

Ethics, Religiosity, and Moral Development of Business Students

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This study examines the effects of ethics education and religiosity on moral reasoning of college students. Previous research on these two variables has provided mixed results. Accounting and business major seniors at three universities in the mid-south region of the United States were studied. Two universities were private and religiously affiliated and one was a public, secular university. The DIT-2 instrument measured cognitive moral reasoning, ethical education with number of completed ethics courses, and religiosity through university affiliation, individual affiliation, and commitment. Results indicated neither ethical education nor religiosity to have an impact on the cognitive moral reasoning of the accounting or other business students.

INTRODUCTION

The questionable choices made by business people in recent years have attracted the attention of the United States and the world. Examples of corporate unethical behavior have abounded with Enron, Arthur Anderson, WorldCom, ImClone, HealthSouth, and many others. Numerous high-ranking officials have been sentenced to prison for their unethical choices and behavior. Examples include Andrew Fastow of Enron, Sam Waksal of ImClone, Dennis Kozlowski of Tyco International, Bernie Ebbers of WorldCom, and Martha Stewart in an insider trading scandal. As a result, public confidence in the integrity of U.S. business leaders has taken a blow in the last several years and the general public has placed business ethics under the microscope. Institutions of higher education have responded to the ethics dilemma for accounting and business students by placing more emphasis on ethical intervention through individual ethics courses and/or integrated ethics approaches.

A business ethical dilemma occurs when people perceive their duties and responsibilities to be inconsistent between different groups of people (Finn et al., 1988). This study attempts to

understand the predictors and drivers of moral development and predicted ethical behavior of senior accounting and business school students in one non-religious and two religious affiliated universities. The study examined the impact of the independent variables of ethical intervention and religiosity on the dependent variable of moral development. The context of the study is accounting and business majors at the university setting. Although numerous researchers have studied religious affiliation, the results in the literature are mixed. Studies in the area of religious commitment have generated mixed results as well. No studies of accounting students have utilized the Allport ROS instrument. This study not only investigated the impact of an ethics course on moral development but compared a secular ethics course with a religious-based ethics course. Researchers have not yet examined this distinction in published empirical research in the accounting arena. Although several studies compare different universities, no published research has examined moral development and religiosity in a Church of Christ affiliated university. For comparison to other studies, this study measured the cognitive moral reasoning utilizing the DIT-2 instrument.

BACKGROUND

Ethical intervention refers to the training and/or education of students in the field of ethics. Based on this understanding, it appears logical to assume that ethical training would increase moral behavior. Several studies reported a positive correlation between ethics intervention and moral development of individuals (e.g., Rest, 1986; Hildebeitel & Jones, 1991, 1992; Glenn, 1992; Armstrong, 1993; Green & Weber, 1997; Eynon, Hill, & Stevens, 1997; and Bonawitz, 2002). However, other studies found little or no correlation between ethics intervention and moral development of individuals (e.g., Fulmer and Cargile, 1987; St. Pierre, Nelson, and Gabbin, 1990; Shaub, 1994; Ponemon, 1993; McCarthy, 1997; Loescher, 2004; and Porco, 2003). Some studies examined the impact of a stand-alone course in ethics while other studies examined an integrated approach of ethics across the curriculum. Bonawitz (2002) and Porco (2003) studied the effects of individual ethics courses on the moral development of students. While Bonawitz found a positive correlation, Porco noted a negative correlation between the two factors. Although numerous studies have examined ethical intervention, the impact on moral development still appears to be under question. Thus, ethical intervention appears to be a pertinent variable for continued examination in this study.

In the area of religiosity, the relationship to moral development has drawn an interesting debate among theologians. While some view moral development and religiosity as related topics, others attempt to separate ethics from the concept of religiosity. Cotham (1998) defines "ethics" as the philosophical study of moral values. Specifically, he defined business ethics as "... the study of what constitutes right and wrong, or good and bad human conduct in a business context" (Cotham, 1998, p. 5). The English word "ethics" came from the Greek word "ethos." This Greek word can be interpreted as "custom or usage" and sometimes "custom or practice as prescribed by law" (Werhave & Freeman, 1997).

Although the word "ethos" did not originate from a religious background, the word appears numerous times in the context of religious teachings. For example, the author Paul in his letter to the Corinthians in the Bible states, "Bad company corrupts good character" (I Corinthians 15:33, NIV translation). The "good character" in this passage was actually the Greek word "ethos." This word appears several times in the New Testament referring to a manner of life in agreement with the professed Christian faith.

Studies of religiosity include two broad categories: religious affiliation and religious commitment. Religious affiliation studies refer to the person's membership or affiliation to a specific religious belief (group). Some studies measure affiliation at the individual level (church preference) while others measure the religious affiliation of a group such as a university (i.e. Catholic, Baptist, Church of Christ, etc.). Religious commitment studies attempt to measure the level of individual commitment to a religious belief or lifestyle. Although these two categories of religiosity are similar, one needs to understand the distinction between the two terms. An individual could have a religious affiliation without religious commitment. However, an individual would less typically have a religious commitment without some type of religious affiliation. This study examined the variables of religious affiliation (individual), religious affiliation (group), and religious commitment (individual) in a university setting. Table 1 displays studies of religiosity and moral development and distinguishes the variables, instruments, sample, and results.

TABLE 1
RELIGIOSITY AND MORAL DEVELOPMENT STUDIES IN
ACCOUNTING AND BUSINESS

Study	Religiosity Variables	Moral Development Instrument	Religiosity Instrument	Sample	Results between CMD and religiosity
Pascarella & Terenzini (1991)	Religious affiliation	DIT	University affiliation	Secondary analysis from Rests 1979 study of students	Significant correlation to affiliation
Wimalasiri, Pavri, & Jalil (1996)	Religious commitment	DIT	Single question on level of commitment	Senior business students and business managers in Singapore	Significant correlation for commitment
Koeplin (1998)	Religious affiliation	DIT, Ethical vignettes	University affiliation	Accounting students at two private liberal arts universities	No significant correlation
Kennedy & Lawton (1998)	Religious affiliation	Ethical vignettes	ROS	Business and non-business students at 4 universities (Evangelical, Catholic, and 2 non-	Evangelical students less willing to engage in unethical behavior (no significant

				religious)	difference in others)
Foster & LaForce (1999)	Religious commitment	DIT	ROS	Students at one religiously affiliated liberal arts university	No significant correlation
Allmon, Page, & Roberts (2000)	Religious commitment	Ethical position questionnaire, ethical vignettes	Single question on commitment	Business students from United States and Australia	Significant positive correlation to commitment
Wimalasiri (2001)	Religious affiliation, Religious commitment	DIT	Individual affiliation, Single question on individual commitment	Business students and practitioners (Australia)	Significant positive correlation for commitment, Significant correlation for affiliation
Porco (2003)	Religious affiliation	DIT-2	University affiliation	Accounting students from 7 universities	Significant correlation to religious affiliation
Conroy & Emerson (2004)	Religious affiliation, Religious commitment	Ethical vignettes	University affiliation, Church attendance	Business students from two universities (one religious and one non-religious)	Significant correlation of religious commitment, no significant correlation to affiliation

Studies in religious affiliation to moral development report mixed results. For example, Pascarella and Terenzini (1991), Wimalasiri, Pavri, and Jalil (1996), and Porco (2003) all found a significant relationship between religious affiliation at the university level and moral development of the students. However, Kennedy and Lawton (1998), Koeplin (1998), and Conroy and Emerson (2004) did not find any significant relationship between moral development and religious affiliation of the university.

In the studies of individual religious commitment to moral development, many studies reported a positive relationship between the two variables. Researchers of Allmon, Page, and Roberts (2000), Wimalasiri (2001), and Conroy and Emerson (2004) all found a significant relationship in their studies. Foster and LaForce (1999) noted religious commitment to be insignificant in relation to moral development.

Not only are the findings mixed, but also the use of instruments and their study populations vary between studies. For example, of the nine studies previously mentioned, six utilized the DIT instrument for measuring moral reasoning (Pascarella & Terenzini, 1991; Wimalasiri, Pavri, & Jalil, 1996; Koeplin, 1998; Foster and LaForce, 1999; Wimalasiri, 2001; and Porco, 2003). The other three studies utilized various ethical dilemmas to indicate the ethical attitudes of the students (Kennedy and Lawton, 1998; Allmon, Page, & Roberts, 2000; Conroy and Emerson, 2004). For religious commitment, only one of the four studies utilized the Allport ROS instrument, one of the most commonly used religiosity instruments (Foster and LaForce, 1999). The other studies used church attendance or a self-reported level of commitment. Finally, the student populations for these studies vary greatly. Pascarella & Terenzini, (1991); Wimalasiri, Pavri, & Jalil, (1996); Foster and LaForce, (1999), examined the general student population. Kennedy and Lawton, (1998); Allmon, Page, & Roberts, (2000); Wimalasiri, (2001); and Conroy and Emerson, (2004) examine business students, and even more specifically Koeplin, (1998) and Porco, 2003) examine accounting students.

As seen from previous research, the impact of religiosity on moral development is a pertinent variable for further examination. Although several studies have reported positive results between religious commitment and moral development, no researchers have focused on the context of business and accounting utilizing the ROS instrument.

Variables and Relationships

In the psychology literature, Lawrence Kohlberg (1969) developed the theory of moral development. Kohlberg's theory actually began with the seminal study performed previously by Jean Piaget (1932). Piaget examined the moral development of children and identified two separate moralities of constraint (heteronomy) and cooperation (autonomy). Piaget noted the morality of cooperation eventually replaced the morality of constraint in the studies of children. Kohlberg extended this study by performing a longitudinal study of boys resulting in his definition of three levels of moral development: pre-conventional, conventional, and post-conventional. Each level contains two stages of which individuals advance to the next level. The cognitive moral development (CMD) theory as developed by Kohlberg rests on the following components (Trevino, 1992):

- 1) moral judgment has a cognitive base,
- 2) stages represent qualitative differences in modes of thinking,
- 3) individuals develop through an invariant sequence of stages, and
- 4) individuals prefer problem solution at the highest stage available to them.

The CMD theory has become one of the most popular and tested theory of moral reasoning. This theory is among the most cited works in contemporary behavioral science (Trevino, 1992). Numerous researchers have focused on business in general as well as the accounting aspect of business since the 1970's. A basic assumption for the accounting profession is the public perception of the business ethics by members in the profession. Without this positive public perception, the accounting profession cannot serve the public effectively. Many believe educational ethical intervention can positively enhance moral development. Thus, the literature on ethics education as an antecedent of CMD growth has received tremendous attention since the early 1980's.

The dependant variable in this study is the cognitive moral development of undergraduate students in the southeast region of the United States. The instrument most commonly used to measure CMD is the Defining Issues Test (DIT) developed by Rest (1979). In the late 1990's,

Rest modified the original DIT instrument resulting in the DIT-2. Many researchers have used this new instrument in recent years. These researchers include Loescher (2004) and Porco (2003) as referenced in the following chapter of this study. The Center for Ethical Studies at the University of Minnesota maintains and supports this instrument. Their website lists numerous recent publications that utilized the DIT-2 instrument in their studies. As such, this study used the DIT-2 instrument to measure the CMD of the students.

The primary independent variables in this study include academic degree, ethical intervention, religious affiliation, and religious commitment. Academic degree is either accounting or other business degrees. This study measured religious affiliation at both the individual level and the institutional level (i.e. choice of university). The most commonly used measurement of religious commitment is the Allport ROS instrument (Barnett, Bass, et al, 1996). However, researchers have not utilized this instrument in published research studies examining moral development and religiosity of accounting students. Many studies measured religious commitment through a simple question asking the student to rank their level of commitment on a scale of high to low (Wimalasiri, Pavri, & Jalil, 1996; Allmon, Page, & Roberts, 2000; and Wimalasiri, 2001). Conroy and Emerson (2004) measured religious commitment through measures of church attendance, prayer/meditation frequency, as well as a self-reported degree of religiosity. They utilized church attendance as the best and most consistent measure of religiosity in their study.

The ROS instrument measures two basic qualities of religiosity labeled intrinsic and extrinsic. Intrinsic religious orientation refers to an internalization of religious beliefs in one's life. As the name implies, extrinsic religious orientation refers to an individual believing in religion for the purpose of what others think about him/her self. In other words, extrinsic religious orientation refers to an individual who "... endorses religious beliefs and attitudes or engages in religious acts only to the extent that they might aid in achieving mundane goals..." (Hill & Hood, 1999, p. 144). Allport and Ross (1967) summarized the distinctiveness of these two variables of extrinsic versus intrinsic with the simple differentiation of "using" versus "living" one's religion. This study used intrinsic quality to measure the strength of an individual's commitment to their particular religion. The 14-item version of the scale requires respondents to indicate the degree to which they agree or disagree with a series of statements. The sum of the intrinsic items ranges from 8 to 40. The sum of the extrinsic items ranges from 6 to 30. The ROS has a long history and extensive validity and reliability data (Donahue, 1985).

Ethical Intervention on Moral Development

Ethical intervention is the educational training of individuals in the field of ethics. Ethics intervention to improve student's ethical orientation has numerous critics. In a review of the literature regarding ethical intervention for accounting students in universities, Feldman and Thompson (1990) addressed many difficult issues. One of these issues deals with the amount of time spent on ethics by the professors. According to a survey of accounting faculty at various U.S. universities by McNair and Milam (1993), the majority of professors (77%) do include some component of ethics in their current courses. The average time spent covering ethical issues at the time of the survey was approximately three hours per course.

Feldman and Thompson (1990) question how much accounting professors can actually do in the short time available to prepare accounting students for their ethical orientation in addition to the knowledge base of accounting. Lester Thurow (1987), former dean of MIT's School of Business, addressed the current ethical awareness of the students coming to the university. He questioned how much a university could accomplish at this stage in the student's life in regards

to teaching them right and wrong. On the other hand, supporters of ethical intervention believe the universities have a calling to improve the ethical understanding and behavior of accounting students. This belief in the ethics development through education has existed for many years. For example, Bok (1976) stated over a quarter century ago that business organizations, professional organizations, and universities should take a more active role in improving the ethical standards of the individuals. He further stated the decline in the importance of churches, families, and local communities resulted in lower moral standards to young people coming to college.

Several researchers have conducted empirical studies over the years in relation to ethical intervention and moral development of individuals. Table 2 displays previous significant ethical intervention studies. This study measured ethical intervention in a consistent pattern with previous research and compares the completion of an ethics course to the cognitive moral reasoning scores of students. In addition, this research separated the ethics courses into two categories: “religious-based” ethics courses and “secular-based” ethics courses based on university affiliation. Although some studies have combined the impact of religion courses and ethics courses on moral development, no studies have attempted to examine these two types of courses separately.

TABLE 2
ETHICAL INTERVENTION STUDIES PRIMARILY IN
BUSINESS AND ACCOUNTING

Study	Population	Methodology	Instruments
POSITIVE CORRELATION STUDIES:			
Rest (1986)	Numerous schools and populations	Meta-analysis of 56 DIT studies with ethical intervention	DIT
Hiltebeitel & Jones (1991)	Public and Private University; Accounting students	Ethics integration	Ethical dilemmas
Glenn (1992)	One university; Undergrad and Grad business students	Ethics course	Baunhart/Glenn questionnaire
Armstrong (1993)	One university; Accounting students	Ethics integration	DIT
Green & Weber (1997)	One university; Accounting students	Audit course	Ethical dilemmas
Eynon, Hill & Stevens (1997)	Practicing CPAs	Ethics course in college	DIT
Bonawitz (2002)	One university; acct, business, and non-	Ethics course	DIT

	business students		
NEGATIVE CORRELATION STUDIES:			
Fulmer & Cargile (1987)	One university; Senior accounting and business students	Auditing course	Ethical scenarios
St. Pierre et al. (1990)	One university; Accounting, business, and non-bus students	Ethics course	DIT
Ponemon (1993)	One university; Accounting students	Audit course	DIT and lab experiment
Shaub (1994)	One university; Accounting students and practicing auditors	Ethics course	DIT
McCarthy (1997)	Ten universities; Accounting students	Audit course	Index of ethical congruence
Loescher (2004)	2 universities (Catholic and other); accounting, business, and non-bus students	Ethics integration	DIT-2

Research Questions

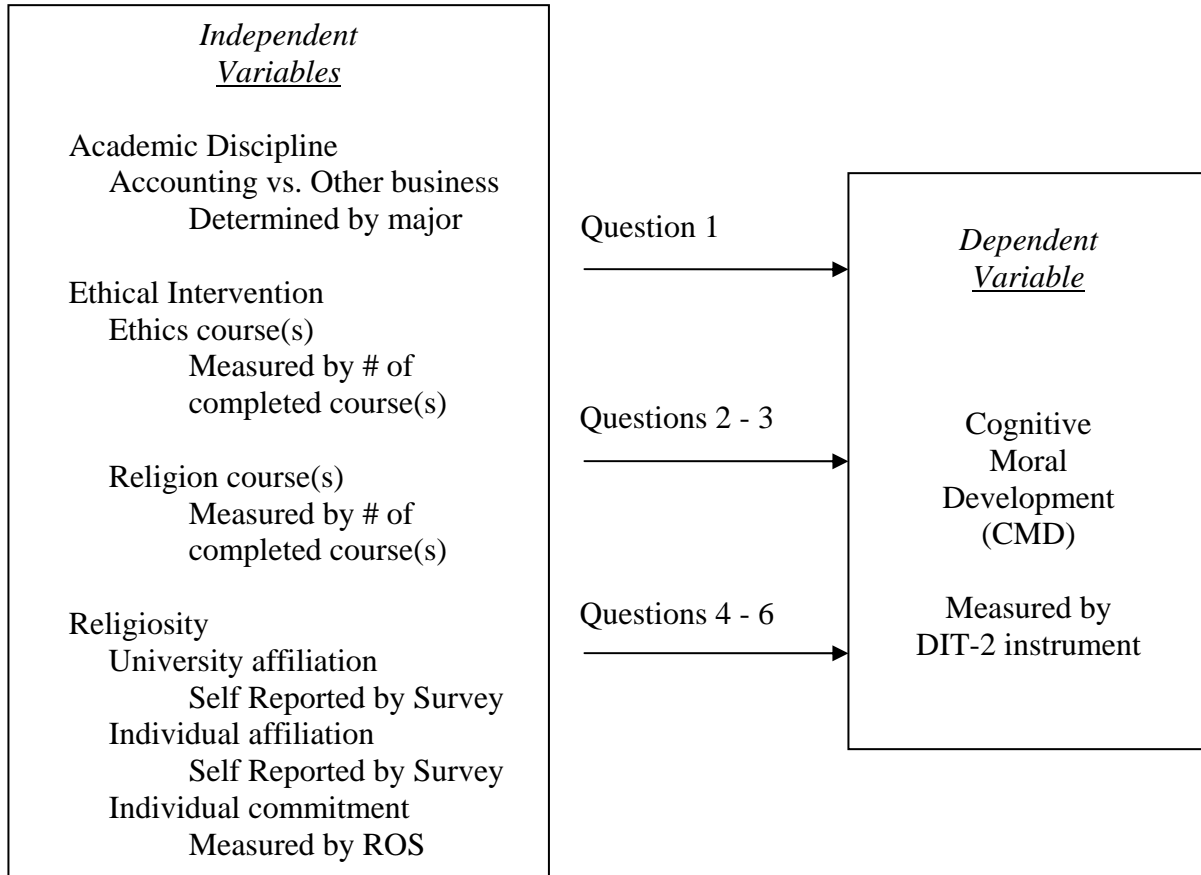
This study specifically addresses the following six research questions:

1. Do accounting majors demonstrate a higher moral reasoning ability than do other business majors?
2. Do business students who have completed an ethics course demonstrate a higher level of moral reasoning ability than business students who have not completed an ethics course?
3. Do business students who have completed an ethics course at a religious affiliated university demonstrate a higher level of moral reasoning ability than business students who have completed an ethics course at a secular university?
4. Do accounting majors who have completed an ethics course demonstrate a higher level or moral reasoning ability than other business majors who have completed an ethics course?
5. Do business students who have completed a religion course demonstrate a higher level of moral reasoning ability than business students who have not completed a religion course?
6. Do business students at the three different universities (two religious affiliated and one secular public) demonstrate different levels of moral reasoning ability?

Research Model

This study addresses the following six research questions developed from the following model.

FIGURE 1



Methodology

This study included students from three universities in the southern region of the United States. Two universities were religiously affiliated and one university was a public secular university. One of the religious universities was Church of Christ while the other was a Catholic University. All the universities have liberal arts programs as well as business programs including accounting. This sample is similar to the Kennedy and Lawton (1998) study that examined a Baptist affiliated university, a Catholic affiliated university, and two public universities. Although the sample populations are similar to the Kennedy and Lawton study, the variables and instruments vary.

Seniors at each of the universities completed the measurement instruments. These included the DIT-2, the ROS, and a demographic form including information on personal affiliation and completion of ethics and religion courses. Students completed these instruments during class time either in the business capstone courses or in other senior level courses. Student participation was voluntary, utilizing regularly scheduled class periods as much as possible to minimize non-response student bias. Honesty was encouraged by offering the students an opportunity to obtain their scores from the instruments along with a key for their scores. The students had the option of including their e-mail address for communicating their score information

Control variables for this study include class status, age, gender, and full-time academic status. The target class status is college students who have completed more than 90 academic

credit hours (typically classified as seniors). Students with less than 90 hours were not included in the study. The target population is students between the ages of 20 and 30 years old. Students outside these parameters were not included in the study.

This study screened all of the responses to ensure they met the criteria for inclusion. These criteria included undergraduate status of a minimal of 90 credit hours and traditional students from ages 20 to 30 years old. This study also screened the data for missing or inconsistent data. The scoring protocols for the DIT-2 instrument control for bogus data. Several standard checks were conducted to address these concerns according to the study by Rest, Narvaez et al, (1999). This study eliminated any participants from the sample with more than eight inconsistencies on any one dilemma and discarded any participant who omitted an entire story.

Data Collection – Independent Variables

Academic Discipline: The student noted their academic discipline on the demographic instrument. The student chose from a list of options that included the option of “other”.

Ethical Intervention: On the demographic survey, students noted if they had completed one or more ethics course(s) at the university. To address the research question of religious view of ethics, the participants also noted the number of religion courses taken during their college career.

Religious Affiliation: On the demographic survey, the participants listed the name of the university they currently attend and also they noted their personal religious affiliation from a list of options. The options of “other” with an open blank as well as “none” were included in this list.

Religious Commitment: The results from the ROS instrument noted the student’s religious commitment. This instrument provides an “I” rating for intrinsic commitment and an “E” rating for extrinsic commitment. The intrinsic rating denotes an internal belief and represents a commitment score. This study utilizes the “I” score for individual religious commitment.

Data Collection – Dependent Variable

The Defining Issues Test (DIT-2) was used to measure the dependent variable of cognitive moral development (CMD). The Center of the Study of Ethical Development at the University of Minnesota calculated the N2 index score from the completed instruments. This index score represents the cognitive moral reasoning level of the student. According to the Center of Ethical Studies, they indicate the N2 index score is more representative of the moral behavior than the previous P score. The major criticism against the DIT instrument is the perceived preference for post-conventional stage reasoning over conventional and pre-conventional stage reasoning (Fisher and Sweeney, 1998). Even with this criticism, the “P” score representing moral development has been the dependent variable in numerous studies of ethical development in accounting students and professionals. As such, this consistent measurement tool and resulting moral reasoning score allows for comparisons across studies and disciplines related to CMD.

While the P score utilized ranking data, the new N2 index takes into effect both ranking data and rating data. The N2 calculations contain more rigorous procedures for handling missing data than did the previous P score calculations (Rest, Narvaez et al, 1999). Rest et al. (1991) also noted the N2 scores report the same mean and standard deviation as the P score for comparison purposes to the previously reported P scores.

DATA ANALYSIS

Statistical Techniques

Tables 4 through 6 report the results of the one-tailed t-test of means for questions 1 through 3. Tables 7 and 7a report the result of the two-tailed t-test of means for questions 4. Table 8 reports the result of the ANOVA statistical technique for question 5. Table 9 reports the result of regression analysis between moral values and religious commitment for question 6.

**TABLE 3
STATISTICAL ANALYSIS SUMMARY**

	Differences in DIT Scores		Results
Q #1:	Accounting vs. Other Business	.010 (P-Value)	Significant difference found between majors
Q #2:	Ethics course	.073 (P-Value)	Persuasive evidence suggesting no difference among students taking an ethics course
Q #3:	Students who took religion courses	.010 (rounded) (P-Value)	Significant difference found in those students who took religion courses in college
Q #4:	Differences in university religious affiliation religious vs. non-religious (.050 significance) Church of Christ vs. Catholic (.05 significance) Church of Christ vs. Secular (.05 significance) Catholic vs. Secular (.05 significance)	.014 (P-Value) .037 (P-Value) .003 (P-Value) .625 (p-Value)	Significant difference between religious and non-religious when combined Significant difference between Church of Christ and Catholic Significant difference between Church of Christ and Secular No difference between Catholic and Secular
Q #5:	Difference in individual religious affiliation One Way Anova	.010	Significant differences found in individual religious affiliations
Q #6:	Levels of religious commitment	.000 (R Sq'd) and .877 sig.	No significant relationship found between levels of religious commitment and DIT scores

TABLE 4
QUESTION 1 DATA ANALYSIS

Accounting and Other Business Majors N2 Index Score Comparison					T-Test of N2 Index Scores between Accounting and Other Business Majors		
Groups	N	N2 Mean	Std Dev	Mean Std Err	t	Df	Significance (1-tail)
Accounting	63	33.56	13.29	1.67			
Other Business	116	28.25	15.01	1.39			
					2.354	177	.010

TABLE 5
QUESTION 2 DATA ANALYSIS

Ethics Course N2 Index Score Comparison					T-Test of N2 Index Score for Ethics Courses		
Ethics Course?	N	N2 Mean	Std Dev	Mean Std Err	t	Df	Significance (1-tail)
Yes	140	29.28	14.40	1.22			
No	39	33.14	15.15	2.43			
					-1.46	177	.073

TABLE 6
QUESTION 3 DATA ANALYSIS

Religion Course N2 Comparison Index					T-Test of N2 Index Score for Religious Courses		
Religion Course?	N	N2 Mean	Std Dev	Mean Std Err	t	Df	Significance (1-tail)
Yes	129	31.73	13.73	1.21			
No	50	25.95	16.08	2.27			
					2.409	177	.009

TABLE 7
QUESTION 4 DATA ANALYSIS

University Religious Affiliation N2 Index Scores					T-Test of N2 Index Score for University Affiliation		
University Affiliation?	N	N2 Mean	Std Dev	Mean Std Err	t	Df	Significance (2-tail)
Non-religious	61	26.39	15.69	2.01			
Religious	118	32.05	13.70	1.26			
					-2.492	177	.014

TABLE 7A
QUESTION 4 DATA ANALYSIS

T-Test of N2 Index Scores between Universities (3 different t-tests)								
	N	N2 Mean	Catholic			Non-religious		
			T	Df	Sig.	t	Df	Sig.
Church of Christ	84	33.72	2.11	116	.037	2.97	143	.003
Catholic	34	27.92				-.491	93	.625
Non-religious	61	26.39						

T-test of means for the N2 index scores between each of the universities indicate a significant difference at the .05 significance level between the N2 index scores from Church of Christ (33.72) to Catholic University (27.92) with a significance of .037. There is also a difference between Church of Christ (33.72) and non-religious (26.39) with a significance of .003. However, the difference between the N2 index scores is not significantly different between Catholic (27.92) and non-religious (26.39) with a significance of .625.

TABLE 8
QUESTION 5 DATA ANALYSIS

One-Way ANOVA on N2 Index Score for N2 Scores and Religious Affiliation					
	Sum of Squares	Df	Mean Squares	F	Significance
Corrected Model	2764.46	4	691.12	3.412	.010
Intercept	30891.12	1	30891.12	152.50	.000
University	2764.46	4	691.12	3.412	.010
Error	35245.51	174	202.56		
Total	38009.98	178			
Corrected Total	38009.98	178			

Table 8 reports the results of the one-way ANOVA for the N2 index score and individual religious affiliation. The analysis notes a significant difference in the N2 index scores for students with high religious affiliation regardless of university.

TABLE 9
QUESTION 6 DATA ANALYSIS

Regression Analysis between N2 Index Score and Intrinsic Religiosity						
Variable	B	Std Err	T	Sign	R squared	Std Error
Intrinsic	-2.963E-02	.192	-.155	.877	.000	14.65
Dependent Variable: DIT N2 Index						

The results of the regression analysis report a significance of .877 and a R² of .000, indicating no correlation between the level of religious commitment as measured by the ROS intrinsic score and the moral reasoning of the student.

Comparison to Results from Other Studies

This study noted accounting majors reported higher DIT scores than other business majors. This is similar to studies by St. Pierre et al (1990), Jeffrey (1993), and Cohen, Pant, and Sharp (1998). St. Pierre examined 10 different majors noting psychology with the highest DIT scores overall and accounting/finance as the highest business major scores. Jeffrey examined three categories of students: accounting, other business, and non-business majors. Accounting majors reported significantly higher DIT scores than the other categories. Cohen, Pant, and Sharp (1998) also analyzed three categories of students: accounting, other business, and non-business majors. Although they did not utilize the DIT instrument, they did note accounting majors were somewhat more concerned about ethical dilemmas than other business majors and non-business majors.

In referring to Table 1, numerous studies noted positive correlation while several other studies noted no or negative correlations between ethics courses and moral reasoning scores. This study adds to the body of knowledge demonstrating no correlation between ethics intervention and level of ethics in students. Four of the studies noted in Table 1 examined only one university in their samples (Fulmer and Cargile, 1987; St. Pierre et al, 1990; Ponemon, 1993; and Shaub, 1994). Of these studies, all but Fulmer and Cargile utilized the DIT instrument for measuring cognitive moral reasoning. The studies of McCarthy (1997) and Loescher (2004) examined students from multiple universities. McCarthy examined accounting students from ten universities but did not utilize the DIT instrument. Loescher (2004) examined students from two universities: Catholic and secular. Within these universities, she examined three groups of students: accounting, other business, and non-business students. She utilized the DIT instrument to measure moral reasoning levels. Again, none of these studies noted a correlation between ethics courses completed by the students and levels of cognitive moral reasoning scores of the students.

In terms of university affiliation, several studies generated similar results in terms of examining cognitive moral reasoning scores (Pascarella and Terenzini, 1991; Kennedy and Lawton, 1998; Koeplin, 1998, Porco, 2003; and Conroy and Emerson, 2004). Pascarella and Terenzini (1991) noted students from a Christian liberal arts college to report higher moral reasoning scores as measured by the DIT instrument than other universities. Kennedy and Lawton (1998) examined students at an Evangelical University (Baptist), a Catholic University,

and two secular universities. They noted the Evangelical University reported higher DIT scores than all of the other three universities. They termed the support for religious affiliation as partial support as the Catholic University reported higher than one of the secular universities but similar in DIT scores for the other secular university. Koeplin (1998) examined students from a Catholic University and a secular university. He noted no significant difference in the DIT scores between the Catholic and the secular university. Porco (2003) examined students from seven universities across the United States. She noted students attended universities with religious affiliation reported a significantly higher DIT score (37.2) than students from non-religious universities (31.5). The religious universities in her study were all Catholic universities. Finally, Conroy and Emerson (2004) examined students from a Baptist University and a secular university noting no difference in ethical orientation of the students.

The results of this study in relation to university affiliation and moral reasoning scores are most similar with Kennedy and Lawton (1998). This study also supports the findings of Koeplin who noted no difference in students from Catholic to secular universities. However, this study is different from Conroy and Emerson (2004) who noted no significant difference in moral reasoning scores between a protestant religious university and a secular university. The Protestant University in their study was a Baptist affiliated university that would be similar to the Church of Christ University in the current study. This study noted the evangelical university reported higher DIT scores than either of the other two universities. However, the Catholic University reported slightly higher moral reasoning scores, but not significant, than the secular university.

CONCLUSIONS

The researchers began with a few simple questions. Did business programs from religious universities produce students with higher ethical values than non-religious universities? Was there a difference in ethical values in accounting students versus other business majors? Was ethical behavior influenced by the amount of ethical intervention received by students in the form of ethics and religion classes? Did the amount of religious affiliation and commitment affect ethical values?

Our expectations were religious schools would produce students with higher ethical values. Data supported this belief only partially. The Church of Christ students had significantly higher DIT-2 scores than both Catholic and non-religious schools. The data suggested no difference in DIT-2 scores between the Catholic and non-religious schools.

We also examined the effects of students taking a religion course on DIT-2 scores. Students taking a religion course regardless of school had significantly higher DIT-2 scores than students not taking any religion course.

Ethical values of accounting students were significantly higher than other business majors regardless of the school. The result might be influenced by accounting students required to take an ethics course in their curriculum. We then examined the effects of students taking or not taking an ethics course and found persuasive evidence that no significant differences exist regardless of school. This result calls to question the effectiveness of an ethics course in influencing a senior students' behavior.

Ethical behavior is paramount to the accounting profession and most successful executives. The accounting firms have responded to the negative public perception with an increased focus on ethics. The AICPA (1999) required ethics as part of the 150-hour program recommendation in

1999. PricewaterhouseCoopers (PWC), (2003) recently published a document entitled “Stand and Be Counted” stating students must have “the educational balance, objective perspective and ethical backbone to enable them to recognize questionable situations and have the courage to make the right call even when it is the difficult call” (PWC, 2003. p. 15). The CPA exam now has an ethical component in the new computerized national examination (Porco, 2003).

The accounting profession is clearly on a path attempting to influence behavior of its members. But what steps are universities taking to influence the ethical behavior of Marketing, Finance, Management, and other business majors? The Association to Advance Collegiate Schools of Business (AACSB) includes ethics as a required learning experience but no specific course at the undergraduate level. Absent of a specific course, ethics content is interspersed through the program. Perhaps this indirect approach is warranted given sometimes contradictory studies of ethical intervention. This study found persuasive evidence that no difference in ethical values resulted from students taking an ethics course.

Why is there a difference in the ethical values of accounting students versus other business majors? There are several possible explanations that require further study. Of all the undergraduate business majors, accounting has emerged as a bona fide profession, including professional licensing, various certifications, and practitioners subscribing to a professional code of conduct. Some of the previously mentioned business majors have parts of these professional attributes but not all. Certified Public Accountants pass a rigorous national exam and are subject to license suspension, revocation, and other civil and criminal penalties for unethical behavior. The penalty for unethical behavior is very high for accountants and arguably not as high for other business majors.

Ethical values of students were significantly different across various religious affiliations. Religion is a complicated subject and a personal matter. This study focused on religious affiliations in general rather than any specific religion. The results indicate religious affiliation appears to make a difference in a person’s ethical values. Many aspects of religious affiliations are similar, including the acceptance of a higher calling in an individual’s life. However, many differences exist regarding how to follow this higher calling. Some religions follow strict adherence to rules while others are more principles based. Do these differences affect the ethical values of the students? Does a better understanding of religious affiliations lead to a better understanding of a student’s ethical values? Researchers may wish to further pursue this question.

Does commitment to one’s religion make a difference in ethical values? The study found the level of commitment to have no correlation to ethical values. This implies the level of commitment to religious teachings is not as important as simply accepting a religion in one’s life. Religious affiliation impacted ethical choices but commitment did not. Further study is needed to understand the complexity between these two seemingly related variables, and their impact on ethical decision making.

Can teaching ethics make a difference in the moral behavior of individuals? The accounting profession is demanding more attention to ethical training at the university level and in continuing education of the practitioners. Is this training making an impact of the profession, or is it good public relations for the profession? Based on the results of this study, the ethical intervention at these three universities did not report a difference in the student’s moral reasoning skills.

Does commitment to one's religion make a person more ethical? This study did not find religious commitment to generate higher cognitive moral reasoning scores in students. The results of this aspect of study point to a need for more studies in this area.

The majority of studies dealt with university affiliation but only one examined individual religious affiliation with business students. Wimalasiri (2001) examined business students and practitioners in Australia, not specifically accounting students. More specifically, he noted Catholics to report slightly higher moral scores than Protestants and significantly higher than did Buddhists/Hindus. He noted students who reported "no affiliation" to score higher than any of the other religious groups. Similar to Wimalasiri's (2001) findings, this study also reported significant differences in the cognitive moral reasoning for individual affiliations. However, the Protestant religion in this study reported a significantly higher moral score than any other religious affiliations. This study also reported students indicating Catholic affiliation to have higher moral scores than students with individual Baptist affiliation.

The final group of studies related to individual religious commitment. Numerous studies reported a significant correlation between religious commitment and moral development (Wimalasiri, Pavri, and Jalil, 1996; Allmon, Page, and Roberts, 2000; Wimalasiri, 2001; and Conroy and Emerson, 2004). However, this study did not support a significant relationship nor did any of the previously mentioned studies utilize the ROS instrument for measuring religious commitment. Three studies used a single question asking the student to report their level of religious commitment while one study utilized church attendance. Foster and LaForce (1999) was the only study noted in the literature review that utilized the ROS instrument. Their study noted no correlation between religious commitment utilizing the ROS intrinsic value and the DIT index scores of the students. This study also examined church attendance as in the Conroy and Emerson study noting similar results of no significant correlation. However, this study did note the students from University A to report significantly higher ROS intrinsic scores than either of the other two universities.

Study Limitations

This study is limited to three universities in the southeast region of the United States. The size and location of each of the universities is different as well. The Church of Christ University was located in a small town of approximately 20,000 people while the Catholic and secular Universities were both in larger metropolitan cities with over 100,000 each. The size of the universities was different with 4,000 undergraduate students at Church of Christ University, 2,000 at the Catholic University, and 11,000 at the secular University. The size of the business program also varied across the universities with the Church of Christ University reporting 800 business undergraduate students, the Catholic University with 500, and the secular University with 2,000. Finally, accreditation varied across the universities. Related to departmental accreditation, the Church of Christ University reported ACBSP accreditation, the Catholic University did not report a business accreditation, and the secular University reported AACSB accreditation. In addition, the Church of Christ University and secular University reported university accreditation by the regional accrediting body of North Central Association. The Catholic University reported university accreditation by the Southern Association of Colleges and Schools.

This study did not examine the self-selection of students to a university or an academic major. The Church of Christ University reported students from all 50 states and 40 foreign countries. The Catholic University reported over 20 states represented while the secular University

attracted more local students. This study did not collect entry-level scores such as SAT, ACT, or high school GPAs. All schools state open enrollment policies for interested students and are not limited in who they accept to the university with the exception of lower entrance scores.

This study purged more students from the secular University due to age than either of the other universities. The secular University was located in the larger metropolitan city and reported older students who might be working full-time in addition to school.

This study collected sufficient data for statistical comparison across universities and between accounting and other business majors. However, after the purging of data for various reasons, this study did not collect data from enough students in certain subgroups for further statistical analysis. For example, although 34 students remained from the Catholic University, only 13 of these were accounting students and 21 were other business students. For the Catholic University, only 17 of the 61 students were accounting students. For individual religious affiliation, the subsets of Baptist, non-denominational Christians, no-religious affiliation, Methodist, and Lutheran were too small for additional statistical analysis.

REFERENCES

Allmon, D., Page, D. & Roberts, R. (2000). Determinants of Perceptions of Cheating: Ethical Orientation, Personality and Demographics. *Journal of Business Ethics*, 23(4), 411-422.

Allport, G. & Ross, M. (1967). Personal Religious Orientation and Prejudice. *Journal of Personality & Social Psychology*, 5(4), 432-443.

American Institute of Certified Public Accountants. (1999). CPA Vision Project: Focus on the Horizon 2011 and Beyond, New York, NY. Retrieved November 8, 2005, from <http://www.cpavision.org/feedback.htm>.

Armstrong, M. (1993). Ethics and Professionalism in Accounting Education: A Sample Course. *Journal of Accounting Education*, 11, 77-92.

Bok, D. (1976). Can Ethics be Taught? *Change*, October: 26-30.

Bonawitz, Mary Feeney (2002) Analysis and comparison of the moral development of students required to graduate with an ethics course. Ph.D. dissertation, Florida International University, United States -- Florida. Retrieved April 30, 2005, from ABI/INFORM Global database. (Publication No. AAT 3049799).

Barnett, T., Bass, K. & Brown, G. (1996). Religiosity, Ethical Ideology, and Intentions to Report a Peer's Wrongdoing. *Journal of Business Ethics*, 15(11), 1161-1174.

Cohen, J., Pant, L. & Sharp, D. (1998). The Effect of Gender and Academic Discipline Diversity on the Ethical Evaluations, Ethical Intentions and Ethical Orientation of Potential Public Accounting Recruits. *Accounting Horizons*, 12(3), 250-270.

Conroy, S. & Emerson, T. (2004). Business Ethics and Religion: Religiosity as a Predictor of Ethical Awareness among Students. *Journal of Business Ethics*, 50(4), 383-396.

- Cotham, P. (1998). *The Heart & Soul of Business: A Christian Perspective*, Franklin, TN: Providence House Publishers.
- Donahue, M. (1985). Intrinsic and Extrinsic Religiousness: Review and Meta-analysis. *Journal of Personality and Social Psychology*, 48(2), 400-419.
- Eynon, G., Hill, N. & Stevens, K. (1997). Factors that Influence the Moral Reasoning Abilities of Accountants: Implications for Universities and the Profession. *Journal of Business Ethics*, 16(12/13), 1297-1309.
- Feldman, H. & Thompson, R. (1990). Teaching Business Ethics: A Challenge for Business Educators in the 1990s. *Journal of Marketing Education*, 12, 10-22.
- Finn, D., Chonko, L. & Hunt, S. (1988). Ethical Problems in Public Accounting: The View from the Top. *Journal of Business Ethics*, 7 (8), 605-615.
- Fisher, D. & Sweeney, J. (1998). The Relationship Between Political Attitudes and Moral Judgment: Examining the Validity of the Defining Issues Test. *Journal of Business Ethics*, 17(8), 905-916.
- Foster, J. & LaForce, B. (1999). A Longitudinal Study of Moral, Religious, and Identity Development in a Christian Liberal Arts Environment. *Journal of Psychology and Theology*, 27(1), 52-68.
- Fulmer, W. & Cargile, B. (1987). Ethical Perceptions of Accounting Students: Does Exposure to a Code of Professional Ethics Help? *Issues in Accounting Education*, 2, 207-217.
- Glenn, J. (1992). Can a Business and Society Course Affect the Ethical Judgment of Future Managers? *Journal of Business Ethics*, 11(3), 217-223.
- Green, S. & Weber, J. (1997). Influencing Ethical Development: Exposing Students to the AICPA Code of Conduct. *Journal of Business Ethics*, 16, 777-790.
- Hill, P. & Hood, R. (1999). *Measures of Religiosity*, Birmingham, AL: Religious Education Press.
- Hiltebeitel, K. & Jones, S. (1991). Initial Evidence on the Impact of Integrating Ethics into Accounting Education. *Issues in Accounting Education*, 6(2), 262-275.
- Hiltebeitel, K. & Jones, S. (1992). An Assessment of Ethics Instruction in Accounting Education. *Journal of Business Ethics*, 11(1), 37-46.
- Jeffrey, C. (1993). Ethical Development of Accounting Students, Non-accounting Business Students, and Liberal Arts Students. *Issues in Accounting Education*, 8(1), 86-96.

Kennedy, E. & Lawton, L. (1998). Religiousness and Business Ethics. *Journal of Business Ethics*, 17(2), 163-175.

Koeplin, J. (1998) A comparison of cognitive moral development of accounting students at a Catholic university with secular university accounting students. Ph.D. dissertation, University of North Texas, United States -- Texas. Retrieved August 4, 2005, from Dissertations & Theses: Full Text database. (Publication No. AAT 9841435).

Kohlberg, L. (1969). Stage and Sequence: The Cognitive-development Approach to Socialization, in D. Goslin (Ed.), *Handbook of Socialization Theory and Research*, (pp. 347-480). Chicago: Rand McNally.

Loescher, K. (2004) The impact of an "ethics across the curriculum" initiative on the cognitive moral development of business school undergraduates. D.B.A. dissertation, Nova Southeastern University, United States -- Florida. Retrieved September 19, 2005, from Dissertations & Theses @ Nova Southeastern University database. (Publication No. AAT 3118029).

McCarthy, I. (1997). Professional Ethics Code Conflict Situations: Ethical and Value Orientation of Collegiate Accounting Students. *Journal of Business Ethics*, 16(12/13), 1467-1473.

McNair, F. & Milam, E. (1993). Ethics in Accounting Education: What is Really Being Done. *Journal of Business Ethics*, 12(10), 797-810.

Pascarella, E. & Terenzini, P. (1991). *How College Affects Students Findings and Insights from Twenty Years of Research*, San Francisco, CA: Jossey-Bass.

Piaget, J. (1932). *The Moral Judgment of the Child*, New York, NY: The Free Press, Simon and Schuster, reprint 1997.

Ponemon, L. (1993). Can Ethics be Taught in Accounting? *Journal of Accounting Education*, 11, 185-210.

Porco, B. (2003) Factors affecting the cognitive moral development of undergraduate accounting students: Ethics education, internships, volunteerism, and Beta Alpha Psi. Ph.D. dissertation, Fordham University, United States -- New York. Retrieved May 15, 2005, from ABI/INFORM Global database. (Publication No. AAT 3084893).

PWC. (2003). *Stand and Be Counted*. PricewaterhouseCoopers Advertorial Campaign. New York, NY.

Rest, J. (1979). *Development in Judging Moral Issues*, Minneapolis, MN: University of Minneapolis Press.

Rest, J. (1986). *Moral development: Advances in Theory and Practice*, New York, NY: Praeger.

- Rest, J., Thoma, S., Narvaez, D. & Bebeau, M. (1997). Alchemy and Beyond: Indexing the Defining Issues Test. *Journal of Educational Psychology*, 89(3), pp. 498-507.
- Rest, J., Narvaez, D., Thoma, S. & Bebeau, M. (1999). DIT-2: Devising and testing a revised instrument of moral judgment. *Journal of Educational Psychology*, 91(4), 644-659.
- Shaub, M. (1994). An Analysis of the Association of Traditional Demographic Variables with the Moral Reasoning of Auditing Students and Auditors. *Journal of Accounting Education*, 12(1), 1-26.
- St. Pierre, K., Nelson, E. & Gabbin, A. (1990). A Study of the Ethical Development of Accounting Majors in Relation to other Business and Nonbusiness Disciplines. *The Accounting Educators' Journal*, 2, 23-35.
- Thurow, L. (1987). Ethics Doesn't Start in Business Schools. *New York Times*, 14 June, 25.
- Trevino, L. (1992). Moral Reasoning and Business Ethics: Implications for Research, Education and Management. *Journal of Business Ethics*, 11(5,6), 445-460.
- Werhane, P. & Freeman, R. (1997). *Blackwell Encyclopedia Dictionary of Business Ethics*, London: Blackwell.
- Wimalasiri, J., Pavri, F. & Jalil, A. (1996). An Empirical Study of Moral Reasoning among Managers in Singapore. *Journal of Business Ethics*, 15(12), 1331-1341.
- Wimalasiri, J. (2001). Moral Reasoning Capacity of Management Students and Practitioners: An Empirical Study in Australia. *Journal of Managerial Psychology*, 16(7/8), 614-634.