A Study of the Relationship Between Personal Values and Moral Reasoning of Undergraduate Business Students

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ABSTRACT. This study examines values and value types as well as scores in levels of moral reasoning for students enrolled in a business program. These two factors are measured using the Schwartz Personal Values Questionnaire and the Defining Issues Test 2. No statistically significant differences in levels of moral reasoning, rankings of values, and value types could be attributed to gender. However, eight significant correlations between value types and levels of moral reasoning provide evidence that a systematic relationship exists. The relationships are not only internally consistent but also consistent with the model of values based on motivational goals (Schwartz S. H. and K. Boenke: 2004, *Journal of Research in Personality*, **38** 230–255).

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Introduction

The focus of this research study is to provide further empirical evidence of a relationship between personal values and cognitive moral development. Weber (1993) investigated how these two factors could be theoretically and empirically linked. Using self-report questionnaires, Weber sampled business managers to measure each factor and reported preliminary evidence that systematic correspondence between sets of values and levels of moral reasoning do exist. He concludes that "through this linkage a more complete representation of the cognitive process emerges, enabling researchers to better understand, explain, and possibly predict decisions and behavior." (1993, 468). The research question

motivating our empirical study of business students was what relationship exists between personal values and levels of moral reasoning?

Cognitive moral development influences the process of ethical judgment, a consistent empirical finding (O'Fallon and Butterfield, 2005). O'Fallon and Butterfield (2005) remarked that most empirical research investigating ethical decision-making has been based on Rest's (1986) four-step linear model. The first step is identification that a moral issue is present in a situation. Second is a moral judgment of what constitutes ethically defensible behavior. Third is to give moral values priority above other values to establish moral intent. Fourth is effective expression of moral behavior (Abdolmohammadi et al., 1997). They also pointed out some weaknesses in assuming that Rest's (1986) four-step linear model is either a complete or accurate foundation upon which to conduct empirical research. They suggested, among other things, that more research is required on the influence of values on ethical decision-making. This is the focus of our research.

To assess level of cognitive moral development, the DIT2 self-reporting questionnaire developed by Rest and based on theory introduced by Kohlberg (1969, 1975, 1984), was used in this study. In the guide for the DIT2, Bebeu and Thoma (2003) note it is an instrument to report on moral judgment, thus this study provides evidence of a relationship between values and the act of making a moral judgment as scored by a measure of cognitive moral development. As Rest's model illustrates, however, moral judgment is only one part or dimension of a process culminating in an individual's observable behavior.

Rokeach (1967, 1969, 1973, 1979) maintained that an individual's behavior is shaped by his or her personal values, ways of being and acting that are seen as desirable or ideal. He produced a widely used self-reporting instrument that Weber (1993) administered in his study, which ranks values and sorts them into four sets. Williams (1968) argued that the value systems (types) or sets of values are useful for explaining behavior. Feather (1988, 2003) determined that personal values are at the core of an individual's personality and influence, among other things, the individual's judgments that in turn influence behavior. Jones (1991) also theorized that the likelihood individuals would engage in unethical behavior depends partly upon their personal values, which influence

their evaluation of actions, moral judgment in Rest's model. Shalom Schwartz developed a different typology of 10 value types. Building on Rokeach, Schwartz produced the Schwartz Personal Values Questionnaire (SVQ) that measures both the ranking and the rating of fifty-six values (Appendix 1). The values held by business students participating in this research were identified and measured using the SVQ. Results indicate a relationship exists between sets of personal values and levels of moral reasoning as measured by the SVQ and DIT2, respectively.

Theory

This section begins with a summary of the theory of the structure of values and their relationship to different behaviors, developed by Schwartz and his colleagues, including relevant empirical results based on data obtained using the SVQ and concludes with a brief discussion of the development of the DIT2. In their meta-analysis of empirical research on ethical behavior in business students, Borkowski and Ugras (1998) reported how stable some statistically significant findings have been over time. One notable exception, however, was a change over time in the students' ethical attitudes. Although this is an interesting result, attitudes are evaluations of some social object (e.g. marriage) predicated on durable, abstract values (Hitlin and Piliavin, 2004). Values, remarked Hitlin and Piliavin (2004), are both poorly conceptualized and poorly measured. For the purposes of this study, we have adopted the theory developed by Shalom H. Schwartz and his colleagues who have established empirically that various values as well as other elements motivate behavior.

Schwartz (1992) is taken as a starting point to describe values and their structure, but as Mark Schwartz (2005) noted, others have theorized the extent to and point at which values influence moral behavior. Schwartz (1992) positioned values as an expression of and motivation for the fulfillment of basic human needs to sustain an individual's biological, and social well-being and functioning. Schwartz's theory of basic human values identifies fifty-six values that cluster into 10 motivationally distinct value types (Spini, 2003). He incorporated features earlier theorized by Rokeach (1973) into his definition: values "(1) are concepts or beliefs, (2) pertain to desirable end states or behaviors, (3) transcend

specific situations, (4) guide selection or evaluation of behavior and events, and (5) are ordered by relative importance''(1992, p. 4).

Through extensive empirical research in 61 countries, Schwartz has produced persuasive evidence that 44 of the 56 values in the SVQ have the same meanings across cultures and can be clustered by the motivational goal they express (Bardi and Schwartz, 2003; Schwartz and Sagiv, 1995; Struch et al., 2002). Different clusters of values form a stable, structured continuum of motivation of different behaviors to achieve three distinct goals (Schwartz and Boenke, 2004). These goals are: biological and personal well-being or self-interest; coordinated social interaction; demands of group functioning (Schwartz and Sagiv, 1995). Thus, the values cluster clearly according to the intent to achieve one of three distinct goals (Appendix 2). The research results reported herein, focus on the relationship of values to judgment, which in the Rest model precedes intent but follows identification of the presence of moral issues.

Spini (2003) built on the results of Schwartz and Bardi (2001), using a different methodology. Spini's results support Schwartz and Bardi's conclusions that the structure of clusters of values is not stable for all values, but Spini (2003) reported variation among different values. While the variations found by Spini could result in different content of value types, the value types and motivational continuum do not change. Based on those values with similar cross-cultural meanings, Struch et al. (2002) reported that all but eight specific values have similar importance for males and females. With respect to their meanings, for males and females no significance was reported for all 10 value types and their motivational relationships. A few inconsistent and small differences in the meaning of individual values did emerge among males and females that were statistically related to the main effect of culture rather than gender. Bardi and Schwartz, 2003 have also applied empirical evidence to produce a typology map of behaviors that are consistent with clusters of values.

Schwartz' model with both empirical and statistical support, illustrates the existence of different motivational goals associated with different sets of values but as yet theory has not been proposed to explain how people prioritize among values to

decide to achieve for example a self-enhancement rather than a self-transcendence goal. How values arise, change, and are expressed in behaviors remains controversial. To simply identify and measure the presence of values alone, will not reveal the mechanism whereby people translate values into behavior. In part, this is because values comprise only one of many elements influencing behavior, more than one unobservable value contributes to observable behavior (Bardi and Schwartz, 2003), and values motivating behavior may often be in conflict (Schwartz and Boehnke, 2004).

In 2004, Schwartz and Boehnke published their article, which statistically confirmed the quasi-circumplex structure of values as a motivational continuum of 10 distinct value types comprised of different clusters of 56-values (Figure 1). In alphabetical order, the value types are: Achievement, Benevolence, Conformity, Hedonism, Power, Security, Self-Direction, Stimulation, Tradition, and Universalism. Schwartz has cautioned that one limitation of this model is that the statistical methods used to cluster values into value types mean the boundaries among clusters are fuzzy rather than sharp and from time to time two value types may collapse into one or the values content of a value type may differ slightly from the model. The robust empirical evidence and clarity of statistical support for the theory described in Schwartz and Boehke
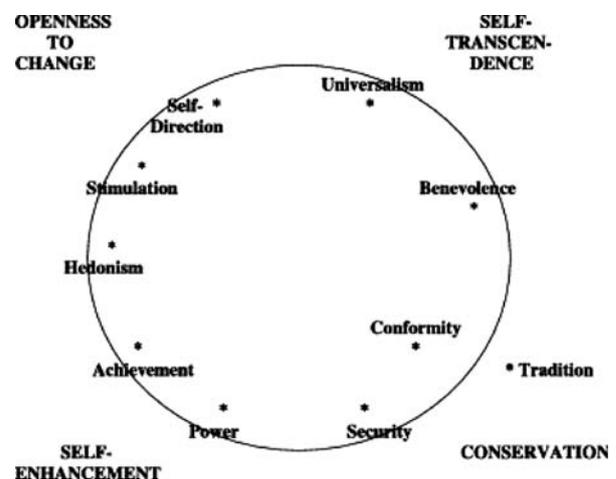

Figure 1. Quasi-circumplex model of the motivational structure of value types (*Source*: Schwartz and Sagiv, 1995).

(2004), determined the use of the SVQ in this study of business students.

It is important to note that visually, the 10 clusters of values, called value types, are not equidistant from one another. Rather, their circular arrangement depicts both the proximity among value types and those diametrically opposed to one another. Proximity indicates that different value types motivate similar behaviors. Conformity and tradition, are placed in close proximity to each other since they share the same broad motivational goal, subordinating self in favor of socially-imposed limitations (2004, 236) but tradition has a unique position external to the circular perimeter. Schwartz and Boehnke (2004, 251) explain that this visually depicts empirical results of significantly different correlations of these two value types with the personality traits, religiosity, political affiliation, and sharing of values between parent and child. It also illustrates that values comprising conformity arise when individuals subordinate their concerns to people with whom they frequently interact. In comparison values comprising tradition motivate subordination of private concerns to more abstract social objects such as religion, cultural customs and ideas (Schwartz and Boehnke, 2004, 235). As a result, tradition has less influence than conformity on the achievement of the same motivational goal.

The second important observation is that the two opposed sets of meta-value types labeled in capital letters, depict conflicting goals obtained by different, proximate clusters of motivational value types. The four meta-value types are openness to change in opposition to conservation and self-transcendence in opposition to self-enhancement. The meta-value type, openness to change, is comprised of the value types of stimulation and self-direction. In contrast, conservation is comprised of security, conformity, and tradition. The meta-value type conservation reflects a preference to achieve predictable status quo outcomes versus uncertain and unpredictable (openness) outcomes to change the social status quo. The second set of meta-value types is self-transcendence comprising universalism and benevolence in contrast to self-enhancement, comprising power and achievement. Where benevolence refers to the goal of improving the welfare of a group of individuals close to oneself, universalism refers to all individuals. The meta-value type of self-transcendence reflects a preference to achieve the welfare of a broad social group even at the expense of personal well-being versus self-enhancement motivated to achieve personal self-interest at the expense of the welfare of others.

Self-transcendence includes the value type universalism, comprising eight values: broadminded, wisdom, social justice, equality, a world at peace, a world of beauty, unity with nature, protecting the environment, and the value type benevolence, comprising five values: helpful, honest, forgiving, loyal, responsible (Giacomino and Akers, 1998; Schwartz and Sagiv, 1995). Self-enhancement includes the value type power comprising four values: social power, authority, wealth, social recognition, and the value type achievement comprising four values: successful, capable, ambitious, influential (Giacomino and Akers, 1998; Schwartz and Sagiv, 1995). While it appears their current model clusters moral values as distinct from others, there is no claim made that the values comprising self-transcendence in fact motivate moral behavior rather than self-interested behavior. In fact Schwartz and colleagues have emphasized that values are only one of several elements affecting the selection of motivational goals. Schwartz and Boehnke (2004) caution that further testing of their model is required to confirm that some value types are more influential than others. While this explains the typology of value types, it is the relationship of values with cognitive moral development that we are investigating.

For the purposes of this study, we have adopted the theory of cognitive moral development proposed and developed by Kohlberg and his colleagues. In a recent article Forte (2004) summarized Kohlberg's developmental theory of moral cognition from which Rest developed and refined the DIT2. Meta-analyses indicate one interesting finding that when a statistically significant difference is reported, gender is positively related to higher levels of moral reasoning with women exhibiting higher levels than men (O'Fallon and Butterfield, 2005; Loe et al., 2000), confirmed by a meta-analysis of the subset of empirical studies of students enrolled in business programs (Borkowski and Ugas, 1998). When added to the empirical findings that no significant differences exist in the values comprising value types and their relationship on the motivational continuum attributable to gender, it is reasonable to revisit this

empirical finding to assess how either value types or gender may influence levels of moral reasoning.

According to Kohlberg, there are three levels of moral development, each of which has two stages, the second of which is more advanced. In the first or preconventional level, physical consequences determine the good or bad character of an action and the central concern is satisfying one's own needs. At stage one people neither know nor understand either moral rules or social conventions (Campbell, 2005). At stage two moral judgment reflects an instrumental (means–end) achievement of self-interested goals wherein pragmatism and hedonism prevail (ibid).

The second level of moral reasoning, Campbell (2005) explains, is the conventional level, in which judgment follows from a concern to please others and meet their approval. The prevailing value is conforming to group norms that lead to behaving in ways that sustain these norms. At stage four, a law and order orientation prevails, in which moral reasoning follows what is deemed to be a consistent set of codes and procedures applicable to all members of society (Rest, 1979). At this stage people both know and understand some fixed rules (Campbell, 2005). Kohlberg considered that most adults in Western, urban society typically reason at stage three or four (Rest, 1979). Weber (1993) adds that a stream of empirical research in this area has shown that "ethical decision-making and intended ethical behavior generally increase as individuals utilize higher stages of moral reasoning (1993, p. 441).

The third, post-conventional level firmly distinguishes morality from convention and individuals understand that convention and social order is both preceded and superceded by moral principles (Campbell, 2005). At stage five people understand and behave according to a mutable, consensus, social contract that smoothes the achievement of mutual social benefit that subordinate personal beliefs of morality as relativistic and immaterial to sustaining social well-being. At stage six, moral reasoning depends upon the application and authority of immutable, universal ethical principles of justice, equal rights, and respect for an individual's dignity (Campbell, 2005). The highest level of moral reasoning measured, however, is a combination of stages five and six (Bebeau and Thoma, 2003).

Campbell (2005) has pointed out that Kohlberg based his developmental theory on the philosophical work of Kant, which accepted a specific definition about what constitutes morality, the most relevant of which is the assumption of justice as the most important expression of morality. Campbell also noted that Kant's moral philosophy assumed people generally understood Christian religious teachings emphasizing the universal duty to be honest, truthful, charitable, and so on. Insisting that morality was established by intent to achieve conformance to duty, only acts motivated by duty and never acts motivated by pursuit of self interest could be defined as moral. Campbell also made it clear that this explained why Kohlberg's most advanced stage of moral cognition or thought relied upon the application the principle of justice.

Weber's suggestion that moral reasoning forms a bridge between personal values and actual decisions may be a helpful way to link not just the approach of Rokeach and Kohlberg, but also that of Schwartz and Rest who build upon these foundations provided by their predecessors. In essence, then, Schwartz has developed and applied the work of Milton Rokeach, just as James Rest has developed and applied the work of Lawrence Kohlberg. A next reasonable step in researching the connection and application of personal values and moral reasoning to human behavior is to attempt to formulate a hypothetical connection between the quadrants of Schwartz's circumplex model of values as applied in his values questionnaire (SVQ) and Kohlberg's stages of moral reasoning specifically as applied in James Rest's Defining Issues Test (DIT2).

Theoretically, the empirical results of this research study analyze the data from questionnaires that have different underlying philosophical assumptions about what constitutes morality. Where, according to Campbell (2005) the DIT2 assumes that duty to apply the supreme universal principle of justice which underlies moral behavior, Schwartz and Boehnke's (2004) model, based on empirical results, places social justice as one of eight values comprising the value type of universalism that combined with the five values comprising the value type, benevolence constitutes the meta-value type of self-transcendence or moral values. Thus, while a relationship among values and level of moral reasoning that influences moral intent is hypothesized, conflicting theories mean in this study we do not

hypothesize any specific relationship with either value or meta-value types.

Research hypotheses

The following hypotheses concerning gender, values, value types, and moral reasoning are proposed for undergraduate business majors based on the literature review. No previous research was found that addressed the link between moral reasoning (measured by the DIT2) and personal values and value types (measured by the SVQ), and we test for this relationship in this study.

> *H1*: Female business majors have different levels of moral reasoning than males

Our first hypothesis arises from opposed theories and mixed evidence presented in empirical studies investigating the effect of gender on the level of moral reasoning (O'Fallon and Butterfield, 2005; Loe, Ferrell and Mansfield, 2000). We anticipate a statistically significant difference but do not anticipate the direction of that difference.

> *H2*: Female business majors have different values than males

One empirical study has reported significant differences in values and value types between accounting and non-accounting majors and between female and male students (Giacomino and Akers, 1998). Borkowski and Ugas (1998) report that prior research on business students has consistently revealed no significant differences attributable to business major. Using a conservative interpretation of Struch et al. (2002) that did not include a Canadian sample, we also hypothesized:

> *H3*: Female business majors have different value types than males

Interestingly, however, meta-analyses of cognitive moral development have consistently reported that where statistically significant differences have been found, females exhibit higher levels of moral reasoning than males. If, as Schwartz and Boenke's model illustrates, there is a separate set of value types associated with moral judgment,

namely universal and benevolence comprising self-transcendence, in contrast to those comprising self-enhancement, then it is reasonable to test for a relationship among value types and levels of moral reasoning. The different theoretical and empirical bases for the SVQ and DIT2 suggests that it is premature to test specific relationships of, for example, the preconventional or personal interest level of moral reasoning with the set of self-enhancement value types until the existence of empirical evidence of any relationship whatsoever can be established. The fourth hypothesis tests for the presence of a relationship and does not assume what the nature of that relationship might be:

> *H4*: Moral reasoning and value types are related for business majors

In the methodology section, which follows we present detail on the content of the two questionnaires used to measure personal values and levels of cognitive moral reasoning. To review the specific content of both values and value types, please refer to appendices 1 and 2.

Methodology

The methodological instruments used for this research are the Defining Issues Test 2 (DIT2) and the Schwartz's Personal Values Questionnaire (SVQ). The DIT2 is a recent version of the DIT developed by the late James Rest of the University of Minnesota Center for the Study of Ethical Development. The DIT2 test is a pencil and paper questionnaire containing five ethical dilemmas. For each of the dilemmas, various issues are outlined and the respondents are asked to rate and rank the issues in terms of importance in making their decisions. Additional information was collected on age, gender, level of education, and political conviction.

Development Indices, which include moral schema scores and the N2 Scores (defined below), are computed by the University of Minnesota Center for the Study of Ethical Development. Three moral schema scores are provided for each respon-

dent: (1) the Personal Interest Schema Score, which represents the proportion of items selected that appeal to Stage 2 and Stage 3 considerations; (2) the Norms Schema Score, which indicates the proportion of items selected that appeal to Stage 4 considerations and (3) the Post-conventional Schema Score, which represents the proportion of items selected that appeal to Stage 5 and Stage 6 considerations. The P score is the sum of scores from Stages 5 and 6, converted to a percent. It is interpreted as the extent to which a person prefers Post-conventional moral thinking to the other two lower level of moral thinking.

The N2 index indicates the extent to which an individual is acquiring more sophisticated moral thinking and also gaining clarity about ideas that should be rejected for their simplistic or biased solutions. Thus it is the degree to which Post-conventional items are prioritized and the degree to which Personal Interest items (lower-stage items) receive lower ratings than the ratings given to Post-conventional items higher stage items).

The SVQ consists of fifty-six individual values, which are rated in importance by each of the responding student. Respondents are asked to circle a number on a scale of −1 to 7 that best describes the importance of each value as a guiding principle in the respondent's life. (See Appendix 1). Respondents are also asked to rank values in order of importance. Data was also gathered about age, gender, undergraduate major, years of full-time work experience and whether the respondents had taken an ethics course.

All fourth year business students enrolled in two compulsory courses of the business program at the University of Windsor were invited to participate in the study. A package containing the DIT2 test, the SVQ, and a covering letter from the researchers were given to the students. Because of the length of the tests (approximately 1 hour), the students were asked to complete the questionnaires at home and respondents were paid an honorarium of $10 as compensation for the time spent. A total of 163 responses were received from the business majors. Once the DIT2 tests were completed, they were coded and sent to the University of Minnesota Centre for the Study of Ethical Development for initial statistical analysis. The DIT2 scoring procedure calculates an M (meaningless) score and performs a consistency test on the respondents' questionnaires; subjects who failed these two tests are purged from the sample. Based on their M score, 22 students were purged from the sample and another 10 excluded because they failed to complete the SVQ. The total sample was 131 responses.

Results and analysis

Table I above presents information about the major, mean age, gender distribution, working experience, and the undertaking of a prior ethics course of the respondents. Approximately half of the 131 business majors who participated in the study 66 were accounting majors and the remainder reported other business majors such as marketing, management science, or management. Their mean age was 25 years and there were 66 females and 64 males. The respondents had an average of 1.82 years of work experience and 42 of them indicated that they had undertaken a prior ethics course.

TABLE I

Major, mean age, gender distribution, educational level, prior ethics course of business majors

	N	Minimum	Maximum	Mean	Std. Deviation
Major – Accounting = 0; Other business majors = 1	131	0	1	0.50★	0.50
Age	129	22	45	25.03	4.25
Gender – Female = 0; Male = 1	130	0	1	0.51★★	0.502
Work experience	128	0	20	1.82	3.22
Prior ethics course – No = 0; Yes = 1	128	0	1	0.33	0.47

★66 accounting majors, 65 other business majors, ★★66 females and 64 males

TABLE II

DIT2 means and standard deviations for schema scores and N2 score of business majors

Moral development index	N	Minimum	Maximum	Mean	Std. Deviation
Post–conventional score (P-score)	131	4.00	68.00	32.88	13.56
Maintains norms (stage 4)	131	4.00	62.00	29.86	12.19
Personal interest (stage 2/3)	131	6.00	64.00	30.46	13.05
N2SCORE	131	−2.62	66.61	29.95	14.40

Table II below shows the means and standard deviations for the moral schema scores and the N2Score of accounting and other business majors. In Table III, separate scores are shown for the male and female respondents.

T-tests reported in Table IV indicate that there was a marginal but statistically significant marginal difference in the means of P–scores for the males and females respondents (0.10). There were no statistically significant differences for the other scores, which could be attributed to gender. These results do not support H_1, which states that female business majors have different levels of moral reasoning than males.

Table V indicates the top and lowest quartile rankings of the 56 values for business students and Table VI presents the rankings of values according to gender. As shown in Table V, the three single values ranked most highly were: family security, true friendship, and healthy. These three values were all ranked above 5.6, indicating their importance to the business majors. The business majors in our sample placed great emphasis on the safety of their loved ones, maintaining genuine relationships in their lives

and keeping healthy both physically and mentally. The values honest, enjoying life and self–respect, ranked 4th to 6th were also rated close to 5.5, indicating that business majors placed almost as much importance on these values. The other values in the top quartile and all with a score above 5 were: freedom, intelligent, successful, loyal, capable, choosing own goals, meaning in life and responsibility.

These findings reveal that business majors report a balance between two of three motivational goals. The ratings and rankings of values show a balance between achieving individual success in their careers and personal enjoyment of life (successful, capable, enjoying life, freedom, choosing own goals), and achieving the smooth functioning of groups of people with whom they often interact (honest, loyal, family security, true friendship). Of the top ranked 15 values, all but four represent values that are stable across both gender and culture and comprise the 10 value types illustrated in Figure 1. None of these values, however, reflect the importance of universal or benevolence values that motivate an improvement of social relationships with all people.

TABLE III

DIT2 Means and standard deviations for schema scores and N2Score of male and female business majors

Index	Business majors	
	Males [n = 66]	Females [n = 64]
Post-conventional score (P-score)	31.16 (12.82)	35.07 (13.80)
Maintains norms (stage 4)	29.75 (12.96)	29.95 (11.56)
Personal interest (stage2/3)	32.15 (14.37)	28.61 (11.44)
N2SCORE	28.38 (13.76)	31.94 (14.74)

*Standard deviations are in parentheses

TABLE IV

T-tests for equality of means of male and female business majors

Index	Business majors	
	T-test	Level of significance (2-tailed)
Post-conventional score (P-score)	−1.67	0.10*
Maintains norms (stage 4)	−0.10	0.92
Personal interest (stage2/3)	1.55	0.12
N2SCORE	−1.42	0.16

*Significant (2-tailed) at 10% level

TABLE V

Value rankings for all business majors

Top quartile values			Lowest quartile values		
Values	Mean	Rank	Values	Mean	Rank
Family security	5.82	1	Influential	3.85	43
True friendship	5.69	2	Protecting the environment	3.79	44
Healthy	5.66	3	Preserving my public image	3.55	45
Honest	5.49	4	Respect for tradition	3.54	46
Enjoying life	5.48	5	Word of beauty	3.54	46
Self–respect	5.47	6	Authority	3.38	48
Freedom	5.37	7	Spiritual life	3.36	49
Intelligent	5.29	8	Daring	3.31	50
Successful	5.23	9	Accepting my portion in life	3.31	50
Loyal	5.19	10	Moderate	2.92	52
Capable	5.18	11	Unity with nature	2.91	53
Choosing own goals	5.17	12	Devout	2.88	54
Meaning in life	5.11	13	Social power	2.46	55
Responsibility	5.09	14	Detachment	2.40	56

This result is reinforced somewhat by the list of the lowest rankings of values. When universal values (protecting the environment, world of beauty, accepting my portion in life, unity with nature) were listed they were ranked among the lowest 15. The apparent lack of concern with which an individual rarely interacts was also reflected in the low ranking of respect for tradition and moderate. Both social power and authority have low rankings, and both these values comprise the value type, power, which may accurately reflect that power goals are as abstract and distant in motivation for final year university students in a business program as are universal goals.

The bottom three values were devout, social power, and detachment. Although devout was ranked 54th, it was rated 2.88 and hence considered to be of some importance to the business majors. Social power and detachment were rated below 2.5, indicating that the business majors had little interest in either exercising control over others or being detached from worldly concerns. These findings support the importance given by the respondents for true friendship and enjoying life (ranked 5th with a score of 5.48). Of the lowest ranked 15 values all but five represent values that are stable across both gender and culture and comprise the 10 value types illustrated in Figure 1.

Table VI reports no statistically significant differences in the ranking of the top 5 and lowest 5 values for both males and females. Both male and female business majors rank family security as the most important personal value, and detachment as the lowest personal value. Interpreted in the light of Struch, Schwartz, and van der Kloot (2002), it is persuasive evidence that fails to support H$_2$ that females have different values than males. This is not the case, however, for value ratings reported in Table VII.

Table VII below shows the value ratings by gender with significant differences. Appendix 1 indicates how ratings are assessed with 5–6 very important and 7 of supreme importance. Females rate and rank the personal values of equality, independent, national security, a world at peace, higher than do males at a statistically significant level (0.03, 0.05, 0.02, respectively). For females, mature love, the opportunity to choose one's own goals, and clean are marginally more important than to the males. On the other hand, for males, the value curious is the only statistically significant but marginally more important value rating than for females.

Of all single values with statistically significant differences, equality and mature love are values that are not stable in meaning across both culture and

TABLE VI

The top and lowest quartiles rankings of values for male and female business majors

Male business majors			Female business majors		
Values	Mean	Rank	Values	Mean	Rank
Family security	5.80	1	Family security	5.86	1
True friendship	5.68	2	Healthy	5.83	2
Healthy	5.48	3	True friendship	5.70	3
Self-respect	5.47	4	Freedom	5.55	4
Enjoy life	5.42	5	Honest	5.55	4
Honest	5.41	6	Enjoy life	5.53	6
Loyal	5.24	7	Self-respect	5.44	7
Freedom	5.21	8	Choosing own goals	5.36	8
Intelligent	5.21	8	Intelligent	5.36	8
Successful	5.15	10	Successful	5.33	10
Responsible	5.09	11	Meaning in life	5.31	11
Capable	5.08	12	Capable	5.27	12
Wisdom	5.06	13	Equality	5.23	13
Ambitious	5.02	14	Independent	5.22	14
National security	3.86	43	Influential	3.75	43
Protecting the environment	3.73	44	Curious	3.75	43
Daring	3.7	45	Preserving my public image	3.63	45
Respect for tradition	3.67	46	Accepting my portion in life	3.53	46
Responsible	3.61	47	World of beauty	3.45	47
Preserving my public image	3.45	48	A spiritual life	3.38	48
Authority	3.41	49	Respect for tradition	3.38	48
A spiritual life	3.33	50	Authority	3.36	50
Moderate	3.11	51	Daring	2.89	51
Accepting my portion in life	3.11	51	Unity with nature	2.84	52
Unity with nature	2.95	53	Devout	2.83	53
Devout	2.88	54	Moderate	2.73	54
Social power	2.48	55	Social power	2.41	55
Detachment	2.38	56	Detachment	2.41	55

TABLE VII

Value ratings of business students by gender with significant differences

Values	Group	Mean	Rank	*T*-test	Significance level
Equality	Males Females	4.68 5.23	23 13	−2.15	0.03★
National security	Males Females	3.86 4.59	43 29	−2.30	0.02★
World at peace	Males Females	3.98 4.67	37 27	−2.29	0.02★
Mature love	Males Females	4.59 5.13	26 17	−1.93	0.06★★
Independent	Males Females	4.74 5.22	21 14	−1.99	0.05★
Choosing own goals	Males Females	4.98 5.36	15 8	−1.66	0.10★★
Curious	Males Females	4.23 3.75	32 43	1.83	0.07★★
Clean	Males Females	4.12 4.61	34 28	−1.78	0.08★★

★Significant (2-tailed) at 5% level, ★★Significant (2-tailed) at 10% level

TABLE VIII

Value types by gender of business majors

Value types	Males [$n = 66$]	Females [$n = 64$]	T-test	Significance (2-tailed)
Achievement	4.79	4.87	−0.47	0.64
Benevolence	4.90	4.88	0.09	0.93
Conformity	4.81	4.80	0.08	0.93
Hedonism	5.19	5.16	0.16	0.87
Power	3.28	3.34	−0.24	0.81
Security	4.42	4.72	−1.61	0.11
Self-direction	4.64	4.74	−0.58	0.56
Stimulation	4.32	3.96	1.61	0.11
Tradition	3.34	3.29	0.24	0.81
Universal	4.14	4.24	−0.57	0.57

gender therefore are not in the set of values comprising the 10 value types reported on in Table VIII (Schwartz and Bardi, 2001). It is interesting to note that family security is highest ranked and rated by both genders and females also rate national security above merely important. Males rate the value, national security above important. Both these values comprise the value type security, which is a component of the meta-value type conservation.

Table VIII shows the value types of the business majors by gender. Recall, that of the 56 values empirical evidence has been provided that only 44 have stable meanings across both culture and gender.

Struch et al. (1998) produced value types based on values whose meanings were stable across both gender and culture. There were no statistically significant differences in the value types attributed to gender. These results for business majors support results of Giacomino and Akers (1998) for accounting majors, but fail to support H_3.

Three values comprising the value type self-direction are listed in Table VIII. Self-direction is one of the value types comprising the meta-value, openness to change, which is the polar opposite of the meta-value type of conservation. Of the eight value ratings that are significant, four are only marginally significant (below 0.05) and of the remaining four, two are not stable across culture and gender. On the basis of only two of 56 statistically significant differences for stable values, this result provides further evidence that fails to support H_2 that females have different values than males.

P–scores

Table IX reports results where P-scores are the dependent and value types the predictor variables.

Two value types, power (at 0.069) and tradition (0.001) exhibit a significant correlation with the post-conventional level of moral reasoning. In the Schwartz model, the value type of tradition refers to abstract, universal social entities such as marriage. A

TABLE IX

Regression analysis-dependent variable is P-scores of business majors

Predictors	Unstandardised coefficient	Standardised coefficient (β)	T-Statistic	p-value 2-tailed
Achievement	−0.43	−0.03	−0.25	0.802
Benevolence	−1.19	−0.09	−0.66	0.510
Conformity	−1.31	−0.106	−0.73	0.469
Hedonism	−0.22	−0.02	−0.19	0.848
Power	−1.96	−0.19	−1.83	0.069★★
Security	0.436	0.03	0.28	0.779
Self-direction	1.88	0.13	1.02	0.31
Stimulation	−0.22	−0.02	−0.18	0.86
Tradition	−3.81	−0.35	−3.25	0.001★
Universal	0.76	0.06	0.39	0.697
Constant Parameter	54.35		7.34	0.000★

★Significant at 5% level, ★★Significant at 10% level; $N = 131$; R-Square = 0.212; Adjusted R-Square = 0.147

statistically significant (at 0.001) and negative relationship of the value type tradition to the highest stage of moral reasoning scored by the DIT2 can be explained in several ways.

First it may arise because respondents lack concern for maintaining support for social ideas about abstract social entities and cultural customs. This analysis is internally consistent with those reported by Tables 5 and 6 wherein the values comprising the value type tradition are ranked among the lowest 15 of the 56. Another explanation is that tradition represents a mutable social contract and this social contract is currently being renegotiated so that it is unclear what rules of conduct traditions such as marriage and religion represent, making it difficult for our respondents to rate and rank the importance of values comprising this value type.

Another explanation arises from scrutiny of Figure 1. The relationship indicated by tradition is consistent with the motivational model of values that places this value type closer to the self-enhancement meta-value type than to the self-transcendence value type.

There is some theoretical basis to expect a relationship with meta-value types, if it exists, would in some way link self-transcendence with the P-score, measuring the highest levels of moral reasoning. Any relationship with a value type distant from with the meta-value of self-transcendence in theory would be negative rather than positive because tradition is more proximate to meta-value of self-enhancement,

the polar opposite of self-transcendence. Thus this result supports H_4 that a relationship exists between value types and levels of moral reasoning.

Power as negatively related to P-score (statistically significant at .069) is easily explained because it is a value type that would be converted by the personal interest level of moral reasoning into acts motivated to achieve and sustain self-enhancement. Power as defined by Schwartz is dominance over others, not justice for others, especially those who are vulnerable. In the semi-circumplex model the meta–value type of self-enhancement is characterized by the power value type. Our results are consistent with the theorized positioning of power in the semi-circumplex model. This result provides support for H_4 that a relationship exists among value types and levels of moral reasoning. The presence of statistically significant relationships and their direction are theoretically consistent with current interpretations of both the Schwartz and Rest models.

Maintaining norms

Table X reports the Maintaining Norms scores as the dependent variable with value types as the predictors.

There are two statistically significant predictors, the value types of Conformity (0.044) and Universal (0.042). The value type of universal, combined with

TABLE X

Regression analysis–dependent variable is maintaining norms scores of business majors

Predictors	Unstandardised coefficient	Standardised coefficient (β)	*T*-Statistic	*p*-value 2-tailed
Achievement	−0.59	−0.05	−0.36	0.721
Benevolence	1.03	0.08	0.59	0.554
Conformity	3.51	0.32	2.03	0.044★
Hedonism	0.09	0.01	0.08	0.934
Power	1.12	0.12	1.10	0.28
Security	0.52	0.05	0.35	0.725
Self-direction	1.69	0.13	0.96	0.34
Stimulation	−1.63	−0.17	−1.40	0.163
Tradition	0.11	0.01	0.10	0.922
Universal	−3.82	−0.32	−2.06	0.042★
Constant parameter	18.73		2.64	0.009★

★Significant at 5% level $N = 131$; *R*-Square = 0.11; Adjusted *R*-Square = 0.03

benevolence forms the meta-value type of self-transcendence. The negative sign reflects the lower level of moral reasoning wherein people are most concerned with smooth functioning of frequent social relations with those close to them rather than achieving improvement in the welfare of all people. The result does support H_4.

We are cautious because those values reported in Tables 4 and 6 that comprise the value type universal are ranked among the lowest 15 of the 56 values, although they are still rated as important. Moreover, this conservative interpretation of Table X is consistent with Table VII that indicates statistically significant gender differences at the 0.05 level for the values equality and world at peace with females scoring higher than males, also part of the value type universal. Values comprising benevolence (honest, loyal), which is the second value type of the meta-value type of self-transcendence rank in the top 15 (see Table V). Thus while the statistically significant result and the negative predictive value both support H_4, it is unclear how meaningful the result is.

Conformity value type along with tradition and security comprise the meta-value of conservation. The value type, conformity, is positively related to the maintaining norms level of moral reasoning (statistically significant at the 0.044 level). The results suggest a correspondence between the maintaining norms or law and order level of moral reasoning and the meta-value of conservation. Conformity achieves the motivational goal of smoothing the functioning among individuals with whom individuals interact closely and frequently. When individuals conform to the norms of their proximate group they fail to exercise the independence to critically assess these norms and whether or not group functioning is achieved to the detriment of the welfare of a broader social group.

Conformity more strongly influences the achievement of motivational goals than does tradition yet does not conflict with the value type, security. Interestingly, while the individuals values comprising security were important to both males and females, the statistically significant correlation is with conformity not security. This result suggests that further research may more profitably pursue correlations of the value types and meta-value types rather than single values with levels of moral reasoning. These results are internally consistent with the statistically insignificant but negative predictive value of conformity and the P-score and the statistically insignificant but positive predictive value of universal and the P-Score reported in Table 9. This result supports H_4 that a systematic relationship exists between value types and levels of moral reasoning.

Personal interest

Table XI presents the Personal Interest scores as the dependent variable with value types as the predictors

TABLE XI

Regression analysis-dependent variable is personal interest scores of business majors

Predictors	Unstandardised coefficient	Standardised coefficient (β)	T-Statistic	p-value 2-tailed
Achievement	1.39	0.11	0.79	0.432
Benevolence	0.71	0.05	0.38	0.703
Conformity	−3.09	−0.26	−1.68	0.097★★
Hedonism	0.12	0.01	0.10	0.921
Power	0.41	0.04	0.37	0.711
Security	−0.50	−0.04	−0.32	0.753
Self-direction	−3.56	−0.25	−1.90	0.060★★
Stimulation	2.29	0.22	1.84	0.068★★
Tradition	3.22	0.31	2.69	0.008★
Universal	1.15	0.09	0.58	0.564
Constant parameter	27.19		3.59	0.000★

★Significant at 5% level, ★★Significant at 10% level, $N = 131$; R-Square = 0.11; Adjusted R-Square = 0.04

Tradition is positively correlated to personal interest at the 0.008 level of significance. This result may indicate the influence of conservation and the desire for more certain outcomes for an individual based on sustaining the status quo. It also is consistent with Schwartz positioning of this meta-value as distinct and more distant from self-transcendence than it is from self-enhancement. Our results are not in conflict with Schwartz' model illustrated in Figure 1 and reinforce the negative correlation of tradition with the post-conventional level of moral reasoning. This result provides support for H_4.

Consistent with Table X's result that conformity is positively related to the maintaining norms score, the result in Table XI indicates a negative and marginally statistically significant predictive value with the Personal Interest score. This result provides some support for H_4, but the marginal significance means marginal support.

Stimulation and self-direction are the two value types comprising the meta-value type of openness to change. This meta-value type is opposed to and in conflict with conservation. It is illustrated on a continuum wherein stimulation is closer to hedonism, a value type comprising self-enhancement than self-direction is to any value type comprising self-transcendence. Stimulation reflects the preference for risk in a varied, novelty-filled, and exciting life – a value type that does not explicitly recognize or ignore the preferences and needs of others. The proximity of stimulation to hedonism could explain why this value type is statistically significant (0.068) and positively related to the personal interest level of moral reasoning. This result provides support for H_4.

Self-direction implies neither willfulness nor selfishness but rather independence of thought and action that would be a necessary condition of post-conventional levels of moral reasoning. The terms creativity (uniqueness, imagination), freedom (of action and thought), independent, curiosity (interested in everything, exploring), choosing one's own goals (selecting one's own purposes) characterize this value type. Table VII reports there is a statistically significant difference between females and males for three of the five values of this value type. Where males rated the two values of independent and choosing one's own goals well above important,

females rated them both as very important. The results of Table VII are somewhat consistent with this result reported in Table 11.

In the circumplex model self-direction is located somewhat farther from the universal value type that characterizes the meta-value type of self-transcendence than it is from the value of stimulation but it is even more distant from the value types comprising self-enhancement. Thus the negative and statistically significant correlation (0.068) of stimulation with the personal interest level of moral reasoning also provides support for H_4.

Summary and conclusions

Our results fail to support any of the three hypotheses regarding gender. However, our results are consistent with preliminary evidence from Giacomino and Akers (1998) regarding values. The results of this study are also consistent with those from meta-analyses of the influence of gender on levels of moral reasoning.

Our results do provide preliminary evidence supporting our fourth hypothesis that a relationship exists between personal values and levels of moral reasoning. We presented conservative analyses of the results for H_4 because with this initial study our intent was to establish whether or not further research using two reliable and valid instruments would be worthwhile. Ideally all 10 value types rated and ranked by the SVQ would have mapped systematically to the six stages of moral reasoning measured by the DIT2. What we have found does provide sufficient evidence that systematic relationships do exist to motivate further research. These preliminary results are sufficient to recommend further research to disclose any systematic relationship of the two meta-value types of self-enhancement and self-transcendence with the post-conventional and personal interest levels of moral reasoning.

A limitation and therefore an area for further study is to ascertain how well the motivational goals of self-enhancement coincide with the theorized levels of cognitive moral development reflected by the personal interest score of the DIT2. There is a similar need for the motivational goals of

self-transcendence in particular because the theoretical assumption of justice as a supreme principle guiding the scoring of the DIT2 is absent from the meta-value of self-transcendence. In the Schwartz model, social justice is only one of several values (not universal principles) comprising the value type of universalism. It is not yet clear that this value type equates to a single or even a dominant universal ethical principle, nor was it intended by Schwartz to do so.

Other limitations of this study lie in the method of measurement using self-report surveys that rely on simulation. While this method may illuminate how value types are related to levels cognitive moral development and therefore influence moral judgment, it moves us no closer to understanding how moral judgment is translated into observable behavior.

Further research can confirm the scope and strength of systematic relationships of value types with moral judgment, as well as investigate any influence of value types on the identification that a moral issue is present. One contribution from our results is to reveal evidence of a systematic relationship of value types with not only moral intent (to achieve a motivational goal) but also moral judgment.

Your task is to rate how important each value is for you as a guiding principle in your life. Use the rating scale below:

- 0 − means the value is not at all important; it is not relevant as a guiding principle for you; •3 – means the value is important; •6 – means the value is very important.

The higher the number (0, 1, 2, 3, 4, 5, 6, and 7), the more important the value is as a guiding principle in YOUR life.

−1 is for rating any values opposed to the principles that guide you. 7 is for rating a value of supreme importance as a guiding principle in your life; ordinarily there are no more than two such values.

In the space before each value, write the number (−1, 0, 2, 3, 4, 5, 6, 7) that indicates the importance of that value for YOU, personally. Try to distinguish as much as possible between the values by using all the numbers. You will, of course, need to use numbers more than once.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

Opposed to my values	Not impor-tant		Important		Very important		Of supreme importance	
−1	0	1	2	3	4	5	6	7

Appendix 1

Schwartz Values Questionnaire

Instructions

In this questionnaire, you are to ask yourself: "What values are important to ME as guiding principles in MY life, and what values are less important to me?" There are 56 values listed on the following pages. These values come from different cultures. In the parentheses, following each value there is an explanation that may help you understand its meaning.

Before you begin, read the values, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values and rate it −1. If there is no such value, choose the value least important to you and rate it 0 or 1, according to its importance. Then rate the rest of the values in the list.

1_____EQUALITY (equal opportunity for all)
2_____ INNER HARMONY (at peace with myself)
3_____SOCIAL POWER (control over others, dominance)

4_____PLEASURE (gratification of desires)

5_____FREEDOM (freedom of action and thought)

Opposed to my values	Not impor-tant		Important		Very important		Of supreme importance	
−1	0	1	2	3	4	5	6	7

6_____A SPIRITUAL LIFE (emphasis on spiritual, not material matters)

7_____SENSE OF BELONGING (feeling that others care about me)

8_____SOCIAL ORDER (stability of society)

9_____AN EXCITING LIFE (stimulating experiences)

10_____MEANING IN LIFE (a purpose in life)

11_____POLITENESS (courtesy, good manners)

12_____WEALTH (material possessions, money)

13_____NATIONAL SECURITY (protection of my nation from enemies)

14_____SELF RESPECT (belief in one's own worth)

15_____RECIPROCATION OF FAVORS (avoidance of indebtedness)

16_____CREATIVITY (uniqueness, imagination)

17_____A WORLD AT PEACE (free of war and conflict)

18_____RESPECT FOR TRADITION (preservation of time-honored customs)

19_____MATURE LOVE (deep emotional and spiritual intimacy)

20_____SELF-DISCIPLINE (self-restraint, resistance to temptation)

21_____DETACHMENT (from worldly concerns)

22_____FAMILY SECURITY (safety for loved ones)

23_____SOCIAL RECOGNITION (respect, approval by others)

24_____UNITY WITH NATURE (fitting into nature)

25_____A VARIED LIFE (filled with challenge, novelty and change)

26_____WISDOM (a mature understanding of life)

27_____AUTHORITY (the right to lead or command)

28_____TRUE FRIENDSHIP (close, supportive friends)

29_____A WORLD OF BEAUTY (beauty of nature and the arts)

30_____SOCIAL JUSTICE (correcting injustice, care for the weak)

31_____INDEPENDENT (self-reliance, self-sufficient)

32_____MODERATE (avoiding extremes of feeling and action)

33_____LOYAL (faithful to my friends, group)

34_____AMBITIOUS (hard-working, aspiring)

35_____BROAD-MINDED (tolerant of different ideas and beliefs)

36_____HUMBLE (modest, self-effacing)

37_____DARING (seeking adventure, risk)

38_____PROTECTING THE ENVIRONMENT (preserving nature)

39_____INFLUENTIAL (having an impact on people and events)

40_____HONORING OF PARENTS AND ELDERS (showing respect)

41_____CHOOSING OWN GOALS (selecting own purposes)

42_____HEALTHY (not being sick physically or mentally)

43_____CAPABLE (competent, effective, efficient)

44_____ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances)

45_____HONEST (genuine, sincere)

46_____PRESERVING MY PUBLIC IMAGE (protecting my ''face'')

47_____OBEDIENT (dutiful, meeting obligations)

48_____INTELLIGENT (logical, thinking)
49_____HELPFUL (working for the welfare of others)

Opposed to my values	Not impor-tant		Important		Very important		Of supreme importance	
−1	0	1	2	3	4	5	6	7

50_____ENJOYING LIFE (enjoying food, sex, leisure, etc)
51_____DEVOUT (holding to religious faith and belief)
52_____RESPONSIBLE (dependable, reliable)
53_____CURIOUS (interested in everything, exploring)
54_____FORGIVING (willing to pardon others)
55_____SUCCESSFUL (achieving goals)
56_____CLEAN (neat, tidy)

Year of Birth:_____ Under-graduate Major_____ Sex: _____Male _____Female Full-time Work Experience: _____year(s) Prior Ethics Course: ____Yes ____No

Appendix 2

Value Types

(Schwartz & Sagiv Study)

Values for Each Type Shown in Parentheses

ACHIEVEMENT
Personal success through demonstrating competence according to social standards. (Successful, Capable, Ambitious, Influential)

BENEVOLENCE
Preservation and enhancement of the welfare of people with whom one is in frequent personal contact. (Helpful, Honest, Forgiving, Loyal, Responsible)

CONFORMITY
Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms. (Politeness, Obedient, Self-Discipline, Honoring Parents and Elders)

HEDONISM
Pleasure and sensuous gratification for oneself. (Pleasure, Enjoying Life)

POWER; Social status and prestige, control or dominance over people and resources. (Social Power, Authority, Wealth)

SECURITY
Safety, harmony and stability of society, of relationships, and of self. (Family Security, National Security, Social Order, Clean, Reciprocation of Favors)

SELF-DIRECTION
Independent thought and action-choosing, creating, exploring. (Creativity, Freedom, Independent, Curious, Choosing Own Goals)

STIMULATION
Excitement, novelty, and challenge of life. (Daring, A Varied Life, and Exciting Life)

TRADITION
Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion impose of the self. (Humble, Accepting My Part in Life, Devout, Respect for Tradition, Moderate)

UNIVERSAL
Understanding, appreciation, tolerance and protection for the welfare of all people and for nature. (Broadminded, Wisdom, Social Justice, Equality, A World at Peace, A World of Beauty, Unity with Nature, Protecting the Environment)

Source: Giacomino, D. and Akers, M. 1998. Exhibit 1, p 571.

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