one that is both “illegal and morally unacceptable to the larger community” (Jones, 1991, p. 367).

The model includes moderators, such as individual characteristics like values, personality, and locus of control (Ferrell and Gresham, 1985; Trevino, 1986), significant others (Ferrell and Gresham, 1985), opportunity (Ferrell and Gresham, 1985), and situational characteristics, such as organizational culture (Trevino, 1986). Note that in this article, the terms “moral” and “ethical” are used interchangeably.

Based on Jones (1991) model, the measurement of ethical judgment (Box 2) is critically important if we are to have a valid decision-making model in behavioral ethics. A prominent instrument for the measurement of such judgments is the Multidimensional Ethics Scale (MES). Reidenbach and Robin (1990) developed this scale based on the assumption that ethical judgment is a multidimensional construct such that the ethicality of an issue

is a function of the philosophy to which it is applied. Reidenbach and Robin (1990) first constructed the MES with 30 items tapping five popular philosophies: egoism, utilitarianism, justice, relativism, and deontology. *Egoism* refers to acting in a manner that only promotes one’s long-term self-interests. For example, not firing the weakest performer in your work group is deemed ethical according to egoism if retaining that weak employee promotes the manager’s long-term interest (because that employee happens to be the son or daughter of a member of the Board of Directors). *Utilitarianism* refers to an action based on cost and benefit analyses, such that the action will bring about the greatest good for the greatest number. For example, firing the weakest performer in your work group is deemed ethical according to utilitarianism if the benefit of increasing employee productivity outweighs its cost (e.g., interruption of work flow). *Justice* refers to an action based on Aristotelian principles of fairness in treating equals equally (Reidenbach and Robin, 1988). Therefore, firing the weakest performer may be deemed unethical if the employee has more tenure with the organization than others. *Relativism* refers to an action based on guidelines/parameters embedded in the social/cultural system, rather than individual considerations. Therefore, firing the weakest performer in your work group may be deemed unethical if the employee is significantly older than you – the manager – as the firing decision goes against the value of respecting the elders in your culture. *Deontology* involves acting in compliance with universal ethical rules. Referring to the above example, firing the weakest performer may be deemed ethical according to deontological views if performance-based termination is the rule.

Through exploratory factor analysis, the original 30-item pool was distilled and revised to contain eight items tapping three dimensions of ethics, i.e., broad-based moral equity, relativism, and contractualism (Reidenbach and Robin, 1990). The *moral equity* dimension refers to individual perception of fairness and justice as well as what is right and wrong in its broadest sense. Four items measure this dimension; reflecting a combination of three philosophies: (a) justice (fair, just); (b) relativism (acceptable to my family); and (c) deontology (morally right). The *relativism* dimension refers to the

perception of what is right versus wrong based on guidelines embedded in the social/cultural system, rather than individual considerations. Two items represent this dimension (culturally acceptable and traditionally acceptable). The *contractualism* dimension refers to individual perception of what is right versus wrong based on notions of an implied contract that exists between business and society, reflecting deontological concepts. Items originally created to measure *utilitarianism* and *egoism* were dropped due to the lack of differentiation from other items tapping other moral philosophies in the exploratory factor analysis (Reidenbach and Robin, 1990).

Most subsequent studies of the factor structure of the MES have relied on exploratory factor analyses (e.g., Clark and Dawson, 1996; Flory et al., 1992; Loo, 2004; Robin et al., 1996b). One problem associated with certain types of exploratory factor (EFA) analyses has been identified in the literature. In conducting a principal component analysis within an EFA, the assumption of no measurement errors has to be made, which may not be true in self-report research (McMahon and Harvey, 2007). Another weakness of the use of exploratory factor analysis is its inability to identify models with complex factor structures, such as those associated with common method bias, for example, in which indicators load not only on substantive constructs, but also on method constructs. To test models involving such complex structures, confirmatory factor analytic techniques are required.

In addition to the problems of exploratory factor analyses in previous studies, previous research validating the MES only examined the MES at the within-scenario, not between-scenario level. As McMahon and Harvey (2007) stated, a between-scenario examination of the MES will prove more useful in determining whether and to what extent the dimensionality of the MES varies across situations (McMahon and Harvey, 2007). In one study in which a confirmatory factor analysis (CFA) was used (Robin et al., 1996a), the CFA approach was not described in detail because it was not a central focus of the study, with the result that the dimensionality of the MES was not fully addressed.

In a recent study, the first one to examine the psychometric properties of the MES via a series of confirmatory factor analyses (CFA), McMahon and Harvey (2007) found weak support for the three

originally proposed ethics dimensions. However, in their best-fitted model using item-level scores they found goodness of fit statistics, such as the Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI) to be in the range 0.47–0.72; much lower than acceptable standards. It is not possible to discern in their study whether the lack of model fit was due to unmodeled factor dimensionality or other unmodeled item covariances. Only their aggregated data model in which item level scores were collapsed to form subscale scores showed acceptable goodness of fit statistics. However, parceling or aggregating items to simplify the CFA in order to increase the fit statistics as suggested elsewhere in the literature (e.g., Meade and Kroustalis, 2006) might obscure the contribution of each item to explaining the variance in ethical judgment.

The purpose of the present study was twofold. First, we wanted to replicate the factor structure of the multidimensional ethics scale (MES) – 8-item version (Reidenbach and Robin, 1990) using a confirmatory factor analysis (CFA) approach similar to that reported in McMahon and Harvey's (2007) study. This is important because McMahon and Harvey recommended replacing the MES-8 item with their proposed MES-10 item. Before discarding a well-established scale, it is necessary to have multiple studies showing the same lack of confirmatory factor structure. Second, via a structural equation model we wanted to extend McMahon and Harvey's (2007) study by examining the extent to which the MES-8-item version predicts ethical behavioral intention. In other words, we investigated the criterion related validity of the MES-8-item version (Box 2 and Box 3 linkage in Figure 1). Given that most previous studies examined the linkage between ethical judgment (Box 2) and ethical behavior (Box 4) bypassing ethical behavioral intentions (Jones, 1991); our study was intended to fill a gap in the literature on behavioral ethics.

Measurement model

The measurement model we investigated is presented in Figure 2. The model was applied to responses to 24 judgments – eight from each of three scenarios. The scenarios depicted possibly unethical behavior in sales, auto, and retail situations. In the

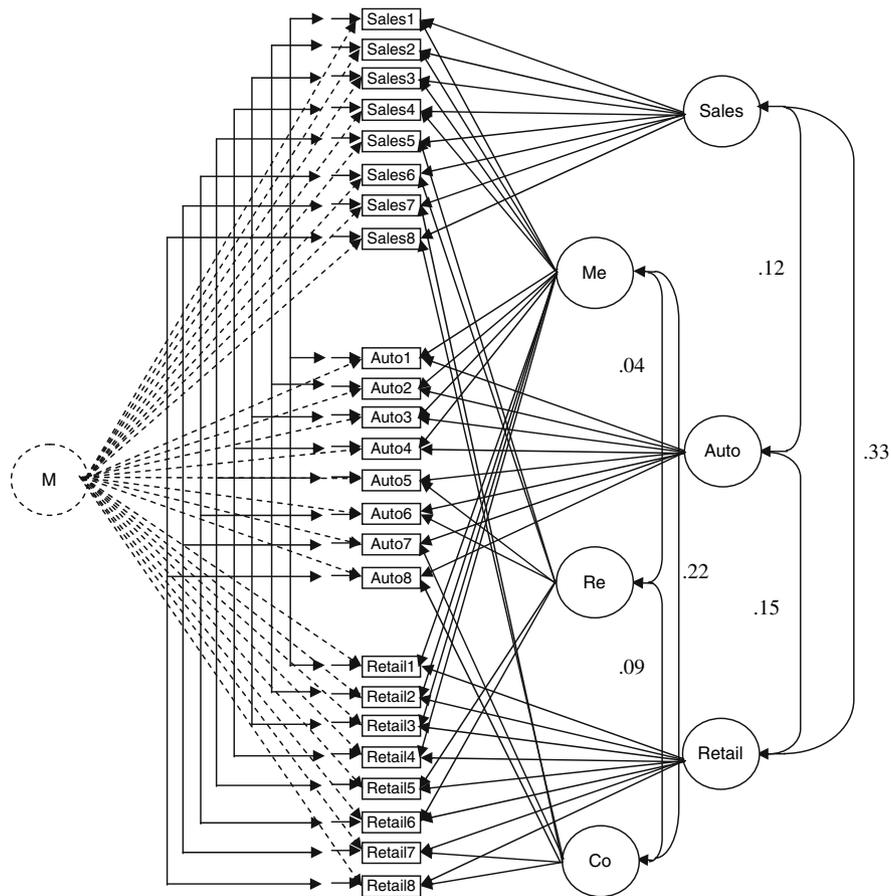


Figure 2. MES measurement model with three dimension, three scenario factors, and residuals of identical items allowed to correlate. Values of correlations between latent variables are shown in the figure.

model, individual responses serve as indicators of three latent variables representing moral equity, relativism, and contractualism ethics. Four indicators from each scenario indicated moral equity, two from each scenario indicated relativism, and two indicated contractualism. Some ethics scholars argued that a conscious application of different moral philosophies would lead to similar ethical judgment (e.g., DeGeorge, 2006); we allowed the three ethicality latent variables to be correlated to account for their shared variance.

The various items used to measure ethical judgment in the MES may have shared variance over and above what might be explained by the dimensions proposed by the scale developers, Reindenbach and Robin. Specifically, the factor structure of the MES may be misrepresented unless the differences in response tendencies specific to scenario are accounted for. To this end, three scenario latent

variables were included in the model – one indicated by the eight responses to the sales scenario, one by the eight responses to the auto scenario, and one by the eight responses to the retail scenario. While scenario latent variables were allowed to correlate, the scenario latent variables were estimated as orthogonal to the ethicality latent variables. It is important to assume that the scenario latent variables to be uncorrelated (orthogonal) with the substantive ethicality latent variables for the model to be identified (Williams et al., 2002). Thus, the model was a multitrait–multimethod model with ethicality dimensions serving in the role of traits and the scenario latent variables serving in the role of methods. Because both traits and methods were allowed to be correlated the measurement model was a correlated traits, correlated methods (CTCM) model, a frequently used choice for confirmatory factor analyses for such situations (e.g., Lance et al., 2002).

Correlated residuals

After considering the within-subjects nature of the study in which participants responded to all three scenarios, we thought it important to incorporate this study design characteristic into the model tested here. To that end, we let the MES item residuals correlate with the corresponding items across scenarios. For example, the residual of item 1 in the sales scenario was allowed to correlate with the residual of item 1 in the retail scenario and the residual of item 1 in auto scenarios; item 2's residual in the sales scenario was allowed to correlate with item 2's residual in the retail and auto scenarios, respectively; and so forth. These correlated residuals are represented on the left side of Figure 2.

Common method variance

A common concern in self-reported research is the possibility of common method variance distorting substantive relationships when all variables are collected from the same source (Podsakoff et al., 2003). To address this concern, we ran a measurement model that included a common method factor influencing all the MES items. This model is similar to Model 3A in the Podsakoff et al.'s (2003) study. The common method factor is illustrated in Figure 2. To distinguish it and its loadings from the other factors, it is represented by dashed lines in the figure.

Judgments and behavioral intentions

The linkage between judgment and behavioral intentions, defined as an individual's intent to act in a certain way, has been postulated in ethical decision-making models (e.g., Jones, 1991; Rest, 1986). Judgment, usually used as the most common indicator of an attitude and its predictive validity of subsequent behavioral intentions, is a central focus of the theory of cognitive dissonance (Festinger, 1957). According to this theory, people are rational decision makers who strive for consistency in everything they do. Therefore, a consistency between attitude and behavior is preferred because it helps alleviate stress and anxiety resulting from the conflict of having an attitude-behavior inconsistency (Festinger, 1957).

The theory of reasoned action (Ajzen and Fishbein, 1980) as well as theory of planned behavior (Ajzen, 1991) both posit that behavioral intentions are predicted by attitudes, subjective norms, and perceived behavioral control. In a meta-analytic review of the theory of planned behavior, the mean correlation of attitude and behavioral intention was reported to be 0.49 (Armitage and Conner, 2001). Overall, these theories share a common principle of the consistency of behavior and the judgments preceding it. In other words, if an action is judged as ethical, one is more likely to form an intention to perform it. Conversely, if an action is judged as unethical, one is less likely to form an intention to engage in the action.

Previous research showed that moral equity had the largest influence in explaining self-reported behavioral intentions across a variety of scenarios (e.g., Cruz et al., 2000; Reindenbach and Robin, 1990). This finding has been so widely documented in business ethics literature that some studies have equated this dimension to ethical judgment (e.g., Barnett and Valentine, 2004). Mixed findings exist concerning the relative influence of relativism and contractualism on behavioral intentions. For example, whereas contractualism was found to have the least explanatory power of behavioral intentions in some studies (e.g., Reindenbach and Robin, 1990); it was found to have more impact than did relativism in accounting scenarios (e.g., Cruz et al., 2000).

Structural model

To assess the relationship of ethical dimensions and scenarios to behavioral intent, a structural model was formed by adding three observed dependent variables to the measurement model. This structural model is shown in Figure 3. Each observed variable represented a judgment of behavioral intention in a scenario. Each of the three behavioral judgment variables was regressed onto the set of latent variables in the measurement model. Structural models with and without a method factor were evaluated. The following hypotheses were developed from the above considerations for the structural model.

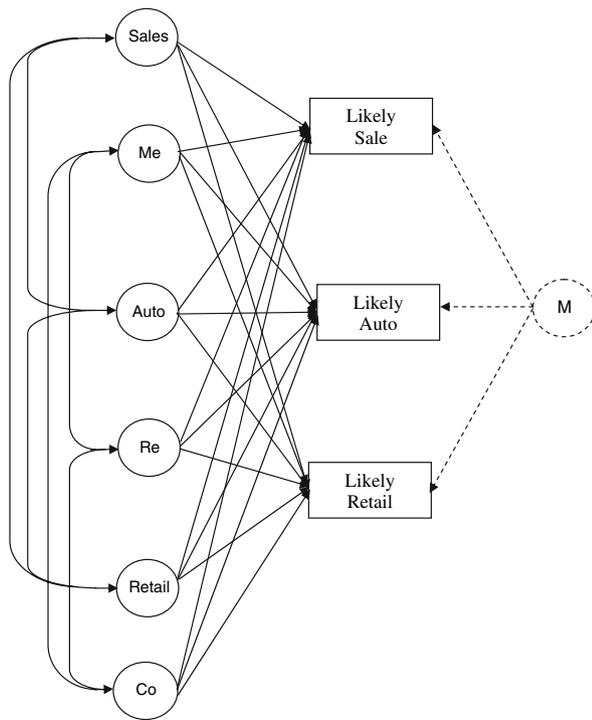


Figure 3. MES structural model predicting behavioral intentions.

Hypothesis 1: Each of the three ethical dimensions of the MES will be related to ethical behavioral intentions with moral equity having the strongest relationship and relativism and contractualism both having weaker relationships.

Based on Jones' (1991) issue-contingent ethical decision-making model, moral issue characteristics, i.e., the moral dilemma itself, will determine the extent to which ethical judgment per action is made. Further, this impact from the moral issue itself on ethical judgment is independent and additive to the impact from situational variables, such as cultural, organizational, social, and economic characteristics (see Figure 1). Speaking differently, the moral issue's effect on ethical judgment will be independent from the organizational characteristics' effect on ethical judgment; therefore any variation in ethical judgment that is due to the moral issue characteristic will be in addition to the variation in ethical judgment that is due to organizational characteristics.

Jones (1991) stated that his model was different from previous ones (e.g., Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Trevino, 1986) in that

people's ethical actions would vary as a function of whether the issue is stealing a few supplies from work (i.e., low in moral intensity) or polluting the environment (i.e., high in moral intensity). Furthermore, Jones viewed the "characteristics of the moral issue itself as an independent variable affecting all four stages of moral decision making and behavior" (Jones, 1991, p. 371) including recognition of moral issues, moral judgment, moral intention, and moral action. Following this line of reasoning, it is reasonable to expect that a retail scenario in which the retailer raises prices on all merchandise items should evoke an ethical judgment differently from a sales scenario in which the salesperson is overeager to sell the product by exaggerating its quality. Therefore, we hypothesize:

Hypothesis 2: The situation or the ethical dilemma itself will be related to ethical behavioral intention independent of the three ethical dimensions of the MES.

Methods

The data for this study were part of a larger program assessment of undergraduate business ethics teaching at a Mid-Atlantic University in the United States of America. Three hundred undergraduate business students participated in the study as part of a larger program assessment. No student names were collected. Out of 300 students, 179 (59.7%) were male with an average age of 21.81 (SD = 3.54; minimum = 18; maximum = 49). The sample was predominantly White (236 or 78.7%) with 10.3% Blacks, 4.7% Asians, 2% Hispanics, and 4.3% reported "other". All participants were given the 8-item version of the Multidimensional Ethics Scale. Each ethics dimension was measured using three scenarios reflecting moral issues in auto, sales, and retail transactions (see the Appendix for scenarios used). We followed Reidenbach and Robin (1990) in using the three scenarios. In their words, the "three scenarios were selected because of the variety of ethical problems they presented and because of the variability of individual reactions to them" (p. 462). The three scenarios here serve as three measures of ethical judgment traditionally used in multitrait-multimethod (MTMM) research such that if

the construct of ethical judgment is appropriate for evaluating multiple ethical scenarios, it will be rendered independent of the scenario to which it is applied. Ethical judgment ratings were collected on all three ethical dimensions of moral equity, relativism, and contractualism using a 6-point scale with 1 as “most unethical” and 6 as “most ethical”.

Moral equity

Moral equity is defined as individual perception of fairness and justice as well as what is right and wrong in its broadest sense (Reidenbach and Robin, 1990). Four items were used to measure this dimension, including “Unfair–Fair”; “Unjust–Just”; “Morally wrong–Morally right”, and “acceptable–unacceptable to my family”. Students were asked to indicate their perception of the degree of the action’s ethicality in each of the three scenarios (see the Appendix for scenarios used). Internal consistency estimates of the 4-item scale were 0.81, 0.77, and 0.74 for the auto, sales, and retail scenarios, respectively.

Relativism

Relativism is defined as perception of what is right versus wrong based on guidelines/parameters embedded in the social/cultural system, rather than individual considerations (Reidenbach and Robin, 1990). Two 6-point items were used to measure this dimension: “Traditionally unacceptable–traditionally acceptable”; “culturally unacceptable–culturally acceptable”. Cronbach alphas were 0.72, 0.75, and 0.82 for auto, sales, and retail scenarios, respectively.

Contractualism

Contractualism is defined as individual perception of what is right versus wrong based on notions of an implied contract that exists between business and society (Reidenbach and Robin, 1990). Two 6-point items were used to measure this dimension including “Violates–does not violate an unspoken promise”, “Violates–does not violate an unwritten contract”. Internal consistency estimate for this variable were 0.75, 0.74, and 0.89, respectively for the auto, sales, and retail scenarios.

Behavioral intentions

Behavioral intention is defined as the self-reported likelihood that an individual will engage in a specific action. Following the procedure of Reidenbach and Robin (1990) for all three ethical scenarios, one item was used to measure the behavioral intention of the students to engage in the same action depicted in the scenario as if they were the agent described in the scenario. For the sales scenario, the question was “How likely is it that you would engage in the same action as the salesperson depicted in the scenario?” For the auto scenario, the question was “How likely is it that you would engage in the same action as the auto dealer depicted in the scenario?” For the retail scenario, the question was “How likely is it that you would engage in the same action as the retailer depicted in the scenario?” Anchors for this item ranged from 1 “very unlikely” to 4 “very likely”.

The measurement and structural models described above were applied by analyzing covariances of the individual items using Amos Version 6.0 (Arbuckle, 2005). Although some investigators (e.g., Hall et al., 1999) have suggested that the analysis of parcels rather than individual items is appropriate when there is evidence that the items indicating a latent variable are in fact unidimensional, we felt that such evidence was not yet available for the MES. For this reason and because of the small number of parcels that would have been available, leading to potential problems with underidentification, individual items were analyzed in this study. As mentioned above, in addition to a model in which only substantive latent variables representing ethical dimensions and scenarios were estimated, a model which included a method bias factor was also investigated. Goodness-of-fit was assessed using the Chi-square statistic, Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA); and the Standardized Root Mean Square Residual (SRMR). Values of CFI values close to 0.95 and RMSEA as well as SRMR values less than 0.08 are considered acceptable fit (Cheung and Rensvold, 2002; Fan et al., 1999; Vandenberg and Lance, 2000). Because the behavioral intention items represented three separate behaviors in three separate scenarios, we decided to analyze them as individual, observed variables rather than treating them as indicators of a latent behavioral intent variable. For the structural model with a method

bias factor, to avoid problems of non-convergence, the loadings of the 24 ethicality judgments on the method bias factor were fixed at the values obtained in application of the measurement model.

Results

We first applied the measurement model of the MES without correlated residuals. As noted in prior research using multitrait-multimethod (MTMM) matrices, Heywood cases or negative error variances are not uncommon (e.g., Williams et al., 1989); and we fixed variances associated with two Heywood cases found in this study at zero and one at 0.001 for all models estimated here. This first model without correlated residuals showed a poor fit to the data ($\chi^2 = 986.484$; $df = 225$; $p < 0.0001$; CFI = 0.837; TLI = 0.783; RMSEA = 0.106; SRMR = 0.078). Next, a model with correlated residuals was applied. The fit of the model with these specific correlated residuals was significantly better ($\chi^2 = 666.869$; $df = 201$; $p < 0.001$; CFI = 0.900; TLI = 0.851; RMSEA = 0.088; SRMR = 0.059). With 24 degrees of freedom difference, the change in chi-square of 319.615 was statistically significant ($p < 0.01$), indicating that estimating the correlated residuals improved the fit of the model to the data. For this reason, we retained the correlated residuals in further analyses.

The addition of a method bias latent variable also resulted in an improvement in goodness-of-fit ($\chi^2 = 534.466$; $df = 177$; $p < 0.001$; CFI = 0.924; TLI = 0.871; RMSEA = 0.082; SRMR = 0.042) over the model without a method bias factor. The chi-square statistic comparing this model with the model without a method bias latent variable was 132.403 with $df = 24$ ($p < 0.001$). For this reason, we report results of both the model without a method bias factor and of the model in which the method bias factor was estimated.

Factor structure of the MES

Table I shows the standardized loadings of indicators on MES dimension and scenario latent variables. As shown in Table I, a slight majority of item loadings on MES dimensions were significant. This was true

for both the No-method factor model and the method factor model, except that the loadings of the items on the Relativism factor were generally significant in the No-method factor model but not significant in the model estimating a method factor. On the other hand, loadings of the items on the scenario factors were all significant and positive in both models.

Table II shows the standardized regression weights of the model latent variables predicting behavioral intentions. Hypothesis 1 states that each of the three ethical dimensions of the MES will have an influence on ethical behavioral intentions with Moral Equity having a greater influence than Relativism and Contractualism. Hypothesis 2 states that the situation or the ethical dilemma itself will have an influence on ethical behavioral intention independent of the three ethical dimensions of the MES. The structural model shown in Figure 3 was used to test both hypotheses. The fit of the model shown in Figure 3 without the method bias latent variable was marginally acceptable ($\chi^2 = 832.780$; $df = 258$; $p < 0.001$; CFI = 0.888; TLI = 0.836; RMSEA = 0.086; SRMR = 0.057). For the structural model incorporating method bias the behavioral intention variables were regressed onto the method bias latent variable in addition to the MES and scenario latent variables as shown in Figure 3. This model fit better, with $\chi^2 = 664.494$; $df = 255$; $p < 0.001$; CFI = 0.920; TLI = 0.882; RMSEA = 0.073; SRMR = 0.041. Note that degree of freedom for the method bias model was 255 because loadings of the ethical judgment items on M were fixed at measurement model values. The standardized regression coefficients linking behavior intentions to the latent variables for both the No-method bias model and the method-bias model are presented in Table II.

Moral equity – behavioral intentions linkage

As shown in Table II, the path coefficient from Moral equity to behavioral intention in sales was positive and significant ($\beta = 0.32$, $p < 0.01$) for the No-method bias model. However, it was not significant when method bias was estimated ($\beta = 0.034$, $p > 0.05$). Moreover, moral equity was not related to behavioral intent in either the auto or

TABLE I
Standardized loadings of indicators on MES dimension and scenario latent variables

	MES dimensions						Moral scenario					
	Moral equity		Relativism		Contractualism		Sales		Auto		Retail	
	No M	M										
Sales 1	0.632 ^a	0.659 ^a					0.609**	0.542 ^a				
Sales 2	0.548**	0.576**					0.672**	0.604**				
Sales 3	0.467**	0.526**					0.587 ^a	0.483**				
Sales 4	0.304**	0.366**					0.665**	0.593**				
Sales 5			0.332**	-0.096			0.725**	0.680**				
Sales 6			0.621**	-0.039			0.694**	0.668**				
Sales 7					0.305 ^a	0.311 ^a	0.698**	0.681**				
Sales 8					0.340**	0.346**	0.624**	0.617**				
Auto 1	0.030	0.122							0.709 ^a	0.721 ^a		
Auto 2	-0.052	0.010							0.805**	0.807**		
Auto 3	-0.004	0.097							0.751**	0.778**		
Auto 4	-0.043	0.011							0.686**	0.673**		
Auto 5			0.309 ^a	0.088 ^a					0.615**	0.530**		
Auto 6			0.828**	0.587					0.561**	0.471**		
Auto 7					0.316**	0.312**			0.646**	0.598**		
Auto 8					0.325**	0.332**			0.523**	0.460**		
Retail 1	0.035	0.147*									0.762**	0.763 ^a
Retail 2	0.012*	0.115*									0.831**	0.824**
Retail 3	0.143	0.234**									0.831**	0.817**
Retail 4	0.046	0.143									0.767**	0.760**
Retail 5			0.354**	-0.268							0.682**	0.648**
Retail 6			0.778**	-0.698							0.629 ^a	0.595**
Retail 7					0.843**	0.834**					0.538**	0.515**
Retail 8					0.749**	0.732**					0.479**	0.466**

* $p < 0.05$; ** $p < 0.001$.

^aRaw loading fixed at 1.

TABLE II
Standardized regression weights of MES dimensions and scenario factors predicting behavioral intentions

	Sales		Auto		Retail	
	No M	M	No M	M	No M	M
Moral equity	0.316***	0.034	-0.010	-0.008	-0.007	-0.025
Relativism	-0.025	-0.064	-0.028	-0.023	0.011	-0.024
Contractualism	-0.088	-0.067	-0.076	-0.051	0.048	0.051
Sales factor	0.516***	0.526***	0.115*	0.133**	-0.025	-0.035
Auto factor	-0.078	-0.093	0.616***	0.614***	-0.037	-0.042
Retail factor	0.085	0.083	0.037	0.026	0.725***	0.713***
Method factor		0.278***		0.067		0.093

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

retail scenarios in both the No-method model and method model.

Relativism – behavioral intentions linkage

An examination of Table II reveals that contrary to our expectation, none of the path coefficients from Relativism to behavioral intentions were significant across three scenarios for either the No-method or the method factor model. Thus, compared to moral equity, relativism ethics had a weak relationship to behavioral intent after controlling for scenario effects.

Contractualism – behavioral intentions linkage

As shown in Table II, none of the path coefficients from Contractualism to behavioral intentions were significant across the three scenarios. This finding indicates that compared to moral equity, contractualism ethics had a weak relationship to behavioral intent after controlling for scenario effects. Overall, Hypothesis 1 was weakly supported. When No-method factor was estimated, moral equity was related to behavioral intentions in sales situations, but not in retail or automobile repair situations. Neither Relativism nor Contractualism had any relationships with behavioral intentions regardless of whether method bias was estimated or not.

Scenario – behavioral intentions linkage

Table II reveals that the ethical scenario had a significant impact on behavioral intention specific to that scenario. Specifically, for the sales scenario, the path coefficient from the sales scenario factor to behavioral intention in sales was positive and significant for both the No-method bias and method bias models ($\beta = 0.52$ and 0.53 , respectively, $p < 0.01$); indicating that the more participants judged the action specific to that scenario as ethical, the more likely they would engage in that action specific to that scenario. The same pattern of results was found for the auto ($\beta = 0.62$ and 0.61 ; $p < 0.01$) and retail scenarios ($\beta = 0.72$ and 0.71 , $p < 0.01$). Taken together, these findings provide support for Hypothesis 2. Even when method bias was estimated

the scenario itself explained incremental variance in behavioral intentions over and above the MES substantive factors, providing support for Jones' (1991) model. Interestingly, the method bias factor was a significant predictor of behavioral intentions in the Sales scenario.

As shown in Table II, none of the across-scenario regression weights was significant except one – the sales scenario factor was found to have a significant relationship with behavioral intentions in auto ($\beta = 0.12$ and 0.13 for the no bias and bias models, respectively, $p < 0.05$). Based on this finding, it appears that a scenario factor's influence on behavioral intentions did not cut across scenarios.

Discussion

The purpose of this study was to replicate and extend the findings of McMahon and Harvey's (2007) study concerning the psychometric properties of the MES. We replicated McMahon and Harvey in that we confirmed their finding regarding the weak multidimensional structure of the MES (see Table I). We also replicated McMahon and Harvey's (2007) study in that the scenario factors explained variance in the MES data in addition to the MES factors combined. Our study extended prior research in general and McMahon and Harvey's study in particular in three important ways. First, we were able to account for the within-subjects characteristic of the study design utilized here by adding correlated residuals to improve the fit of the model applied to the MES data. Whereas McMahon and Harvey (2007) utilized the same study design, they failed to model that study design characteristic, which might explain why their model's comparative fit index (CFI) was 0.73, much smaller than the CFI of 0.90 reported here. Second, we were able to extend the investigation of McMahon and Harvey (2007) by testing the criterion-related validity of the MES in predicting behavioral intentions. Finally, we were able to estimate the factor structure and behavioral linkages within the context of a model in which a common method bias factor was estimated.

The fact that we found the scenario factors explained additional variance to the MES factors in both ethical judgments and behavioral intentions is worthy of discussion. There are two possible ways to

interpret the scenario factors as modeled in this study. First, it could be interpreted as an overall “positiveness” of the scenario wherein a high score indicates that the behavior described in the scenario is evaluated positively. Whereas the 8-items of the MES might represent three dimensions of ethics or philosophies, the respondents in this study might not have perceived them as such and may have responded as if they were indicators of a single “positiveness” dimension. This might explain why we found a lack of dimensionality of the MES. Our results echoed McMahan and Harvey’s (2007) findings of a general ethical judgment construct that is scenario dependent, rather than a multidimensional ethical judgment construct as originally proposed by Reidenbach and Robin (1990).

Second, we think the scenario factors here capture what can be best described as responding tendencies induced by the characteristics of the scenario presented. In other words, we think that the scenario factors here might have captured what Jones (1991) called “moral intensity” in his situation-contingent model of ethical decision making (see Figure 1). However, without actually measuring the moral intensity construct, our interpretation of this finding should be tempered pending future research examining this question with a moral intensity measure.

Overall, the results of our study did not speak well for the criterion related validity of the MES as well as its factor structure. Across three scenarios, only behavioral intention in sales was significantly related to moral equity judgment and then only when method effect was not estimated. Relativism and Contractualism, despite explaining substantive variance in ethical judgment, had no discernible relationships to behavioral intentions. It is possible that other existing but unexamined variables (e.g., personality) moderated the relationships of behavioral intentions to ethical judgments. This might explain why there was a lack of significance in the above relationships in this study.

Our findings add to the growing body of evidence on the importance of taking common method bias into account when estimating structural equation models. Adding the method bias factor significantly improved goodness-of-fit of the measurement model. The addition of the method factor also resulted in changes to tentative conclusions regarding the factor structure of the MES. The improvement to goodness-of-fit might be sufficient to cause a model

to move from a “not acceptable fit” categorization to an “acceptable fit” categorization. Moreover, the effect on the factor structure of estimating a method factor here reaffirms previous suggestions that models in which a method factor is not estimated may suffer from misspecification.

The impact of the method factor on conclusions regarding the structural model should also be noted. Without the method factor, it appeared that moral equity predicted behavioral intentions in the sales scenario. When the method factor was included in the model, it was apparent that behavioral intentions were not related to any of the MES dimensions, only the scenario factors.

Implications for managerial practice and future research

Based on our study findings, we offer two practical implications. First, managers need to know that ethicality varies from one situation to the next. Therefore, those managers wishing to screen employees on behavioral ethics may want to incorporate as many scenarios as possible in the employment interview to measure applicant’s range of ethical judgment. Second, managers should take advantage of the finding that ethical judgment is situation dependent such that situations that induce ethical judgment should be rewarded and those that induce unethical judgment should be disciplined.

Our study findings also present three avenues for future research. First, currently there are only two items representing the Relativism and Contractualism ethical dimensions. This makes the CFA model unstable and subject to failures of convergence. The solution is to add more items indicating these dimensions in future research. Second, future research should include as many scenarios as possible to capture as wide a range of ethical judgment as allowed. Finally, given the weak factor structure of the three MES dimensions and their inability to predict behavioral intentions, it appears that reconsideration of the dimensions of moral judgment is in order.

Limitations of the study

Several limitations of the study should be noted. First, the student sample limits the generalizability of the

finding to a manager/practitioner population. However, given the fact that more than half of the sample (54%) reported having managerial experience, this limitation could be negligible. Second, in presenting the dilemmas to the students, the order of the three ethical dilemmas was not counterbalanced, which might have confounded the findings reported herein due to a potential order effect. Third, the use of the same sample in modeling both the measurement and then validating the confirmed model in a structural model may have capitalized on chance. Future research should replicate this study in a practitioner sample to have more conclusive findings. Fourth, the cross-sectional nature of this study limits our ability to examine the influence of ethical judgment on ethical behavior at one point in time. Future researchers might want to collect data longitudinally to increase the confidence of causal inferences concerning the relationship of ethical judgment measured at Time 1 and ethical behavioral intention measured at Time 2, and ethical behavior measured at Time 3. This way, specific structural equation models (SEM) can be established to better test the ethical judgment – intention – behavior linkages.

Conclusions

Despite decades of studies investigating moral/ethical judgment, little research exists to model the construct using confirmatory factor analysis. This study was one of the first to validate the MES using structural equation models. It represents a means of isolating the effects of each ethics dimension on ethical judgment and subsequent ethical intention, which is critical in better understanding behavioral ethics. It is hoped that the results of this study are a positive step in that direction.

Appendix: Ethical Dilemmas used in the Study (adopted from Reindenbach and Robin, 1990)

Sales dilemma

A young man, recently hired as a salesman for a local retail store, has been working very hard to favorably impress his boss with his selling ability. At times, this young man, anxious for an order, has been a little over-eager. To get order, he exaggerates the value of the item or withholds relevant information concerning the product he is trying to sell. No fraud or deceit is intended by his actions, he is simply over-eager.

Action

His boss, the owner of the retail store, is aware of the salesman’s actions but he has done nothing to stop such practice.

Auto dilemma

A person bought a new car from a franchised automobile dealership in the local area. Eight months after the car was purchased, he began having problems with the transmission. He took the car back to the dealer, and some minor adjustments were made. During the next few months he continually had a similar problem with the transmission slipping. Each time the dealer made only minor adjustments on the car. Again, during the 13th month after the car had been bought the man returned to the dealer because the transmission was completely over-hauled.

	1	2	3	4	5	6
Unfair						Fair
Unjust						Just
Unacceptable						Acceptable
Morally wrong						Morally right
Traditionally unacceptable						Traditionally acceptable
Culturally unacceptable						Culturally acceptable
Violates an unspoken promise						Does not violate an unspoken promise
Violates an unwritten contract						Does not violate an unwritten contract

Action

Since the warranty was for only 1 year (12 months from the date of purchase), the dealer charged full price for the parts and labor.

Retail dilemma

A retail grocery chain operates several stores throughout the local area including one in the city's ghetto area. Independent studies have shown that prices do tend to be higher and there is less of a selection of products in this particular store than in the other locations.

Action

On the day welfare checks are received in the area of the city the retailer increases prices on all of his merchandise.

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