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USING BUSINESS STUDENTS' PRECEPTS TO PREDICT ETHICAL DECISION MAKING

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A 13-item questionnaire was administered to 259 business students on two college campuses, with a combined population of 1,872, to determine if religious affiliation, upbringing, profession, college major and several other independent variables (labeled precepts) could be used to predict students' perceptions of some main problems of philosophy. Stepwise multiple regression models revealed several significant differences, with $p < .05$ in four separate models. Precepts are predictive of business students' perceptions of some of the basic problems of philosophy. Understanding the influence of religion affiliation, upbringing, profession, and college major on students' perceptions of right and wrong decision making can be useful for educators when planning for ethics instruction in business education.

INTRODUCTION

The word philosophy itself means literally the love (philo) of wisdom (sophy), suggesting a person who is serious about philosophy is also serious about pursuing wisdom. Although there is no universal definition of ethics, Socrates's creed "An unexamined life is not worth living." To Socrates, ethics can be defined as not merely "what is" but "what ought to be" (Landesman, 1985). Even then, what is prudent for the individual (egoism) may be reckless for the group. Considering the harm one's actions or decisions might have on others (altruism) is a critical component of one of the main branches of philosophy called ethics. Social and demographic variables (precepts) can influence ethical thinking and conduct. One study in particular examined the relationship between gender and business ethics.

McCabe, Ingram, and Conway (2006) found that when a multidimensional approach to gender was applied, results showed that expressive traits and egalitarian gender-role attitudes contributed to both men's and women's propensity to perceive questionable workplace behaviors as unethical. Emotions also play a role in perceptions of ethical conduct. Connelly, Helton-Fauth, and Mumford (2004) reported that positive and negative emotions classified as active emotions were more strongly related to interpersonally-directed ethical choices than to organizationally-directed choices; they also determined that passive emotions were less related to ethical choices than active emotions. Recent initiatives in business curricula have included emphases on global business and ethics.

Fisher, Woodbine, and Fullerton (2003) found that Australian and Canadian students in both countries generally held high expectations for the behavior of business people and consumers. In a study of marketing goods on the Web, Sama and Shoaf (2002), found that four traditional ethical rationales guide organizational decision making – utilitarianism, moral rights of man, distributive justice, and relativism – were applied to four moral dilemmas attributed to the proliferation of dot.com companies as they relate to consumer welfare. They found that ethical rationale in the

New Media (e-commerce) is largely non-existent; and when it does exist, it is generally reactive and driven by utilitarian or relativistic reasoning.

Abdolmohammadi and Baker (2007) investigated the relationship between moral reasoning and plagiarism and found evidence of an inverse relationship between test scores measuring moral reasoning and levels of plagiarism. The authors found more plagiarism at the beginning of a semester than at the end and another inverse relationship between plagiarism and grade point average: Higher grades meant lower levels of plagiarism.

While the use of the Internet has led to improved efficiency and effectiveness in teaching, it has also created an explosion in students' plagiarism (Fialkoff & St. Lifer, 2002; Rimer, 2003). Given the proliferation of student plagiarism involving the Internet, Granitz and Loewy (2007) conducted a study to determine which theory students invoked when defending the act of plagiarism. The results indicated that students predominately invoked deontology, situational ethics, and Machiavellianism.

Mason (2006) conducted an exploratory study at one university to examine students' inclination to commit questionable academic behaviors. He found that students perceive academic dishonesty to be commonplace; in fact, slightly more than three-fifths of the respondents believe that other students engage in dishonest behaviors on a frequent or very frequent basis. Sixty percent of the respondents considered the dishonest behavior to be a "minor problem" or "not a problem." A third of the sampled students had witnessed academic dishonesty, but they chose not to inform the teacher; this statistic does not bode well for believing these future business leaders will actively pursue any type of whistle-blowing activity when they observe dishonest behavior on the job.

A study by Albaum and Peterson (2006) reported on a survey of undergraduate business students regarding certain general ethics-related attitudes and the degree of ethicality these students possessed. The findings revealed that female survey participants were slightly but significantly more ethically inclined than male survey participants. Survey

participants who reported being very religious were slightly but significantly more ethically inclined than survey participants who were less religious.

To examine the determinants of and difference between the ethical beliefs of two groups of Japanese students in religious and secular universities, a study was conducted by Rawwas, Swaidan, and Al-Khatib (2006). The analysis revealed that students of the Japanese religious university perceived that young, male, relativistic, and opportunistic students tended to behave less ethically than did older, female, and idealistic students. Students of the Japanese secular university perceived that male, achievement-oriented, and opportunistic students tended to behave less ethically than did female and experienced students. Opportunism was found to be one of the most important determinants in explaining misconduct. In addition, students of the Japanese secular university were somewhat more sensitive to academic dishonesty practices than were students of the Japanese religious university.

Premeaux (2005) surveyed students in Association to Advance Collegiate Schools of Business-International (AACSB) accredited Tier 1 and Tier 2 schools to assess attitudes about cheating. Tier 1 schools offer undergraduate, masters, and doctoral programs; Tier 2 schools offer undergraduate and masters programs. He found that while cheating is fairly commonplace at Tier 1 and 2 AACSB accredited business schools, some differences existed between Tier 1 and 2 students and their attitudes about cheating. Tier 1 students were more likely to cheat on written assignments, but Tier 2 students have a tendency to cheat more on exams. The Tier 2 mean rating for the idea that moral and ethical people cheat was significantly greater than the Tier 1 rating. Moreover, Business Administration majors at Tier 2 schools were more likely to cheat than other majors. Furthermore, the literature suggests new knowledge reported in the empirical business ethics literature appears to be somewhat mixed.

The Purpose of this Study

Our purpose is to determine if some of the precept variables commonly discussed in the business ethics literature, as having influence on students' perceptions of right and wrong choices, can be used to predict some of the basic problems of ethics. Furthermore, we wanted to know if a diverse population of college-aged business majors' precepts would be predictive of their perceptions of the ethicality in hypothetical business decisions, which are rooted in western philosophical thinking on ethical conduct. With all these competing views on business ethics, a few research questions should be answered.

Research Questions

For example, is cheating on an exam similar in moral philosophy to cheating on a mortgage application or lying to

the IRS on a tax return? Does a persons' age or gender or church affiliation or profession incline them to believe more in a "teleological" ethic than in a "utilitarian" ethic? Does professional certification incline a person to perceive whistle blowing from the perspective of consequentialism as opposed to a deontological perspective? These and other questions are very important in helping educators plan instruction for their business students. The precept variables in this study (gender, age, affiliations, upbringing, etc.) are demonstrated in the business ethics literature to contribute to students' habitual morality; moreover, not many studies have directly measured how these precepts predict students' perceptions of basic ethical issues.

VARIABLES ASSOCIATED WITH ETHICAL DECISION MAKING

In a longitudinal study by Andersson, Giacalone, and Jurkiewicz (2007), employees with a stronger sense of hope and gratitude were found to have greater sense of responsibility toward employee and societal issues. However, employee hope and gratitude did not affect a sense of responsibility toward economic, safety and quality issues.

Researchers Emerson, Conroy, and Stanley (2007) surveyed accounting practitioners and college students to determine how each group perceived a series of ethically charged vignettes. The researchers found no significance difference between the two groups. Accounting practitioners were, however, more accepting of vignettes involving physical harm to individuals and situations that were legal but ethically questionable.

On the other hand, with all the publicity of ethical problems in American organizations, a study by Velthouse and Kandogan (2007) found that ethics is still considered one of the least important skill sets by managers. A more positive outlook, however, indicates that business students are less accepting of ethically questionable activities (Emerson & Conroy, 2004).

While accounting students are well aware of the accounting scandals, they seemed to know considerably less about the accounting profession and its subfields (Comunale, Sexton, & Gara, 2006). In addition, these accounting students lowered their opinions of corporate management more than that of accountants. Comunale, Sexton and Gara (2006) write, "These accounting students shifted the blame away from their own profession onto others" (p. 645). Interestingly, students who scored higher on the idealism scale tended to lower their opinions of accountants more than that of corporate managers. They also found that student gender was insignificant in predicting student opinions of accountants and corporate managers (Comunale, Sexton, & Gara, 2006).

McCabe, Ingram, and Conway (2006) found that ethicality and moral reasoning are profoundly affected by social, personal, individual and situational variables. Albaun and Peterson (2006) reported on a survey of undergraduate

business students regarding certain general ethics-related attitudes and the degree of ethicality these students possessed. The findings revealed that female survey participants were slightly but significantly more ethically inclined than male survey participants. Additionally, a study by Caples, Hanna, and Phelps (2008) found that females tend to see issues as black and white (either right or wrong) more often than males. They surmised that people advocating positions that might be viewed as unethical should be careful in how they present those ideas to females in the educational setting. However, we found gender as precept did not influence perception.

Rawwas, Swaidan, and Al-Khatib (2006) found that young, male, relativistic, and opportunistic students in a Japanese religious university tended to behave less ethically than did older, female, and idealistic students. A study by Chen and Tang (2006) examined the relationship between student attitudes on unethical behavior and the propensity to engage in unethical behavior. The researchers found relationships concerning the propensity to act unethically predictive by gender and by attitudes about ethical deeds. Results suggested that male students had stronger unethical attitudes and had higher propensity to engage in unethical behavior than female students.

Independent Variables Associated with Ethics Instruction

Although there is widespread agreement on the importance of ethics instruction in business education, there is no agreement on the best approach or timing of instruction. A study by Weber (2006) acknowledged the paucity of attention regarding the development of ethics programs within an academic environment and described in a case study how the Duquesne University School of Business attempted to introduce, integrate and promote its own ethics program. The paper traced the business school's attention to mission statements, curriculum development, ethics policy, program oversight, and outcome assessment. Six lessons learned were offered as suggestions for others seeking to develop and implement an ethics program in their school.

Tyler and Tyler (2006) used J. O. Prochaska and DiClemente's transtheoretical model of change as the basis to develop a model of student readiness for learning about ethics. By focusing on student development, the Tyler and Tyler model suggested how to best sequence educational activities in ethics instruction. Extensive ideas for practical educational activities were presented for each of the four stages of student change. The four changes are precontemplation, contemplation, action, and maintenance.

Comer and Vega (2006) presented a role-playing exercise to make the topic of whistle-blowing personally salient to undergraduates. In this exercise, students identify with the prospective whistle-blower, whose decision affects several stakeholders. The protagonist merely suspects her

manager of stealing, until she hears concrete evidence of his thefts from her assistant manager, who does not want to take action. The exercise helps prepare students to decide how to act if they observe workplace wrongdoing, demonstrates that different ethical frameworks may point to different decisions, promotes examination of possible consequences of whistle-blowing, and highlights how organizational factors affect employees' behavior and the outcomes of their behavior. The ethical frameworks defined in the study are deontology and/or formulation, utilitarianism and/or teleology, and axiology and/or relationships.

Libby, A. Agnello, and V. Agnello (2005) conducted a study to determine if an ethics course or courses help business students make better ethical decisions. They compared students who had taken an ethics course with students who had not taken an ethics course. Each group of students responded to a series of ethical dilemmas. Interestingly, male students who had taken an ethics course made fewer ethical decisions than those who had not taken an ethics course; similar results have been found in other studies.

Meanwhile, a study by Luthar and Karri (2005) found that exposure to ethics in the curriculum had a significant impact on student perceptions of what should be the ideal linkages between organization ethical practices and business outcomes. Gender based differences were found with female students having a higher expectation regarding what should be the "ethics practices and business outcomes" link. Exposure to ethics in the curriculum had a positive moderating influence on the gender-based effects on perceptions of ideal ethical climate.

In 1976 Maccoby developed an ethics profile instrument in which he categorized two general values for ethics as (1) heart values, which reflect the feeling aspects or qualities related to consciousness and (2) head values, which reflect the thinking aspects or qualities related to conceptualizations. Maccoby's instrumental value profile for managers was operationalized in a recent study of college students by Allen, Bacdayan, Kowalski and Roy (2005). The authors examined the impact of ethics training on business students. They found that college seniors were influenced less in their perceptions of the importance of instrumental values in comparison to freshmen. No significant difference was found between men and women in both the importance and reinforcement of the instrumental values examined in the study. The results of the study also do not support the idea that additional emphasis on ethics in textbooks and courses has had a significant effect.

Another study of students at two major universities by Singhapakdi (2004) analyzed the relative influences of perceived ethical problems, perceived importance of ethics, idealism, relativism, and gender on ethical intention of students. The results revealed that perceived ethical problems and perceived importance of ethics had positive impacts on ethical intentions of students. There was a reverse relationship between relativism and ethical intention;

however, there was no relationship between idealism and ethical intentions. Male students tended to be less ethical in their intention than female students. The findings indicated that grade point average and educational level were not determinants of ethical intentions for students. Important implications for marketing education and for management ethics training programs were discussed.

Anticipating harm to others appears to be a consistent mantra of advocates of good moral principles. Yet, in recent business practices, these songs appear to be falling on deaf ears.

Unethical decision making and behavior within organizations have received increasing attention over the last decade. In the cover letter to the 2008 Report to the President: Corporate Fraud Task Force, Mark Filip made the following statement:

Since July 2002, the Department of Justice has obtained nearly 1,300 corporate fraud convictions. These figures include convictions of more than 200 chief executive officers and corporate presidents, more than 120 corporate vice presidents, and more than 50 chief financial officers (p. iii).

College students are affected by such news. At least one article shows when CEOs engage in moral turpitude, it has an effect on students' perceptions of social responsibility of big business.

A study by Elias (2004) examined the effect of high-profile corporate bankruptcies on perception of corporate social responsibility. Undergraduate and graduate students rated the importance of corporate social responsibility on profitability, long-term success and short-term success, before and after high-profile bankruptcies. The results indicated that students, in general, perceived corporate social responsibility to be more important to profitability and long-term success of the firm and less important to short-term success after media publicity of corporate scandals. These

findings have important implications for business education, especially as it relates to the world view variables associated with precepts that allow for some students to engage in moral turpitude. We know students cheat! But, what are the precepts that predict the moral choices students make when it comes to ethicality in business decisions?

METHODOLOGY

Survey, Sample and Descriptive Statistics

A survey instrument was used to ask rural and Historically Black College and University (HBCU) students to rate 13 scenario statements, from 1 to 5. The survey was conducted at a rural Midwestern university and a HBCU with populations of 872 and 1,000 business students respectively. There were 259 students sampled from the combined rural and HBCU universities' business student population.

Students responded to 13 survey items (on a five-point Likert-type scale) written to be consistent with several prominent schools of thought on ethical conduct: teleological and deontological ethics, hedonism and utilitarianism, Kant's "categorical imperative," and Bentham's "felicific calculus." All examples are from schools of thought on ethical conduct deeply rooted in modern society's perceptions of right and wrong, directly and indirectly related to decision making in business. Presented in Table 1 are statements, means, and standard deviations consistent with western philosophical thinking (means-end, greater good, religious, etc.).

Moreover, since ethics might be defined as "what is and what ought to be," precepts (the social attributes that help shape students' thinking along the philosophical lines of right and wrong choices) can be construed as corollary to students' perceptions of decisions in business scenarios; thus, they should have predictive qualities. Students also provided demographic information on the survey instrument.

TABLE 1

Item Number, Scenario Statements with Means* and Standard Deviations

Items	Thirteen Hypothetical Scenario Statements on Ethical Conduct	Mean (SD)
S1	All managers should feel confident they are right before making a decision that could hurt a subordinate employee.	4.37 (.957)
S2	All managers should feel confident they are right prior to making a decision that could help a colleague.	4.28 (.821)
S7	All managers should feel confident they are right prior to making a decision that could hurt a colleague.	4.10 (.991)
S10	All managers should feel confident they are right prior to making a decision that could help a subordinate employee.	4.09 (.814)
S8	Ethical managers know right from wrong.	4.05 (1.026)
S13	A firm should have proper procedures to protect its whistle-blowers.	3.81 (1.039)
S4	Business ethics requires managers to consider harm to others prior to actions they take.	3.77 (1.232)
S3	The most ethical way to terminate a person's employment is to show facts, be direct and confrontational with that person.	3.64 (1.297)
S11	As part of the team, I will whistle-blow on others' wrong doings.	3.34 (1.105)
S5	The most ethical way to terminate a person is to use a neutral party, such as human resources, to show facts and confront the person.	3.31 (1.259)
S6	If necessary, an ethical manager could terminate 20 percent of their workforce if it means saving the company.	3.17 (1.051)
S12	A whistle-blower should be rewarded for revealing unethical acts.	3.08 (1.178)
S9	The most ethical managers have some church or religious affiliation.	3.04 (1.155)

*denotes 1 = strongly disagree to 5 = strongly agree.

A summary of demographic variables appears in Table 2. Slightly more than half of the respondents were female; more than two-thirds of the respondents were juniors and seniors; and accounting and management majors were evenly divided with approximately 25 percent each or 51.5

percent combined, for the various business majors. Almost 57 percent of the respondents were from the rural university, and slightly over 43 percent of the respondents were from the HBCU.

TABLE 2

Summary of Demographic Variables

<i>N</i> = 259	<i>Demographics</i>	<i>N</i>	<i>%</i>
Gender	Female	131	51.2
	Male	<u>125</u>	48.8
	Total (3 missing)	<u>256</u>	<u>100</u>
Age	<20	0	0
	20-25	104	40.8
	26-30	123	48.2
	31-35	22	8.6
	36-40	4	1.6
	≥ 40	<u>2</u>	0.8
	Total (4 missing)	<u>255</u>	<u>100</u>
Grade Level	Freshman	8	3.1
	Sophomore	36	14.1
	Junior	98	38.3
	Senior	78	30.5
	Graduate	<u>36</u>	14.1
	Total (3 missing)	<u>256</u>	<u>100</u>
Campus	Rural	147	56.8
	HBCU	<u>112</u>	43.2
	Total	<u>259</u>	<u>100</u>
Majors	Accounting	59	26.2
	Management	57	25.3
	Finance	16	7.1
	MIS	8	3.6
	Marketing	13	5.8
	Others	66	29.3
	Business Comm.	<u>6</u>	<u>2.7</u>
	Total (34 missing)	<u>225</u>	<u>100</u>

A 13-item instrument with a Likert-type scale (1 = strongly disagree, 5 = strongly agree) was used to assess business students' perceptions of those items representing ethical decisions in business. The statistical analyses presented in this study were based on those 259 observations, which we assumed to be normally distributed.

Since Albaum and Peterson (2006) and Rawwas, Swaidan, and Al-Khatib (2006) recently found significant differences on ethics between genders, testing this demographic was also of interest to us. Table 3 shows the frequency and percentages of social attributes (precepts) for male and female students based on their ethical choices.

TABLE 3

Summary of Frequency of Precept Variables by Gender*

Social Attributes	Response to Social Attribute	Yes Male		Yes Female	
		Frequency	%	Frequency	%
Age	251	129	51.4	122	48.6
Income	248	189	76.2	59	23.8
Gender	249	174	69.9	75	30.1
Race	251	181	72.1	70	27.9
Education	250	112	44.8	138	55.2
Profession	253	115	45.5	138	54.5
College Major	249	177	71.1	72	28.9
Professional License	251	159	63.3	92	36.7
Religious Affiliation	254	134	52.8	120	47.2
Upbringing	254	98	38.6	156	61.4
Certification	250	203	81.2	47	18.8
Religious/Org. Member	254	77	30.3	177	69.7

*Twelve social attributes students perceive influence a manager's ethical decision making.

Several precept categories (consistent with the literature) were included on the survey instrument to help determine if these rural and HBCU college students' precepts (those categories students indicated as having a positive influence on ethics) would be predictive of their perceptions of business decision scenarios rated on a Likert-type scale. Students responded to survey questions pertaining to precepts, organizational affiliation requiring ethical conduct, and the number of unethical actions seen in the last year. The survey questions were presented as follows:

Please indicate by checking any of the categories below that you view as positively associated with ethics:

Age; Income; Gender; Race; Education; Profession; College Major; Professional Licensure; Religious Affiliation; Upbringing; and/or Certificate

How many unethical actions have you seen in the last year _____?

Do you belong to an organization requiring its members to be ethical, yes or no?

The twelve items were then coded "1" if checked by a student and "0" if not checked by a student. Students could check any item that applied to precepts they associated positively with ethics. These items were naturally dummy coded and were used in regression analyses to be discussed later. Prior to that, reliability of the scale was ascertained and deemed respectable. Thus, the aforementioned research

purpose was addressed by testing the following null hypothesis:

Hypothesis: Age, income, gender, race, education, profession, college major, professional licensure, religious affiliation, upbringing, certificate, number of time a student has seen an unethical act, or belonging to an organization that requires ethical conduct is not predictive of college aged business students' perceptions of ethical business decisions that are represented by four derived factors.

FINDINGS AND RESULTS

Instruments' Reliability Test

The 13-item Likert-type scale was tested for reliability in SPSS 15.0 using a Cronbach's (1984) alpha. The scale reliability was .75, which exceeds the Nunnally (1978) criteria of .70 for an acceptable alpha. The reliability did not improve if any item was deleted; therefore, 13 items were used for further data analyses. In a recent study, Lance, Butts, and Michels (2006, p. 206) wrote: "Thus, our second point is that .80, and not .70 as has been attributed appears to be Nunnally's recommended reliability standard for the majority of purposes cited in the organizational literature." Devellis (1991) says an alpha "between .70 and .80" is respectable (p. 85). Given the differences in the literature on an acceptable alpha, we moved forward with the data analysis based on the .75 alpha we obtained. A factor analysis was conducted after testing and accepting the 13-item instrument's alpha reliability.

Factor Analysis

Two hundred fifty-nine students' responses to the 13 items measuring precepts with a Likert-type scale were subjected to an un-rotated principal component analysis, with a Scree Plot (in SPSS 15.0). Four factors were suggested by the Scree Plot. To gauge for sampling adequacy, The Kaiser-Meyer-Olkin Measure of Sampling Adequacy Test was .743 and the Bartlett's Test of Sphericity was 699.546 with degrees of freedom at 78, with $p = .000$. Those four factors explained 57.63% of variance after a Rotation Sums of Squared Loadings (Factor 1 = 22.11%, Factor 2 = 16.75%, Factor 3 = 9.68%, and Factor 4 = 9.10%, respectively). Principal Component Analysis was used with Varimax Rotation to extract the four factors, as shown in Table 4.

A variable was said to load on a factor if it had a component loading of .40 or higher on that factor and less than .40 on any other factors (Devellis, 1991; Hatcher, 1994; Kachigan, 1991). The derived factors were indicative of the construct being measured. Therefore, each of the four derived factors represents one dimension of the construct—students' perceptions of ethicality in business decisions, in lieu of one or more of the perspectives on ethical thinking in western philosophy. Factors 1, 2, 3, and 4 were subsequently labeled according to the nature of the language contained in the components loading on each factor: Factor (1) *Decision Theory*, (2) *Deontology & Consequentialism*, Factor (3) *Utilitarianism* and, Factor (4) *Teleology & Utilitarian Theories of Punishment*. To test a single null hypothesis, four separate stepwise multiple regression models were used.

TABLE 4

Principal Component Factor Analysis of Ethical Business Decisions *

Items	Scenario Statements Representing Precepts	Factor Loadings			
		F1	F2	F3	F4
FACTOR 1: Decision Theory					
S7	All managers should feel confident they are right prior to making a decision that could hurt a colleague.	.855	.024	-.086	-.021
S1	All managers should feel confident they are right before making a decision that could hurt a subordinate employee.	.741	-.025	.175	.191
S10	All managers should feel confident they are right prior to making a decision that could help a subordinate employee.	.728	.223	.054	-.113
S2	All managers should feel confident they are right prior to making a decision that could help a colleague.	.681	.047	.185	-.018
S4	Business ethics requires managers to consider harm to others prior to actions they take.	.529	.190	-.255	-.013
FACTOR 2: Deontology & Consequentialism					
S11	As part of the team, I will whistle-blow on others' wrong doings.	.122	.794	.022	-.035
S12	A whistle-blower should be rewarded for revealing unethical acts.	-.003	.787	.084	.185
S13	A firm should have proper procedures to protect its whistle-blowers.	.127	.749	.130	-.081
FACTOR 3: Utilitarianism					
S5	The most ethical way to terminate a person is to use a neutral party, such as human resources, to show facts and confront the person.	-.010	.067	.763	.266
S6	If necessary, an ethical manager could terminate 20 percent of their workforce if it means saving the company.	.125	.179	.711	-.263
FACTOR 4: Teleology & Utilitarian Theories of Punishment					
S3	The most ethical way to terminate a person's employment is to show facts, be direct and confrontational with that person.	.241	.159	.003	-.736
S9	The most ethical managers have some church or religious affiliation.	.299	.344	-.002	.468
S8	Ethical managers know right from wrong.	.356	.312	.076	.436

*Extraction Method: Principal Component Factoring. Rotation Method: Varimax with Kaiser Normalization; a Rotation converged in 6 iterations.

Stepwise Regression Models for Analyses

The regression analyses were significant for all four factors. Our research purpose was to determine if precepts could be used to predict perceptions. Stepwise multiple regression analyses on the four factors (entered as a criterion/ dependent variable one at a time) were conducted since they account for 57.63 percent of the variance explained.

Precept categories in the regression equations are as follows: 1) age; 2) income; 3) gender; 4) race; 5) educational level; 6) profession; 7) college major; 8) professional licensure; 9) religious affiliation; 10) upbringing; and 11) certification. These variables were used (all dummy coded) as predictor (independent variables) on tests. Additionally, the precept categories 12) organizational affiliation and 13) the number of unethical acts students saw within a year were also added to the regression models as independent variables. In each of the four regression models, there were 13 independent variables; all four regression analyses were significant between at least one of the factors and at least one of the 13 predictor variables.

Multicollinearity was not a problem for the data in this study in any of the four regression models. No condition index exceeded 15. In SPSS 15.0, Collinearity Diagnostic tests of the data revealed no independent variable with a condition index above 4.0; in addition, no two variables shared variance proportions above .50. A condition index of 15 indicates possible collinearity problems and an index over 30 suggests serious collinearity problems (Belsley, Kuh, and Welsch, 1980).

None of the 13 independent variables had tolerances below .20. The null hypothesis was rejected on Factor 1, because the precept of "upbringing" is predictive of business students' perceptions of choices made in the business environment concerning *Decision Theory*. The Collinearity Diagnostic for predictor variable "upbringing" shows a Tolerance of 1.000 and a Condition Index of 2.818, respectively in the stepwise regression model. Therefore, "upbringing" can be considered highly predictive of *Decision Theory*. The variable predictive of Factor 1 is shown in Table 5, including the F Change.

TABLE 5

Stepwise Multiple Regression Model – Precept on *Decision Theory*

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.295 ^a	.087	.083	.96880299	.087	21.121	1	222	.000	2.166

a. Predictors: (Constant), eUPBR

b. Dependent Variable: REGR factor score 1 for analysis 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	-.380	.103		-3.700	.000						
	eUPBR	.608	.132	.295	4.596	.000	.295	.295	.295	1.000	1.000	

a. Dependent Variable: REGR factor score 1 for analysis 1

The null hypothesis was rejected on Factor 2, because the precepts of "profession" and "religious affiliation" are predictive of business students' perceptions of choices made in the business environment concerning *Deontology and Consequentialism*. The Collinearity Diagnostic for predictor

variables profession and religious affiliation shows Tolerances of .997 and .997 and Condition Indexes of 2.152 and 3.146, respectively. The two variables predictive of *Deontology and Consequentialism* are shown in Table 6, including the F Change.

TABLE 6

Stepwise Multiple Regression Model – Precepts on *Deontology and Consequentialism*Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.178 ^a	.032	.027	.96423496	.032	7.278	1	222	.008	1.840
2	.227 ^b	.052	.043	.95640994	.020	4.648	1	221	.032	

a. Predictors: (Constant), ePROF

b. Predictors: (Constant), ePROF, eREL AFF

c. Dependent Variable: REGR factor score 2 for analysis 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.224	.095		-2.357	.019					
	ePROF	.349	.129	.178	2.698	.008	.178	.178	.178	1.000	1.000
2	(Constant)	-.337	.108		-3.125	.002					
	ePROF	.333	.128	.170	2.596	.010	.178	.172	.170	.997	1.003
	eREL AFF	.278	.129	.141	2.156	.032	.151	.144	.141	.997	1.003

a. Dependent Variable: REGR factor score 2 for analysis 1

The null hypothesis was rejected on Factor 3, because the precepts of “upbringing,” “college major,” and “profession” are predictive of business students’ perceptions of choices made in the business environment concerning the hypothetical descriptions amounting to *Utilitarianism*. The Collinearity Diagnostics for predictor variables upbringing, college major, and profession are shown in Table 7, including the F Change.

The null hypothesis was rejected on Factor 4, because the precept “religious affiliation” is predictive of business students’ perceptions of choices made in the business environment concerning the hypothetical statements approximating *Teleological & Utilitarian Theories of Punishment*. The Collinearity Diagnostic for the predictor variable religious affiliation shows a Tolerance of 1.00 and a Condition Index of 2.215. The variable predictive of Factor 4 is shown in Table 8, including the F Change.

TABLE 7

Stepwise Multiple Regression Model – Precepts on Utilitarianism

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.197 ^a	.039	.035	.97197988	.039	8.984	1	222	.003	1.875
2	.251 ^b	.063	.055	.96178647	.024	5.731	1	221	.018	
3	.290 ^c	.084	.072	.95306224	.021	5.065	1	220	.025	

- a. Predictors: (Constant), eUPBR
- b. Predictors: (Constant), eUPBR, eCLG MAJ
- c. Predictors: (Constant), eUPBR, eCLG MAJ, ePROF
- d. Dependent Variable: REGR factor score 3 for analysis 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.175	.103		1.698	.091					
	eUPBR	-.398	.133	-.197	-2.997	.003	-.197	-.197	-.197	1.000	1.000
2	(Constant)	.047	.115		.412	.681					
	eUPBR	-.341	.133	-.169	-2.557	.011	-.197	-.169	-.166	.969	1.032
	eCLG MAJ	.355	.148	.158	2.394	.018	.188	.159	.156	.969	1.032
3	(Constant)	.162	.125		1.300	.195					
	eUPBR	-.307	.133	-.152	-2.307	.022	-.197	-.154	-.149	.956	1.046
	eCLG MAJ	.460	.154	.205	2.983	.003	.188	.197	.192	.880	1.136
	ePROF	-.302	.134	-.153	-2.250	.025	-.102	-.150	-.145	.906	1.104

- a. Dependent Variable: REGR factor score 3 for analysis 1

TABLE 8

Stepwise Multiple Regression Model – Precepts on Factor 4

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.161 ^a	.026	.021	.98649444	.026	5.896	1	222	.016	1.890

- a. Predictors: (Constant), eREL AFF
- b. Dependent Variable: REGR factor score 4 for analysis 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.151	.088		-1.716	.087					
	eREL AFF	.323	.133	.161	2.428	.016	.161	.161	.161	1.000	1.000

- a. Dependent Variable: REGR factor score 4 for analysis 1

SUMMARY AND DISCUSSION

Given the ethical and legal lapses that occurred from year 2000 to 2010 in the United States, it is increasingly important to know the ethical perspectives of future business

leaders so that their future behavior can be anticipated. Our study's findings fill a void in the literature concerning college students' perceptions and the strength of precepts on their perceptions. Our findings showed that some precepts do predict students' perceptions of the ethicality in business

decisions represented by four Factors: (1) *Decision Theory*, (2) *Deontology & Consequentialism*, (3) *Utilitarianism*, and (4) *Teleology & Utilitarian Theories of Punishment*. Upbringing, religious affiliation, profession, and college major are strong predictors of students' perceptions of some of the problems Feinberg (1996) refers to in his edited book, *Reason and Responsibility: Readings in Some Basic Problems of Philosophy*.

Since we know which of the hypothetical statements (components) loaded onto which of the four derived factors, we labeled and defined our four factors in the following ways:

Factor (1) *Decision Theory*: "The theory of rational choices aimed at achieving an optimal outcome where the amount of information available to the agent is limited" (Feinberg, 1996, p. 640).

Factor (2) *Deontology*: "A type of moral theory stating that morality consists in doing one's duty, rather than in considering the probable consequences of one's actions, in cases where duty and the promotion of good consequences come into conflict" (Feinberg, 1996, p. 640) and *Consequentialism*: "A type of moral theory stating that to act morally we must base our actions on their probable results or consequences, rather than acting out of duty, in cases where duty and promoting good consequences come into conflict" (Feinberg, 1996, p. 639).

Factor (3) *Utilitarianism*: "The moral theory stating that individuals should choose the act, among those available to the agent, that is likely to create the greatest amount of happiness and the least amount of pain" (Feinberg, 1996, p. 653).

Factor (4) *Teleology*: "The view that there is a purpose or goal to the universe. From the Greek telos (goal, end) and logos (theory, account)" and *Utilitarian Theories of Punishment*: "These theories hold that punishment is at best a necessary evil, justifiable if and only if the good of its consequences (its social utility) outweigh its own immediate and intrinsic evil" (Feinberg, 1996, p. 652).

We named the factors based on our interpretations of language contained in the components loading on each of the factors. We believe naming the factors based on the aforementioned defined theories helps to better explain the factor loadings; for example, the language found in the five components loading on Factor 1 (S7, S1, S10, S2, and S4) combined seem to represent "*Decision Theory*."

Moreover, the language in the components loading on Factor 2 (S11, S12, and S13) combined seem to represent "*Deontology and Consequentialism*." Whistle blowers often sacrifice personal gain, their reputations, and sometimes their liberty and freedom for what they perceive to be the greater good. Personal sacrifice in whistle blower cases is among the most costly ethical choices.

Although students' perceptions remain a latent variable, the four derived factors, in a sense, represent four dimensions of the hypothetical construct: "students' perceptions of ethicality in business." The alpha reliability

for each of the four derived factors was acceptable. The regression analyses used 13 predictor variables (precepts) that are subsumed to correlate well with students' perceptions (factors), but not so much with each other, that they can be used to predict perceptions. What we found in this study is that among the 13 predictor variables, four of the predictor variables (Upbringing, Religious Affiliation, Profession, and College Major) significantly predict business students' perceptions.

Among the 13 precept variables in the four stepwise regression analyses, *age, income, gender, race, educational level, professional licensure, certification, organizational affiliation and the number of unethical acts students saw within a year* did not survive the stepwise regression in any of the four regression tests as independent predictor variables. Surprisingly, race and gender were not predictive of perceptions in any of the regression analyses.

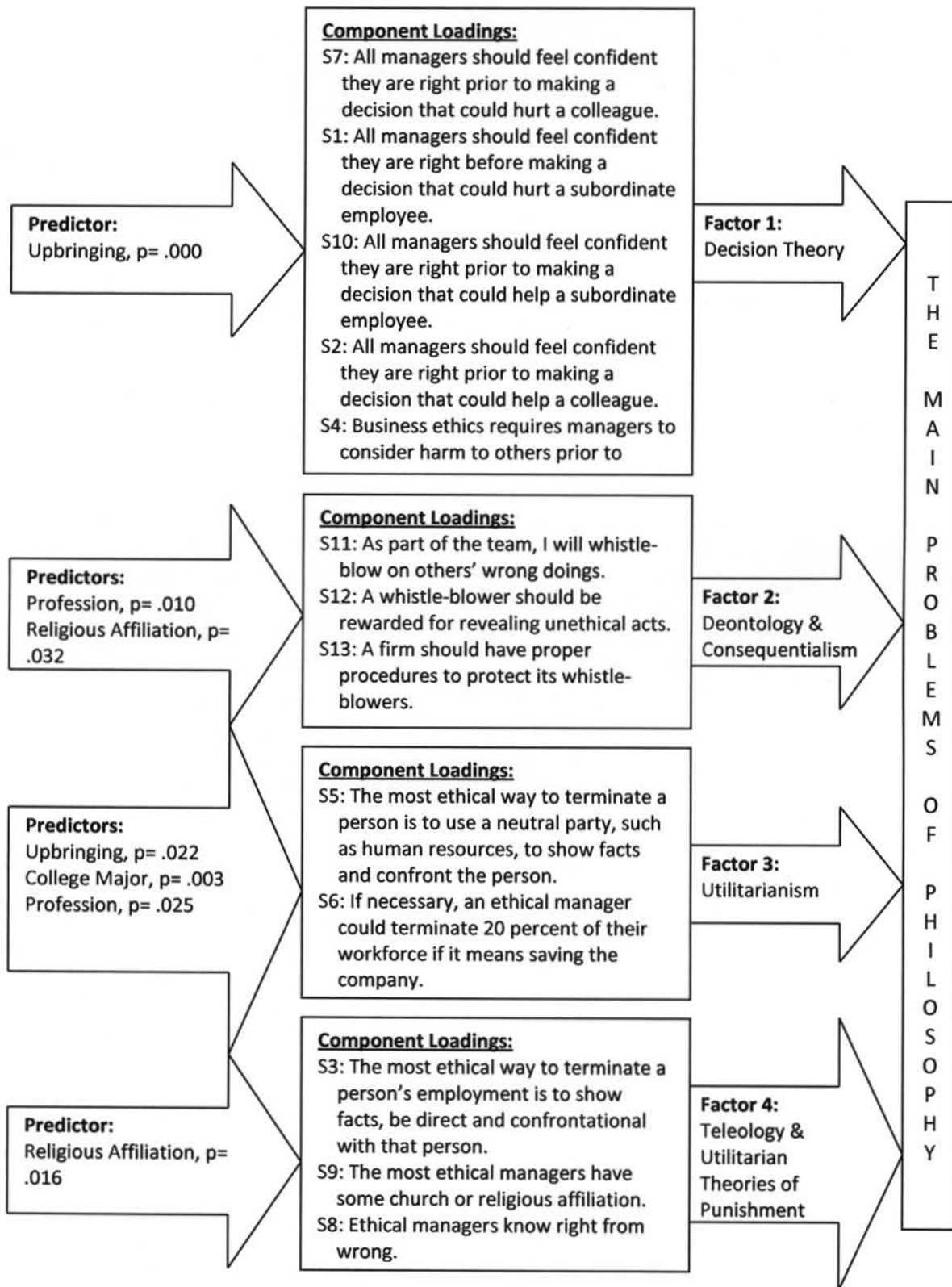
Our study shows that race and gender differences might somehow be trumped by the aspects of upbringing and religious affiliation common to everyone being socialized within the superculture of the United States. There might be more shared understanding about basic problems of philosophy among these groups than conflicting views on ethicality as summarized in the aforementioned literature. What this implies is the basic underpinnings of *Decision Theory, Deontology & Consequentialism, Utilitarianism, and Teleology & Utilitarian Theories of Punishment* is learned from parents or at church or through some affiliation with religion. The tougher choices requiring personal sacrifice for a greater good or the imposition of punishment (which is construed to be inherently evil) are also predicted by religious affiliation. We present a condensed version of our findings in Exhibit 1.

The predictor variables that survived the stepwise regression analyses in each of the four separate stepwise regression models and their levels of significance are included. In addition, language of the components loading on each factor is briefly described, along with the named factors. Notice the language in the two components loading on Factor 3 seems to point directly to the greater good, or utilitarian actions.

Terminating 20 percent of the workers means the act is an attempt to preserve jobs for 80 percent of the workers. Even more so, business students appear to perceive persons with religious affiliation to be more self-sacrificing, to always be looking out for the greater good, to be purpose driven and to be able to meter out just punishment if it means a better consequence in the future. Another important observation is religious affiliation is predictive of two of the derived factors and upbringing is also predictive of two of the factors, but neither is at the same time predictive of any of the four factors. This leads us to believe religious affiliation and upbringing are critically important precepts in moral development warranting further study and analyses, especially among business majors.

EXHIBIT 1

Predictors with Levels of Significance, Component Loadings, and Factors



As stated at the beginning of this study, the recent scandals involving unethical decision making within organizations have received considerable publicity. Academics have responded with various studies involving student perceptions on ethics, methods of assessing students' beliefs on ethics, and contradictions in practice. However, the literature review did not find any studies that were conducted in rural and urban HBCU universities that measured and compared mean differences on the strength of precepts on students' perceptions of right and wrong business decisions. The finding that sophomore rural students were less likely to blow the whistle on wrongdoing than junior level rural students is inconsistent with the results of at least one study (Bell, Guyot, Martin, & Meier, 2011). A study by Singhapakdi (2004) revealed that educational level was not a determinant of ethical intentions for students. There are, of course, always limitations to any study.

In lieu of the egregious examples of moral turpitude allowed by corporate executives today, but exposed by the popular press, it is very important to understand which world-view variables can be used to predict business students' perceptions of the ethicality in business decisions

In our study, stepwise multiple regression analyses revealed religious affiliation, upbringing, profession, and college major variables (precepts) to be predictive of students' perceptions of decision theory, deontology, consequentialism, utilitarianism, teleology and utilitarian theories of punishment. Because business students' precepts predict some of the basic problems of philosophy, understanding these precepts can be useful for educators when planning for ethics instruction in business education. Today's business students are tomorrow's business leaders.

Limitations and Future Research

This study was limited to two universities, a rural and an urban. This study did not survey a sufficient number of students across all grade levels and across enough university campuses. Freshmen and graduate students were under represented in this study. The rural business students and urban students made the combined sample more heterogeneous; however, we are still precluded from making generalizations to a broader population of college business students. A much larger and more heterogeneous population of business students should be sampled.

Future studies should compare longitudinal data from baseline information gathered from students with the same information gathered from alumni as they progress throughout their careers. Possibly the effects of age, work experience, education, and gender could be analyzed. According to McCabe, Ingram, and Conway (2006), our understanding of the similarities and differences between men and women with regard to ethical perceptions may

become better informed by measuring gender as a complex, multidimensional construct.

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