

# How do Scores of DIT and MJT Differ? A Critical Assessment of the Use of Alternative Moral Development Scales in Studies of Business Ethics

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**ABSTRACT.** The construct of Cognitive Moral Development (CMD) has drawn much attention in the study of business ethics for over two decades. The Defining Issues Test (DIT) has made a significant contribution to the literature as an easy-to-administer CMD instrument, and the Moral Judgment Test (MJT), an alternative scale, has also been used widely especially in Europe. The two scales differ in their approaches to measuring CMD, focusing on *stage preference* (DIT) and *stage consistency* (MJT), yet empirical comparisons have been scarce. The present research empirically compares the two scales in terms of their correspondence with ethical ideology as a reference scale, and it demonstrates a clear distinction between the DIT and the MJT. Although they both aim to measure CMD, their dissimilar approaches lead to distinctly different implications.

**KEY WORDS:** Cognitive Moral Development (CMD), Defining Issues Test (DIT), Moral Judgment Test (MJT), ethical ideology, stage preference approach, stage consistency approach

**ABBREVIATIONS:** CMD: Cognitive Moral Development; DIT: Defining Issues Test; MJT: Moral Judgment Test; EPQ: ethical positioning questionnaire

## Introduction

Kohlberg's (1969) six-stage scheme of Cognitive Moral Development (CMD) has had a considerable impact on the field of ethics research. CMD captures advances in moral reasoning and a progression to a higher stage that reflects an increased understanding of the nature of moral obligations in complex social systems (Rest, 1979). For over two decades, researchers have incorporated CMD in modeling complex decision-making and behaviors of business managers (e.g., Hunt and Vitell, 1986; Lampe and Finn, 1992; Menguc, 1998; Gul et al., 2003). The general appeal of the use of CMD in studying business ethics stems from its ability to efficiently capture individual differences in terms of attitudes toward ethical behaviors. While many empirical studies have failed to demonstrate one-to-one correspondence between moral development and moral behaviors, the consensus is that CMD is still a valuable predictor of ethical behaviors (see Trevino and Youngblood, 1990; Goolsby and Hunt, 1992; Marnburg, 2001).

Although the measurement of CMD has been a challenge, to say the least, Rest's (1979) development of the Defining Issues Test (DIT) has made a significant contribution to the broad ethics literature by offering a CMD instrument that is essentially a multiple-choice questionnaire – as compared to Kohlberg's original measurement (the Moral Judgment Interviews or MJI), which require in-depth interviews and scoring by trained judges (see Colby et al., 1987). Also noteworthy is Lind's (1978) CMD scale called the Moral Judgment Test (MJT), which also uses a multiple-choice format. The ease of

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administration of both the DIT and the MJT has resulted in numerous studies spanning various disciplines.

Both Rest et al. (1997) and Lind and Wakenhut (1985) characterize the key difference between the DIT and the MJT as being in their approach: a stage preference approach for the DIT as opposed to a stage consistency approach for the MJT. The DIT measures the extent to which an individual uses principled considerations in making moral decisions (Stages 5 and 6 in CMD), while the MJT's interest is in determining how consistently an individual follows a particular moral principle. One would expect that these dissimilar conceptual approaches would have different implications for conducting studies involving CMD; therefore, the primary goal of this study is to assess whether it is appropriate to use the DIT and the MJT as alternative, interchangeable scales of CMD.

Previously, few studies have specifically compared the two scales. The most notable exception is Rest et al. (1997). They applied the MJT's unique calculation formula to their existing DIT datasets to derive a C-score, the most widely used score of the MJT. They then compared the C-scores with the original P-scores – the DIT's most widely used index – on three grounds: (1) expert versus non-expert groups (that is, moral philosophy and political science graduate students versus underprivileged, delinquent junior high students), (2) correlation with moral comprehension, and (3) longitudinal trends. Only the DIT P-score varied significantly and in expected patterns, while the MJT C-score was rather consistent across the subgroups and over time. Based on these findings they concluded that the MJT has no general advantage over the DIT.

This 1997 comparison method by Rest et al. is based on their argument that it is unreasonable to make a direct factor-analytic comparison approach by giving both the DIT and the MJT to the same participants in the same study due to major structural differences between the two scales. Our research employs a different comparison approach: we gave the study participants both the DIT and the MJT and compared the two indices against the individual's ethical ideology classifications. Ethical ideology is a construct that deals with individual variations in approach to moral judgment (Schlenker and Forsyth,

1977; Forsyth, 1980); in other words, differences in judgment of what is moral. The present study selected *ethical ideology* as a reference scale because it generates a unique taxonomy of individuals based on their personal ethical ideologies, which then allows for unique multi-group comparisons of the DIT P-scores and the MJT C-scores. In summary, our research objectives are twofold:

Research Objective 1: To determine whether one's ethical ideology classification is associated with his/her CMD preference score (i.e., P-score) and consistency score (i.e., C-score).

Research Objective 2: To assess potential differences in the DIT and the MJT scales based on their correspondence with the ethical ideology taxonomy.

The article is organized as follows. First, we will briefly review the construct of CMD, followed by literature reviews of the DIT, the MJT, and ethical ideology. A discussion of methodology is followed by an empirical analysis of the relationships among DIT P-scores, MJT C-scores, and the ethical ideology taxonomy. Lastly, we discuss their implications as well as limitations and future research directions.

## Literature overview

### *CMD: a brief overview*

Drawing on Piaget's (1932/1965) seminal work examining children's moral decision-making development, Kohlberg (1969) developed through a longitudinal study the theory of moral development, which is based on the belief that from birth to adulthood people progress in their moral reasoning about the bases for ethical behavior. Kohlberg extended Piaget's three-stage model to six stages, each reflecting a progression from the previous stage in increasing understanding of the nature of moral obligations in complex social systems (Rest, 1979).

The six specific stages of CMD are categorized into three broader stages: pre-conventional, conventional, and post-conventional as shown in Table I. According to Kohlberg, pre-conventional Stages 1 and 2 are characteristic of young children; while most adults are in conventional Stages 3 and 4.

TABLE I  
Kohlberg's six stages of Cognitive Moral Development (CMD)<sup>2</sup>

Level	Stage	Motivation for moral behavior
Pre-conventional	1	Orientation to punishment, obedience, and physical and material power. Rules are obeyed to avoid punishment.
	2	Naïve instrumental hedonistic orientation. The individual conforms to obtain rewards.
Conventional	3	"Good boy/girl" orientation designed to win approval and maintain expectations of one's immediate group. The individual conforms to avoid disapproval. One earns approval by being "nice."
	4	Orientation to authority, law, and duty, to maintain a fixed order, whether social or religious. Right behavior consists of doing one's duty and abiding by the social order.
Post-conventional	5	Social contract orientation, in which duties are defined in terms of contract and the respect of other's rights. Emphasis is upon equality and mutual obligation within a democratic order.
	6	The morality of individual principles of conscience that have logical comprehensiveness and universality. Rightness of acts is determined by conscience in accord with ethical principles that appeal to comprehensiveness, universality, and consistency.

Only 20–25% of the adult population ever reaches the last two post-conventional stages.

These CMD stages reflect the ways of thinking about moral matters. The self-perception of the *pre-conventional* level is such that individuals see the value of interpersonal relationships only as a means to their own needs. At the *conventional* stages, individuals see themselves as part of their immediate society to the extent that they seek conformity to stereotypical images of conduct that is shared among the members. What these individuals consider to be correct behaviors are the ones that are congruent with the values of the majority. At the highest *post-conventional* level, individuals value social order above and beyond their immediate social group because they deeply respect the rights of others.

The original contention of CMD was that moral development predicts moral actions (cf. Colby and Kohlberg, 1984). Today, the consensus is that CMD is a necessary but not sufficient condition for ethical conduct, as postulated by Kohlberg (1969) and Rest (1979). Nevertheless, researchers have generally shown a positive association between CMD and ethical behaviors (cf. Rest, 1986a), and many studies continue to demonstrate such effects (e.g., Goosby and Hunt, 1992).

#### *DIT and MJT comparisons*

##### *The DIT overview*

The DIT derives from Kohlberg's moral development theory, and the six stages of CMD are incorporated into the scale (Rest, 1979). Compared to Kohlberg's original approach to data collection (i.e., MJT) of long, in-depth interviews to uncover underlying moral reasoning in making ethical judgment, the DIT is revolutionary in the sense that it is relatively easy to administer due to its multiple-choice questionnaire format. Indeed, by 1986 over 500 studies using the DIT had been reported from over 20 countries (Rest, 1986a). By far, for over 20 years, the DIT has been the most widely used instrument for measuring CMD.

When administering the DIT, a study participant is presented with either three (short-form DIT) or six (original DIT) moral dilemmas, and each dilemma is followed by a set of 12 statements, each representing a particular stage of CMD. The subject is asked to rate each statement for its importance in making their ethical judgment. After rating the 12 statements, the subject is then asked to select the four most important statements and rank-order them from one to four.

The P-score has been the most widely used index, which indicates the “relative importance a subject gives to principled moral considerations [Stages five and six] in making a decision about moral dilemmas” (Rest, 1990, p. 2). The P-score, which ranges from 0 to 95, is scored by assigning points to the four most important statements the subject has selected that correspond to Stages 5 and 6 of CMD. Four points are given to the most important statement corresponding to either Stage 5 or 6; three to the second most important statement corresponding to either Stage 5 or 6, and so forth. According to Rest et al. (1997, p. 498), the P-score has “survived because it consistently gave better trends for the theoretically expected findings than did other ways of indexing.” Rest (1986b) advises against trying to type subjects into individual stages. Instead, he recommends that subjects be divided into two groups: those who make moral judgments on the basis of principled moral considerations (i.e., P-score > 50) and those who do not (i.e., P-score ≤ 49).

Detailed discussions of the DIT scale validations are provided in Rest (1990). Reliability measures based on test–retest and internal consistency (Cronbach’s  $\alpha$ ) have been reported to be in the high 0.70 s and 0.80 s. Two additional checks of reliability are recommended. First, an M-score can be computed with “filler” statements, which appear in four of the six dilemmas. These filler statements do not represent any stage of CMD and are completely meaningless. A high M-score indicates that the subject chose these meaningless statements to be important criteria for their moral judgment, and hence represents one’s tendency to endorse statements for their pretentiousness rather than meaning (Rest, 1990). Therefore, Rest recommends discarding any individual score containing a high level of M-score. Another check of reliability tests the consistency between a subject’s ratings and rankings of a statement. This consistency check is another indicator of the usability of a subject’s data.

By far, the DIT is the most widely used measure of CMD. Rest et al. (1999) cite a partial list of over 400 published articles and books using the DIT from 1974 and 1998. According to Rest and Narvaez (1994), the DIT has been used in over 40 countries and regions, across various professions such as accounting, marketing, nursing, dentistry, teaching, and veterinary medicine, with consistent validity, with about 150

new studies each year. While the exact nature of the relationship between CMD and ethical behaviors is of secondary concern (see Rest, 1986a for a more in-depth discussion), researchers continue to rely on the DIT as a measure of CMD with a premise that moral development is part of the process of behaving ethically. Applications of the DIT include ethics education (e.g., Rogers and Smith, 2001; Nucci, 2002), personality research (e.g., Skoe and von de Lippe, 2002), ethical decision-making models (e.g., Trevino and Youngblood, 1990), and demographic and/or social influences (Pennino, 2002; Chenting et al., 2003), just to name a few.

#### *The MJT overview*

The MJT is also a moral development test that is based on Kohlberg’s scheme of six stages of CMD. The MJT shares three things in common with the DIT: (1) ethical dilemmas are presented to the subject<sup>1</sup>, (2) stage-prototypic statements follow the ethical dilemmas, and (3) a multiple-choice questionnaire format is used (i.e., no open-ended questions). The MJT, however, takes a different approach to measuring CMD in that the primary concern is the consistency in subjects’ moral reasoning across (1) situations (i.e., moral dilemmas) and (2) opinion conformity (i.e., pro-con arguments) (see Lind and Wakenhut, 1985).

The MJT was developed by Georg Lind to assess one’s moral judgment competencies, and it measures the degree to which one can consistently employ the same moral value across two ethical dilemmas and between six *pro* and six *con* statements about the protagonist’s action. Hence, the MJT offers a unique 6 (statements; each corresponding to a particular stage of CMD) × 2 (ethical dilemmas) × 2 (pro versus con position to the protagonist’s action) multivariate design, and the main index, C-score is computed by a MANOVA-like method.

After reading about an ethical dilemma, study participants are first asked to rate whether they agree or disagree with the protagonist’s action. Next, they are asked to rate the degree to which they find each of the six *pro* and *con* statements about the protagonist’s action acceptable. In effect, the MJT assesses the degree to which the subjects consistently rate the acceptability of statements according to their particular moral standards. The C-score, the main MJT index, is computed by the unique scoring formula

developed by Lind, and it “indicates the percentage of an individual’s total response variation due to a persons’ concern for the moral quality of given arguments or behavior” (Lind, 1999, p. 4).

This approach is to be distinguished from that of the DIT, as the MJT C-score reflects “a person’s ability to judge arguments according to their moral quality (rather than their opinion agreement or other factors)” (Lind, 2001, p. 5). In other words, the score reflects a person’s ability to consistently apply his/her own moral principles to moral dilemmas even when she/he is presented with the position contrary to the one she/he would choose. In addition, unlike the DIT P-score, which pertains specifically to Stages 5 and 6 of CMD, the MJT C-score does not take into consideration which stage(s) the subject actually follows. Hence, C-scores should be interpreted as the extent to which one consistently follows a particular moral value, which need not be in line with principled reasoning (Stage 5 and 6 of CMD). The approach emphasizes that, although many individuals prefer higher-stage moral arguments, only those with mature cognitive structures exhibit consistency (Lind, 2001).

The MJT’s unique measure of CMD stage-consistency has been applied in numerous studies, most notably in Europe. Lind (1995) cites data collected from over 15,000 participants, and the number continues to grow. To name a few, the MJT has been used in studies in the areas of ethics education (e.g., Biggs et al., 1999; Patino, 1999), political attitudes (e.g., Gross, 1995, 1997), and the influences of social environment (e.g., Krämer-Badoni and Wakenhut, 1985).

In summary, the reviews of the similarities and differences between the DIT and the MJT lead us to believe that their scores do not necessarily correspond. Rest et al. (1997) report the moderately high positive correlation of 0.38–0.53 between the two in three separate sample groups. However, Lind (1998) argues that the two need not be correlated because “Although many individuals prefer higher stages moral arguments, only those with more cognitive structures exhibit consistency or reversibility” (p. 6). Hence, our main objective is to examine potential differences in the two CMD scales based on their correspondence with the ethical ideology taxonomy. The overview of ethical ideology and reasons for the selection and its use as a reference construct are discussed next.

### *Ethical ideology and CMD*

#### *Ethical ideology overview*

Ethical ideology deals with individual variations in moral judgments, or, what is moral. A taxonomy of ethical ideology was originally developed by Schlenker and Forsyth (1977) and further refined by Forsyth (1980). The taxonomy is based on two basic ethical orientations: relativism and idealism. The first dimension, idealism, refers to the extent to which the individual believes that desirable consequences will necessarily follow from appropriate actions. The idealism orientation is consistent with *deontological* moral philosophy, which rejects the use of an action’s consequences as a basis for moral evaluation. The second, relativism, refers to the extent to which the individual rejects the possibility of formulating and relying on universal moral rules at all times. The relativism orientation is more consistent with *teleological* moral philosophy, which suggests that a moral action be judged based on its consequences; i.e., *ends* justifying *means*. Using the two dimensions, a 2 (low/high idealism) × 2 (low/high relativism), four classifications of ethical ideologies are yielded, as featured in Table II.

Both *situationists* and *subjectivists* score relatively high on the ethical relativism dimension; in other words, these individuals eschew universal moral principles. Though, situationists “still insist that one should produce positive consequences that benefit all involved (high idealism)” (Forsyth, 1992, p. 462), while subjectivists “are not particularly positive about the possibility of achieving positive outcomes for everyone concerned” (Forsyth, 1992, p. 463). Both *absolutists* and *exceptionists* score relatively low on the ethical relativism dimension. According to Forsyth (1980), absolutism is consistent with deontology, a general approach to moral philosophy that emphasizes absolute universal moral principles, as Immanuel Kant, a deontological philosopher, argued that a moral principle can allow no exceptions, regardless of the consequences” (p. 176). Although exceptionists share the same appreciation for moral absolutes, they do not believe they are always attainable. As Forsyth (1992, p. 463) describes,

“[Exceptionists’] outlook ... corresponds most closely to a moral philosophy based on *rule-utilitarianism*:

TABLE II  
A taxonomy of ethical ideologies<sup>3</sup>

	Low idealism	High idealism
Low relativism	Exceptionists: Feel conformity to moral rules is desirable, but believe that exceptions to these rules are often permissible. Morality of an action depends on the consequences produced by it. Rule-utilitarian.	Absolutists: Assume that the best possible outcomes can always be achieved by following absolute moral rules. Deontologists.
High relativism	Subjectivists: Do not believe in absolute moral rules. Moral evaluations based on one's own personal perspective rather than universal moral principles. Ethical egoists.	Situationists: Skeptical of absolute moral rules to provide the best possible outcomes and advocate contextual appropriateness of each act in each situation. Idealistic skeptic.

moral principles are useful because they provide a framework for making choices and acting in ways that will tend to produce the best consequences for all concerned. Following principles, however, will sometimes cause one to act in ways that will cause harm to innocent people, and in such instances exceptions are allowable.”

The two dimensions of ethical ideology, as well as the taxonomy of ethical ideology have been widely used in ethics research. Forsyth (1978) shows that ethical ideology has a significant influence on ethical judgment. For example, he finds that absolutists consistently rated others harshly in their appraisal of morally questionable actions, while exceptionists tended to be the most forgiving of immoral actions. Subjectivists actually rated immoral actions favorably when positive consequences are observed. Forsyth et al. (1985) report that individuals who score highly on ethical idealism more strongly endorse statements that reflect a fundamental concern for the welfare of people, while those with higher scores on ethical relativism tend to espouse a situational moral value rather than that of deontological norms. Barnett et al. (1994, 1996, 1998) also verify the same trend that absolutists are the most unforgiving judges of ethical vignettes, while subjectivists and exceptionists are more forgiving of unethical actions in some cases more so than others.

Other studies include examining differences in ethical ideology based on countries, genders, and occupations. Karande et al. (2002) report significant differences in scores of ethical idealism and relativism by countries, namely, Australia, Malaysia, and USA. Hartikainen and Torstila (2004), among

others, report gender differences such that females tend to score higher on ethical idealism, and also find that younger financial professionals lean toward a relativistic position and are more accepting of unethical actions such as stealing clients and insider-trading. Leary et al. (1986) and Ho et al. (1997) also show a highly positive relationship between Machiavellianism (Christie and Geis, 1970) and the ethical relativism dimension of ethical ideology.

#### *Ethical ideology and CMD*

Since studies have shown that individuals who have different ethical ideologies tend to differ in their judgments regarding ethical dilemma (Forsyth, 1980; Forsyth and Pope, 1984), there seems to be a relationship between CMD and ethical ideology. Forsyth (1980) reports, however, that neither the ethical idealism nor the relativism dimension is correlated at all with CMD using the DIT P-score. Forsyth (1980) explain that stages of CMD do not consider the extent to which the values are idealistic or relativistic:

“To give an example, an individual who displays post-conventional moral reasoning as classified by Kohlberg’s stage approach could endorse any one of the four different moral positions suggested by the EPQ ... All the ideologies of the EPQ do, in a sense, accept certain principles, which can be distilled down to nothing more than *There are moral absolutes, Exceptions are tolerable, Look to the specifics of the given situation, and Consider the action from your own ethical viewpoint...* Although the content of the principles determines the individual’s ideology, the reasons for

accepting the principles determine his or her stage of moral development” (p. 180).

Another study with marketing practitioner sample also reports a non-significant correlation between the DIT P-score and ethical relativism a non-significant negative correlation of the P-score with ethical idealism (Ho et al., 1997). Although, Ho et al. (1997) also report a significant positive correlation between P-scores and ethical relativism and a significant negative correlation with ethical idealism when they examined only the *principled* subjects (i.e., P-score higher than 50, see Rest, 1986b). However, neither Forsyth (1980) nor Ho et al. (1997) compared the possible variations in subjects’ P-scores across the four classifications of ethical ideologies. It would be interesting to examine whether the taxonomy, rather than the idealism and relativism orientations, can explain any significant variations in P-scores. As for the MJT, to the best of our knowledge, no studies have reported any relationship between the MJT C-score and ethical ideologies. Such comparisons would be interesting, as the MJT’s consistency approach to measurement of CMD seems to have implications on how consistent one follows particular moral orientation.

## Methods

### Measures

Both the DIT and MJT scales are used to measure the CMD construct. For the DIT, the short-form (three dilemmas) rather than the long-form (six dilemmas) is implemented due to time constraints. Although a long version yields a higher level of reliability, a shorter version correlates highly with the longer counterpart (between 0.91 and 0.94) according to Rest (1990). The instructions and survey instrument for the MJT were obtained directly from Geog Lind upon receiving the permission to use them in academic research.

Ethical ideology was measured using the Ethical Position Questionnaire (EPQ) developed by Forsyth (1980). The EPQ consists of 20 statements; the first 10 items measure ethical idealism, and the remaining 10 ethical relativism. Respondents were asked to rate the degree to which they agree or disagree with each

statement on a 9-point scale anchored by 1 (completely disagree) and 9 (completely agree). After data collection, the survey participants were categorized into four groups (situationists, absolutists, subjectivists, and exceptionists) by their scores on ethical relativism and idealism scales. The median values in our sample were 6.2 and 5.9, respectively, and those with equal to or higher than the median value were considered high, while those with lower than the median value were considered low. The high idealism group scored the mean of 7.24 on the ethical idealism scale, while the mean of the low idealism counterpart was 5.11. On the ethical relativism scale, the high relativism group scored the mean of 6.69, while the low relativism counterpart scored the mean of 4.61.

### Sample

The research sample was drawn from the undergraduate students enrolled in the introductory marketing course at a large southeastern, state-funded university. The students participated in two 30-minute sessions of the survey in exchange for extra credit. The short-form DIT was used in the first part of the survey, and the same participants took the second part of the survey consisting of the MJT and EPQ 1 week later.

## Results

### Data quality

A total of 134 students participated in the survey. The final sample size was 117 after case-wise deletions of participants with missing variables and/or a high M-score (13.3 and above) in the DIT scale following Rest’s (1990) recommendation. These latter responses are termed unreliable as higher M-scores represent the participants’ tendency to endorse statements for their pretentiousness rather than meaning. The final sample consisted of 55 males and 62 females. The MJT took less time to administer; our study average was 8.7 minutes as compared to 14.5 minutes for the DIT short-form.

The means, standard deviations, and correlation matrix of the four variables for the final sample are

reported in Table III. For the DIT, the two checks on scale reliability for the DIT followed immediately after data collection. Low M-scores led to deletion of 15 questionnaires (representing 11.4% of the total sample). All questionnaires passed the second reliability measure that tested the consistency of a participant's rating and ranking scores. According to Rest et al. (1997), on average roughly 10–15% of the tested participants fail one reliability check or another.

The DIT P-score computed for each participant had a mean value of 24.82 (SD=14.14), ranging from 6.67 to 63.3. This mean is very low, equivalent to that of high school students according to Rest's (1990) manual. It is not unusual to see low P-scores; some other studies, Marnburg (2001) for example, have reported much lower scores in mature adults than those specified in the manual. In addition, given that the age of the undergraduate students in the present sample 19–20 is not much greater than that of high school students, the low mean score is not too surprising. Furthermore, according to Rest's (1986b) classification of non-principled or principled individuals with P-score of 50 points as a threshold, only seven individuals (7.5%) in our sample can be said to be in post-conventional stages of CMD, as compared to Kohlberg's (1969) estimate of 20–25% of adult population.

Another CMD scale, the MJT's C-score was computed following the guideline and SPSS syntax provided by Georg Lind himself. According to Lind's MJT manual (1999), scores from one to nine out of 100 possible are considered low; 10–29 are medium; 30–49 are high; and scores of 50 are considered very high. The mean C-score in the present sample was 18 (SD=14), ranging from 1 to 69, with 29.1% classified as low. The MJT C-score from our sample, therefore, fits in the normal range.

Both the ethical idealism and relativism scales of EPQ had adequate levels of internal consistency. Cronbach's  $\alpha$  was 0.86 for both scales.

### Findings

We first examine whether the two measures of CMD are related to each other. The correlation between DIT P-scores and MJT C-scores was significant and positive ( $r = 0.24$ ). The moderate, yet positive correlation is consistent with Lind (1995) and Rest et al. (1997) who report 0.20–0.53 correlations in various samples. Correlation of 0.24 in our sample indicates that the two scores share only about 6% of variance in common. The fact that the two CMD scales have been developed based on dissimilar interpretation of moral development is verified empirically that the scales indeed do not share much in common.

As shown in Table III, the DIT P-score is not correlated significantly with two orientations of ethical ideology: ethical idealism and relativism. The finding is consistent with Forsyth's (1980) contention that ethical ideology dimensions and CMD stages are unrelated because the content of moral principles determines the individual's ideology, while the reasons for accepting the principles determine his or her stage of moral development. The MJT C-score, however, is related negatively with ethical idealism ( $r = -0.17, p < 0.05$ ). The correlation value is very similar to that of Ho et al. (1997), who report a  $-0.15$  ( $p < 0.05$ ) correlation between the DIT P-score and ethical idealism for the *principled* subsample.

Figure 1 further scrutinizes potential differences between the DIT P-score and the MJT C-score. To examine specifically the mean differences based on

TABLE III  
Means, standard deviations, and correlation matrix (\*, significant at  $p < 0.05$ )

	Mean (SD)	DIT P-score	MJT C-score	Ethical idealism	Ethical relativism
DIT P-score	28.89 (13.30)	1.00			
MJT C-score	17.95 (13.94)	0.24*	1.00		
Ethical idealism	6.23 (1.27)	-0.06	-0.17*	1.00	
Ethical relativism	5.79 (1.37)	-0.16	0.11	0.05	1.00



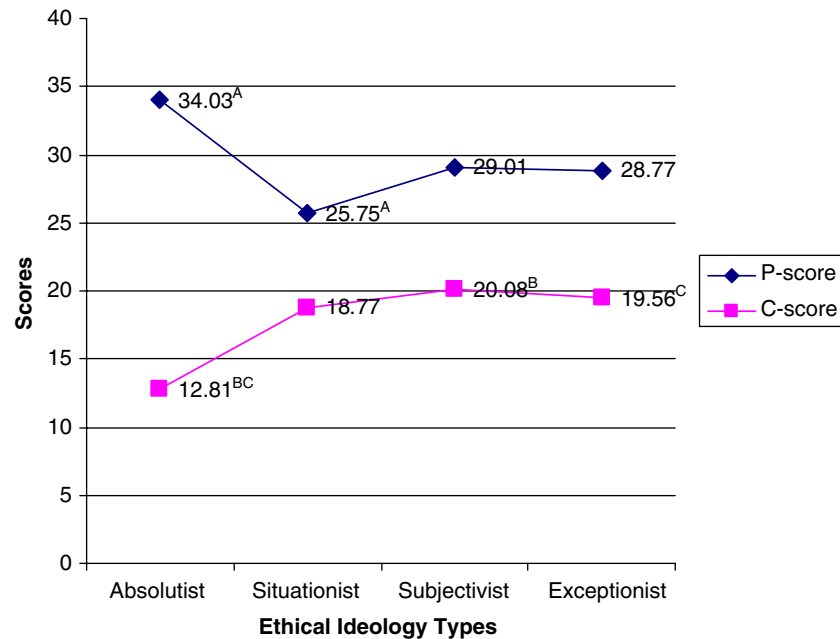


Figure 1. Mean values across ethical ideology types (values with common superscripts are significantly different at  $p < 0.05$ ).

the ethical ideology taxonomy, survey participants were classified into four subgroups using median-splits: absolutists ( $n=27$ ), situationists ( $n=36$ ), subjectivists ( $n=28$ ), and exceptionists ( $n=26$ ). For both scales, there are some distinct differences across these subgroups. For the mean DIT P-score is significantly different between absolutists (mean=34.03) and situationists (mean=25.75). As for the MJT C-score, we found that absolutists score significantly less (mean=12.81) than did the subjectivists and exceptionists counterparts (20.08 and 19.56, respectively). The distinct contrast is found for the absolutist subjects, who believe that desirable consequences will necessarily follow from appropriate actions and that *ends* do not justify *means*. Our results show that these subjects score the highest DIT P-scores, while they score the lowest in the MJT C-score. Our interpretation of the findings is discussed below.

## Discussion

The key finding is found in the absolutist subjects who scored the lowest in the MJT scale, but the highest in the DIT scale. This is particularly surprising because both scales are designed to measure

the degree of moral development (i.e., CMD), which seems to suggest the highest regards for deontological norms. The present research demonstrates that it is the case only for the DIT.

The DIT P-score's correspondence with ethical ideologies is significantly higher for absolutists than situationists. Though both subgroups endorse universal moral rules (i.e., ethical idealism), the key difference between the two is in their degree of ethical relativism. Situationists advocates situational analysis of each act in moral judgment, while absolutists assume that best possible outcomes can be attained by always following universal moral rules. The result indicates that the DIT's stage preference approach to CMD measurement is more consistent with absolutists than the situationist counterpart.

The results pertaining to the MJT C-scores are yielded an interesting pattern. Since the MJT is designed to measure CMD by ethical judgment consistency across (1) ethical situations and (2) pro- and con-arguments for the protagonist's action taken in the situation, the findings that absolutists score significantly less than subjectivists and exceptionists are not too surprising. Absolutists may be able to consistently apply universal moral values across ethical situations. However, because absolutists make moral

judgment assuming that best possible outcomes can always be achieved by adherence to absolute principles, their judgment may only be in agreement or disagreement with a particular action of the protagonist in each ethical dilemma, and not both.

For the MJT, our finding suggests that appreciation for a certain moral value shown by consistent rating (between pro and con statements) need not be consistent with universal moral principles. This seems to be in line with Georg Lind's emphasis that his MJT scale and its C-score represents one's cognitive structure, not affects (i.e., attitudes). As Lind (1998, p. 6) notes,

"Invariably, most subjects prefer sophisticated moral arguments when assessing factors favorable to their own position ... It is only when asked to evaluate a position contrary to one's own that the importance of cognitive structures emerges. One may prefer universal norms of justice (a high affective score) but be unable to use them consistently, particularly when evaluating the moral position of an adversary (a low competence score)."

Overall, the two dissimilar approaches of the DIT (stage preference) and the MJT (stage consistency) can be distinctly observed in one's ethical ideology. Our findings indicate that those individuals who subscribe to moral absolutes (i.e., absolutists) are likely to score low on the MJT scale, while they may score higher on the DIT scale. The higher DIT P-scores indicate higher preferences for deontological principles, as compared to relativistic view (i.e., situationists). The MJT's stage-consistency approach clearly focuses on consistency of moral reasoning, and it may be very difficult for the absolutists, who believe that the best outcomes can be attained by following universal moral rules, to view from an opposing argument and be able to consistently follow the same value.

Knowledge of CMD undeniably has enormous implications in understanding one's moral decision-making and subsequent behaviors. Trevino (1986, p. 602) notes, "an individual's level [of CMD] strongly influences the person's decision regarding what is right and wrong; the rights, duties, and obligations involved in a particular ethical dilemma." The present study demonstrates a clear distinction between the DIT and the MJT. Although they both aim to measure CMD, their dissimilar approach leads to

differences in scores with distinctly dissimilar implications. Those who score highly on the DIT scale *prefer* principled considerations in making moral decisions, while those who score highly on the MJT scale are able to consistently exhibit a certain moral quality. We advise researchers who consider incorporating CMD in their ethics study that they consider these differences when deciding which scale to use.

### Limitation and future research direction

The findings from our research rely on a homogeneous (19 to 20-year-old undergraduate students) and relatively small ( $n=117$ ) final sample. This could have possibly confounded the results and hence limit generalizability of our findings. Future research may extend the present study to further analyze the differences between the two scales using larger and more diverse samples. Nonetheless, our initial attempt to empirically compare the two distinctly different approaches of CMD, both in theory and measurement, sheds light on how different they really are in terms of what their scores represent.

The present research utilized ethical ideology as comparison guides, and it is an attitudinal measure. It may be interesting to empirically compare whether the two would lead to different conclusions if both were used simultaneously to predict moral behavior instead. Previously, the link between CMD and moral behaviors has been weak and often mixed. Distinguishing CMD stage-preference and stage-consistency approaches may help better establish the link in future studies.

### Notes

<sup>1</sup> Note that the MJT uses two ethical dilemmas, as opposed to three (short-form DIT) and six (traditional DIT) dilemmas.

<sup>2</sup> Adopted from Rich and Devitis (1985, p. 88).

<sup>3</sup> Adopted from Forsyth (1981, p. 219).

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