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# Analysis and comparison of the moral development of students required to graduate with an ethics course

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

ANALYSIS AND COMPARISON OF THE MORAL DEVELOPMENT OF  
STUDENTS REQUIRED TO GRADUATE WITH AN ETHICS COURSE

A dissertation submitted in partial fulfillment of the  
requirements for the degree of

DOCTOR OF PHILOSOPHY

in

BUSINESS ADMINISTRATION

by

Mary Feeney Bonawitz

2002

To: Dean Joyce J. Elam  
College of Business Administration

This dissertation, written by Mary Feeney Bonawitz, and entitled Analysis and Comparison of the Moral Development of Students Required to Graduate with an Ethics Course, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Dana L. Farrow

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Ena Rose-Green

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Clark Wheatley

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Felix Pomeranz, Major Professor

Date of Defense: March 6, 2002

The dissertation of Mary Feeney Bonawitz is approved.

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Dean Joyce J. Elam  
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Dean Douglas Wartzok  
University Graduate School

Florida International University, 2002

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## DEDICATION

I dedicate this dissertation to my husband, Irving M. Bonawitz, PhD, CPA. Without his patience, suggestions, guidance, and most of all love, this dissertation would not have been completed.

## ACKNOWLEDGMENTS

I wish to thank the members of my committee for their unending patience, support and suggestions. They have been shining examples to me and encouraged me to remain confident in my abilities to succeed. From the School of Business Administration, Dana Farrow, took time from his schedule to serve on a committee in a discipline other than his own. I appreciate Ena Rose-Green's thoughtful commentary on my research methodology and hypotheses. Clark Wheatley's great sense of humor made all his critiques interesting which aided my writing and learning.

My deepest appreciation must go to Dr. Felix Pomeranz, my major professor, for his encouragement and confidence to help to reach my goals. He kept me on track with his gentle prodding despite the many delays due to my husband's illness. He has my eternal gratitude and deepest respect.

ABSTRACT OF THE DISSERTATION  
ANALYSIS AND COMPARISON OF THE MORAL DEVELOPMENT OF  
STUDENTS REQUIRED TO GRADUATE WITH AN ETHICS COURSE

by

Mary Feeney Bonawitz

Florida International University, 2002

Miami, Florida

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Accounting students become practitioners facing ethical decision-making challenges that can be subject to various interpretations; hence, the profession is concerned with the appropriateness of their decisions. Moral development of these students has implications for a profession under legal challenges, negative publicity, and government scrutiny. Accounting students moral development has been studied by examining their responses to moral questions in Rest's Defining Issues Test (DIT), their professional attitudes on Hall's Professionalism Scale Dimensions, and their ethical orientation-based professional commitment and ethical sensitivity. This study extended research in accounting ethics and moral development by examining students in a college where an ethics course is a requirement for graduation.

Knowledge of differences in the moral development of accounting students may alert practitioners and educators to potential problems resulting from a lack of ethical understanding as measured by moral development levels. If student moral development levels differ by major, and accounting majors have lower levels than other students, the

conclusion may be that this difference is a causative factor for the alleged acts of malfeasance in the profession that may result in malpractice suits.

The current study compared 205 accounting, business, and nonbusiness students from a private university. In addition to academic major and completion of an ethics course, the other independent variable was academic level. Gender and age were tested as control variables and Rest's DIT score was the dependent variable. The primary analysis was a 2x3x3 ANOVA with post hoc tests for results with significant p-value of less than 0.05.

The results of this study reveal that students who take an ethics course appear to have a higher level of moral development ( $p=0.013$ ), as measured by the (DIT), than students at the same academic level who have not taken an ethics course. In addition, a statistically significant difference ( $p=0.034$ ) exists between freshmen who took an ethics class and juniors who did not take an ethics class. For every analysis except one, the lower class year with an ethics class had a higher level of moral development than the higher class year without an ethics class. These results appear to show that ethics education in particular has a greater effect on the level of moral development than education in general. Findings based on the gender specific analyses appear to show that males and females respond differently to the effects of taking an ethics class. The male students do not appear to increase their moral development level after taking an ethics course ( $p=0.693$ ) but male levels of moral development differ significantly ( $p=0.003$ ) by major. Female levels of moral development appear to increase after taking an ethics course ( $p=0.002$ ). However, they do not differ according to major ( $p=0.097$ ).



These findings indicate that accounting students should be required to have a class in ethics as part of their college curriculum. Students with an ethics class have a significantly higher level of moral development. The challenges facing the profession at the current time indicate that public confidence in the reports of client corporations has eroded and one way to restore this confidence could be to require ethics training of future accountants.

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## **Chapter 1. INTRODUCTION**

### **1.1 Accounting Background.**

Professional conduct and ethics were not formally addressed by the accounting profession until the mid 1980s. Robert Sack, then chief accountant for the Securities and Exchange Commission (SEC) Division of Enforcement, expressed concern over encroaching ills in the profession (Sack, 1985). Some of the concerns were opinion shopping, lack of communication with regulators regarding audit client financial irregularities, and a perceived lack of independence in audits of management advisory clients. The failures of savings and loan institutions and junk bonds debacles of the late 1980s and early 1990s (Armstrong, 1993; Epstein and Spalding, 1993; Mednick, 1987) resulted in accusations of income smoothing by corporations such as General Electric, Mattel, W. R. Grace and NationsBank (DePree and Grant, 1999) and improper write-offs (Lazere, 1997; Greenman and Sherman, 1999). Due to its effect on the market price of a company's stock, income smoothing was of great concern to SEC Chairman Levitt. (This accounting practice arises when a company's management interferes in the financial reporting process in order to distort the true earnings.)

During the 1980s the United States Congress led by Congressmen Jack Brooks, John Dingle, and Ron Wyden, launched investigations into the financial problems of audited corporations. The Dingle sub-committee (1985) initiated intensive investigations of the accounting profession's independence and quality of performance. In 1986,

Representative Wyden<sup>1</sup> introduced a bill requiring auditors to expand the scope of their audits to include the detection of fraud (Armstrong, 1993). In the same year, the U. S. Comptroller General issued a report on the problems resulting from the lack of quality in CPA audits of governmental units (Bowsher, 1986). These problems were CPAs' failure to follow Generally Accepted Auditing Standards including lack of work papers, insufficient supervision of staff and no review of work papers and reports. The same year the SEC initiated greater imposition of Rule 2(e) (Epstein and Spalding, 1993). This rule penalizes infractions by banning a CPA firm from practice before the SEC on a temporary or permanent basis.

The SEC's concern with the accounting profession has increased since the 1980s. In May 2000, SEC Chairman Arthur Levitt criticized accountants' compliance with SEC rules and requested that the Big Five accounting firms perform self-assessments of their compliance (Tie, 2000). Levitt was most alarmed about independent auditors said to keep clients happy by turning a blind eye to clients' earnings management activities. Recent headlines have reported numerous accounts of CPAs supposedly unaware of their clients' reporting irregularities. Tyco International and MicroStrategy received extensive coverage in the media for their declining stock prices after they had to restate earnings. Industry leaders, such as America On-line and Microsoft, have not escaped the criticism of analysts. These two giants of the technology revolution were under SEC investigation for revenue recognition violations by not reporting earnings in the proper accounting period. Bukics and Fleming (2000) reported that the first consideration to deter improper revenue recognition is for management to set a "tone at the top" to create an environment

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<sup>1</sup> Representative Wyden's bill H.R. 4886 failed to pass in Congress.

that communicates what is and is not acceptable behavior in the corporate culture. This concept of setting a tone at the top was earlier mentioned in the 1987 Treadway Commission Report. The report stated “the tone that the top managements of public accounting firms set is just as important in the firms as that set by top managements in public companies.”

## **1.2 Ethics in Education**

If management’s tone sets an acceptable level of behavior in the workplace but the environment still suffers from unacceptable behavior, is it possible that the unacceptable ethical behavior was learned in childhood? How pervasive is the unethical conduct of youth? Current research finds that between 75% and 98% of all college students cheated in high school (Kleiner and Lord, 1999); in many cases, the students were aided by their parents (Loftus and Smith, 1999). Indeed, the November 22, 1999 issue of U.S. News & World Reports (Loftus and Smith, 1999) states cheating and academic dishonesty often begin in grade school. For example, the unethical behavior in education is perpetuated by on-line term papers for sale and delayed transmission of questions on national standardized exams. Kleiner and Lord (1999) report this conduct is further manifested by padding resumes when job hunting.

Moral development of accounting students has implications for a profession under legal challenges and government scrutiny. Students become accountants and business leaders who make decisions that can be subject to a variety of interpretations. The profession is concerned with the appropriateness of these decisions ranging from earnings

management (DePree and Grant, 1999), underreporting time on client engagements (Ponemon, 1992), to lack of independence on attestation services (Ponemon and Gabhart, 1990), and willingness to “commit fraud” by adjusting write-offs to fix the bottom line (Lazere, 1997). Moral development of future accountants is especially relevant given the rash of negative events facing the profession today. These are caused, in part, by a litigious business environment, continued "downsizing" of major corporations, and mergers of the largest accounting firms (Ponemon, 1993).

The case for teaching ethics in the accounting and business school curriculum was proposed as early as the Treadway Commission Report (1987) and Bedford Report (1986). Langenderfer and Rockness (1989) addressed the need to incorporate ethics cases into accounting courses to better prepare students for the challenges they might face on the job. This need for ethics in accounting courses was an element of Position Statement Number Two of the Accounting Education Change Commission (1992). The Statement suggested that students in the first accounting course should be exposed to the accounting profession’s ethics and the public responsibilities of the profession. However, a study of the coverage of ethics in these texts shows significant variation (Bracken and Urbancic, 1999). They reported that some texts had as much as 7.1% of the pages having a reference to ethics; while others had less than 1% of the pages referring to ethics. In addition, records maintained by the Association to Advance Collegiate Schools of Business (AACSB) do not report information on accounting programs that require specific ethics courses. According to Daniel LeClair, AACSB Director of Knowledge Services, few accounting programs require specific ethics courses.

Knowledge of differences in the moral development of students who attend a university where at least one ethics course is required in order to graduate, vis-à-vis students who are not required to take an ethics course as part of their curriculum, may alert practicing accountants and educators to potential problems resulting from a lack of ethical understanding. Ponemon (1993) summarized findings to date and reported “ethical reasoning has been shown to influence accounting judgment such as audit independence, the disclosure of sensitive information, the assessment of audit evidence, and the detection of fraudulent financial information.” Since ethics courses are a new addition to the accounting curriculum, the average CPA has not had this requirement during his or her university years. Bartel (1990) reported that failure to comply with professional ethics might be found in court to be clear evidence of malfeasance that often results in findings of malpractice. If the moral development level of students who are not exposed to an ethics course in a university is lower than that of students who take an ethics course, the conclusion may be that the comparative low moral development level of the average CPA (Armstrong 1987, Ponemon 1992) is a causative factor for misinterpretation of professional ethics.

Findings of a lack of professional ethics may be the starting point for the resolution of a situation that could, if not rectified, substantially change the professional status of the CPA or even destroy it. The profession may be forced into further consolidations due to the cost of malpractice insurance and into continued lengthy and expensive lawsuits. Regulation of the profession may, for example, occur through increased government control (Armstrong, 1993). The knowledge of differences between students exposed to ethics in the undergraduate curriculum and those who have not may



have implications for educators developing accounting curriculums to comply with the 150-hour law. “Perspectives on Education: Capabilities for Success in the Accounting Profession” (Kullberg, Groves, Gladstone, Horner, Scanlon, O’Malley, Cook, and Kangas 1989), a document prepared by the managing partners of the Big Six accounting firms, that specifies the general knowledge skills that are desired in a student’s education.

This research examines differences in the level of moral development between students who have taken an ethics class and those who have not, after controlling for academic major and academic level. Shaub (1994) examined students and auditors who had a college ethics course and compared the results to those of students and auditors who had not taken this course. In that study, however, there is the possibility of self-selection bias since the class was not required for graduation. Students who elect to take an ethics course that is not a graduation requirement may have different ethical awareness than other students. This study examines students who are not able to self-select into or out of an ethics course, but who are required to complete the course in order to meet the requirements for graduation. This is an innovative contribution to the accounting ethics literature since prior research has not examined students for whom ethics was not a choice.

The remainder of this paper is organized as follows: Section II reviews the pertinent literature for ethics research in accounting, including the foundations of moral development theory used in the accounting research to date. Section III develops hypotheses to test the moral development levels of the students. Section IV describes the research methodology. Section V presents the findings and their analyses. Section VI discusses potential contributions, limitations and future research.

## **Chapter 2. LITERATURE REVIEW**

### **2.1. Measuring Moral Development**

Moral development psychology is an established field of research developed by child psychologist Jean Piaget (1932). His research in moral development was preceded by his early studies of developmental psychology in France. He found that knowledge is a process of growth in the brain that is built by logically rooted structures starting with lower-level logical means and building in adulthood to higher-level logical processes. He found that the cognitive modes of children initially and dramatically differ from those of adults. His theories of psychological development were tested and refined while working at a boy's institution in France. Later as Director of the Institute of Educational Sciences, University of Geneva, he researched his theories of moral development in children and the foundations needed to develop moral awareness in adults.

Lawrence Kohlberg (1969) built on Piaget's research to emphasize the cognitive basis of moral judgment and its effect on moral action. Like Piaget, Kohlberg based his theory on cognition processing; stages in the organization of moral development; research into the process of making a moral judgment; and research of children at many different stages (Rest 1994). Kohlberg's theory of Cognitive Moral Development (CMD) provided for six unique stages of moral development, which can be grouped into three levels of CMD, each with two stages. These stages are based on the concept that moral development is a monotonically increasing function over time (Jeffrey 1993). According

to Kohlberg (1969), individuals should develop the higher stages of moral cognition as they progress through the experiences of life.

**TABLE 1**

Kohlberg's Cognitive Moral Development

| Levels   | Lower stage   | Upper stage  |
|--|---|--|
| Pre-conventional → the focus is on the individual only.                            | Stage 1 → focus on obedience and punishment orientation.                  | Stage 2 → focus on instrumental purpose and exchange.    |
| Conventional → the focus is on relationships in a group.                           | Stage 3 → focus on interpersonal accord, conformity, mutual expectations. | Stage 4 → focus on social accord and system maintenance. |
| Post-conventional → the focus is on the inner self and personally held principles. | Stage 5 → focus on social contact and individual rights.                  | Stage 6 → focus on universal ethical principles.         |

Kohlberg's (1969) levels and stages of CMD are summarized in **Table 1**. These stages describe how individuals learn to determine right from wrong. Kohlberg's stage-sequence theory posits that the higher the developmental stage, the greater the level of moral development. Kohlberg's model emphasizes the cognitive or reasoning aspect of moral decision-making rather than an individual's behavior. Psychological research, however, has shown that there is a positive correlation between relatively high moral judgment, and what is considered moral behavior, such as honesty, resistance to

temptation, and charity (Kohlberg and Candee 1984). Rest (1990) wrote that “moral judgment draws on the basic conceptual frameworks by which a subject analyzes a social-moral problem and judges the proper course of action” (P4.1) they should take. Each person faces a moral dilemma where a choice must be made.

Kohlberg and Candee (1984) found that an individual uses their psychological understanding of right and wrong, prior situations of moral choice, the effect of social events on cognitive processes, and then makes a dynamic judgment that they act upon to resolve the dilemma. Ashton and Ashton (1995) found that judgment performance is the result of “the joint effects of cognition and incentives” (P22). Kohlberg and Candee (1984) reported that subjects who understand right from wrong would usually carry that moral understanding into behavior by making the correct moral judgment.

Although Kohlberg's stages of CMD are discrete, Rest (1979) designed an objective test of Kohlberg's CMD using a continuous scale. His multiple-choice Defining Issues Test (DIT) (see **Appendix B**) provides a "P" (Principled) score to measure a subject's responses to a set of three to six cases. These cases require a subject to decide a moral dilemma that they may face in their daily lives. Although the measurement approaches are different, the larger the "P" score, the higher the probability that a subject's thinking is at a high CMD level. The “P” score ranges from 0 to 95 and scores under 50 indicate the subject does not recognize moral problems nor make moral judgments with the same cognition that moral philosophers do.

The DIT does not rate or portray a subject's personality, value as a human being, or sociability. DIT evaluation by the “P” scores is an assessment of conceptual adequacy of moral thinking. The subject is not to present their reasons for their choice to resolve the

dilemma, but to rank the items given that most strongly influence choice. The “P” score interprets the “relative importance a subject gives to principled moral considerations in making a decision about ethical dilemmas” (Rest 1979b, 5.2) and is based on rankings the subject gives to “items representing Stages 5 and 6, principled moral thinking” (Rest 1994, 13).

Rest (1979a) conducted a large-scale study using the DIT. The test was given to more than 4,000 subjects ranging from college students to adults in the workplace. **Table 2** summarizes the data from this study. Rest found support for Kohlberg’s (1969) CMD and that education was positively correlated with higher “P” scores. Since that study the DIT has been used in more than 500 research projects involving moral development.

**TABLE 2**

Rest (1979a) “P” scores

| Group:                 | Number | Mean “P” score | Standard Deviation |
|------------------------|--------|----------------|--------------------|
| College undergraduates | 2,479  | 42.3           | 13.2               |
| Graduate students      | 183    | 53.3           | 10.9               |
| Adults                 | 1,149  | 40.0           | 16.7               |

## 2.2. Ethics Research in Business

One of the earliest studies on ethics in business was a Harvard University survey by Baumhart (1961). He surveyed business executives to gather empirical evidence on unsubstantiated claims that numerous executives act in an unethical manner in their business relationships. Baumhart contacted 796 executives, and asked them about their

attitudes, behavior, and experiences in the workplace. He found that almost 50% reported conflicts between company interests and personal ethics. The greatest conflicts were found to arise from: 1) firings and layoffs, 2) honesty in communication, and 3) pricing (including price collusion).

Brenner and Molander (1977) updated the 1961 *Harvard Business Review* study of business ethics. They added the concepts of social responsibility and conflicts in relations with individuals. The updated study found that respondents were more cynical of the ethics of their peers than were respondents in the earlier study. In addition, the 1977 study found evidence that ethical standards had declined and that practices that were once ethically suspect were now common. Conflicts between company interests and personal ethics were found to have increased in regard to honesty in communication, but to have decreased for personnel and pricing issues. In addition, there were new conflicts reported for the issues of: fairness and discrimination, honesty in executing contracts, and miscellaneous law breaking. This study provided the foundation for the work of Arlow and Ulrich (1980, 1988) and Trevino (1986) in business ethics and moral development.

Arlow and Ulrich (1980) examined the ethical behavior of business executives and undergraduate business students. They tested students on scales measuring personal business ethics and social responsibility. They found that students who took a university course that had a strong ethics component had a higher post-test score than pretest score, on the issues of personal business ethics and social responsibility. They then gave the same test to a group of business executives and compared the executives scores with those of the students. Arlow and Ulrich found that the executives had significantly

higher scores on personal business ethics than either the pre or post test groups of students. The students, however, had higher scores than the executives on the issue of social responsibility. The researchers found support for the conjecture that business students reject some aspects of corporate life, such as price-fixing schemes, misleading advertising and actions that limit fair competition. Their finding cannot, however, be extended to a rejection of the contemporary business ethics tested in the study. This raises the question of whether the personal business ethics of students can be strengthened.

An interactionist model of ethical decision-making based on Kohlberg's (1969) Theory of CMD was proposed by Trevino (1986) to explain ethical behavior. The model recognizes that individual elements, such as moral development, need to function with situational elements, such as the work culture, to predict and clarify how ethical decisions are reached. Trevino found that ethical decision-making is a constant in the uncertain market environment where “multiple stakeholders, interests, and values are in conflict” (P601) and the legal system is not consistent<sup>2</sup>. Kohlberg's CMD provided construct definition for the theoretical foundation of the model and the measurement tools. The model was expected to be an addition to the conceptual base of understanding ethical decision-making in organizational settings.

Since individuals search for guidance in resolving ethical business dilemmas (Hosmer 1988, Loeb 1988, and Greenman and Sherman 1999), educational institutions have a critical role to play in training students to make informed and morally correct

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<sup>2</sup> The relationship between e-commerce and privacy rights is a current example of such conditions.

business decisions. Trevino and McCabe (1994) suggested that ethics education for business students does not provide enough comprehensive coverage to provide the guidance required by current market conditions. They found that ethics education is not a required course in most universities, and that the courses that are offered lack the ability to “stimulate students cognitive moral development by exposing them to moral reasoning” (P407) that is higher than their current level of reasoning. They suggested that universities’ “experience with honor codes” (P414) provides an opportunity to create environments “where students, faculty and administrators come together to learn about ethics” (P414) through ethical performance.

Lazere (1997) interviewed corporate CFOs’ regarding concerns with business students’ ethical orientation and then asked business school faculty to respond to the issues raised by the CFOs. These executives told Lazere that emphasis needs to be placed on the decision-making process in reaching an ethical decision and not just on the ability to know right from wrong. Lazere focused on executives’ responses to an experiment by Brief, Dukerich, Brown and Brett (1996) that found over three-fourths of MBA students were willing to commit fraud to increase reported earnings. Lazere found support for the belief that financial reporting practices of the corporation affect the behavior of managers. At the same time, she reported that ethics education could train students to distinguish ethical dilemmas and to resolve them to the benefit of both the individual and the organization. The AACSB requires ethics to be covered in some form by its member schools but does not specifically require a separate ethics course or even coverage in a business class. Some AACSB institutions leave ethics to the philosophers. However, other schools that teach ethics in the business curriculum provide coverage



over a wide continuum from mentioning the ethics in one class to a track of ethics courses in the specific business disciplines.

Greenman and Sherman (1999), in an examination of recent research on executives, business students, and business school deans, reported that while young executives were uncomfortable with violations of legal and ethical standards, they felt that these violations would aid their career advancement. Business school students were unable to see the difference between “high moral self-image and actual unethical behavior” (P173) in the workplace. These students reported to the authors that they believed they had high ethical standards yet, from the same subjects “only 5.2% claimed that they did not cheat at all” (P173). Administrators at business schools were surveyed on issues ranging from pre-dated contributions for manipulating taxable income to the admission of unqualified students upon the request of a major donor. In these situations, the authors reported that many of the deans would proceed with an act that some might consider “questionable” (P174), such as deleting the records of a student with violations of the school’s honor code, for a donation. Other questionable behavior that the deans acknowledged was accepting backdated checks for donations of a different tax year, knowing that it was a violation of IRS Section 6701, or the admittance of an unqualified applicant to the MBA program in exchange for a large donation.

### **2.3. Ethics Research in Accounting before 1990**

An early empirical study by Finn, Chonko, and Hunt (1988) examined the nature and extent of ethical problems faced by AICPA members. They surveyed members of

the AICPA (excluding educators) to identify the most important ethical problems facing senior level AICPA members, and to learn how the AICPA members viewed these problems. The most frequently cited problems faced by the respondents were: tax fraud and alterations of tax information, conflicts of interest and independence, alterations of financial statements, and fee issues. Overall, the CPAs responding to the survey believed that the opportunities exist in the profession for unethical behavior, but professional success can be achieved without resorting to such actions. The respondents believed that ethical problems are reduced when partners in firms reprimand other firm employees for unethical behavior.

Loeb (1988) addressed the issue of teaching ethics to accounting students. He stated that the need for teaching ethics is imperative due to the environment in which accountants practice. Most important are the codes of conduct of the professional associations and state licensing boards and the dilemmas in the decision-making processes of accounting. Students need to be able to tie their “accounting education to moral issues” (P321) and recognize that the choices they make for their clients or their employers have ethical implications to the profession. Accounting is increasingly complex which leads to choices in accounting policies and practices. Some of these choices may lead to errors in moral judgment if students have not received training in ethics. Loeb believes that the accounting environment is dynamic and that students need to receive ethics education to aid in making moral judgments.

Basic issues in ethics education and problems associated with the integration of ethics into the accounting curriculum were addressed by Langenderfer and Rockness (1989). They stated that students need to 1) be made aware of the potential ethical

conflicts in accounting careers and 2) taught how to resolve ethical conflicts to the satisfaction of all parties. They believe that students need to discuss the issues surrounding business ethics and learn how to gather sufficient information for ethical decision-making while they are still students. If they do not gather the necessary information, then they may make “a bad or, at least, a poorer decision” (P 61) in their career than if they would have had if they discussed a similar situation in an academic setting. Langenderfer and Rockness support Kohlberg’s theory that college students’ moral values can be strengthened through the education process. They support the notion that college students should complete at least one “philosophy-based course” during their college years.

#### **2.4. Ethics Research in Accounting – The AICPA Code of Conduct**

Beets (1992) examined practitioners' problems with implementing the revised AICPA Code of Professional Conduct (1991). The AICPA Code differed from many state society codes and the ethics rules of state licensing boards. Some of the more contentious differences were concerning referral fees, contingent payments and commissions. The accountants surveyed by Beets were questioned regarding their knowledge of ethics. Beets’ results showed that 38% of the subjects continued their ethics education after the completion of their formal university training, and that of those, 65% (or 25% of the total) had attended CPE programs in which ethics was a topic. The remaining 62% of those surveyed had not received any ethics instruction after they completed formal university training, and were unfamiliar with the code-of-conduct

changes. Beets suggests that this lack of knowledge could result in widespread compromises by accountants placed in situations where an ethical judgment must be made. He further suggested that state accountancy boards, CPA firms, and the AICPA facilitate understanding of the changes in the code-of conduct through the creation of CPE courses specifically related to ethics.

Ward, Ward and Wilson (1996) examined *students'* ethical perceptions and attitudes when presented with situations concerning the AICPA Code of Professional Conduct. They found that students learn how accountants are expected to behave from contact with educators and practitioners. "When internalized" (P148), students will develop opinions "of how CPAs will or should behave when faced with ethical decisions" (P148). Ward, Ward and Wilson's findings confirm that education and the passage of time can alter students' ideas of acceptable professional behavior. The exposure and subsequent resolution of conflicts in ethical judgments at the college level may prevent errors in decision-making after the student enters the work force.

## **2.5. Ethics Research in Accounting – Defining Issues Test (DIT)**

Armstrong (1987) was the first accounting researcher to use the DIT to examine moral development in the accounting profession. As discussed earlier the DIT provides a Principled ("P") score that measures a subject's responses to a set of three to six cases. These cases require a subject to decide a moral dilemma that they may face in their daily lives. The "P" score ranges from 0 to 95 and the greater the "P" score, the higher the probability that a subject's thinking is at a high CMD level. She examined ethics from a

moral development perspective and not the prescriptive rules of the AICPA Code of Conduct and state licensing boards. The understanding of ethics through the moral maturity of CPAs was tested by Armstrong based upon the theory of cognitive moral development (CMD) proposed by Kohlberg (1969) and used in Trevino's 1986 model.

At Kohlberg's highest levels (stages five and six), Armstrong found that individuals are guided by inner principles that have been developed through the process of CMD. Armstrong compared the "P" score of college educated CPAs, with those of the subjects in Rest's 1979a study, as discussed previously. She mailed a questionnaire that included a three-part version of Rest's DIT, instructions and a request for demographic data to a random sample of practicing CPAs. Armstrong compared her results with the DIT "P" scores from Rest's subjects of college undergraduates, graduate students and adults in the general population. The results suggested that practicing CPAs have reached the moral maturation level of adults in general, but not the level of college students and much less than the level of graduate students in Rest's study.

While it seems likely, that practicing CPAs would score at least at the minimum level for college students, the results from Armstrong's study did not support that expectation. The college education of the CPAs did not appear to have inspired a continued moral maturation. Instead, the moral development of practicing CPAs, as measured by the "P" score, was found to be lower than both graduate and undergraduate students. Despite the surprising results that CPAs have a statistically significant lower level ( $p\text{-value} = 0.05$ ) of moral development than students do, Armstrong found these results might encourage inclusion of ethics in the accounting curriculum. This research provided the foundation for many successive studies in accounting using the DIT.

**Appendix A** summarizes the research topic studied and provides a summary of Armstrong (1987) and successive accounting studies of ethics in the profession and education.

Ponemon and Glazer (1990) extended Armstrong (1987) by examining the ethical development of students and graduates of accounting programs at two educational institutions. They employed the Defining Issues Test (DIT) to study the "influence of college education and professional practice on an individual's ethical development" (P 195). Ponemon and Glazer chose academic institutions with very different academic and operating philosophies. One test site was a public institution in the northeastern United States and the other was a private liberal arts institution in the same geographic area. Their results were not consistent with Armstrong (1987). Ponemon and Glazer found that alumni from the private institution achieved higher DIT "P" scores than the alumni from the state institution and that alumni from the public institution achieved DIT "P" scores consistent with Armstrong's (1987) findings for accounting graduates. Other findings from their research were that seniors and alumni from the institutions under study achieved higher DIT "P" scores than freshmen from the same institution, and that the alumni "P" score variation was significantly lower than the variation within the students' ranks at both institutions. Ponemon and Glazer argued that different educational philosophies were responsible for higher "P" scores of accounting students at the liberal arts institution. They caution, however, that only a longitudinal study could support such a conclusion.

The differences found by Ponemon and Glazer (1990) provided the impetus for Jeffrey (1993) to study the moral development of students at a single institution. Jeffrey

theorized that the differences in Ponemon and Glazer (1990) were the result of the different moral atmosphere of each institution that fostered the moral development of the students. Jeffrey's subjects were lower division students (freshmen and sophomores) and seniors in three different majors. Her results supported Ponemon and Glazer's (1990) finding that lower division students in the study had lower DIT "P" scores than seniors in each major. In addition, the results suggested that lower division and senior accounting majors had higher "P" scores than other lower division and senior liberal arts majors and liberal arts majors at both levels achieved higher "P" scores than business majors at both levels. In addition, her results suggested that accounting majors at both levels had higher "P" scores than the business and liberal arts majors at similar levels. She found that the liberal arts majors at both levels had higher "P" scores than the business majors.

Bay and Greenberg (2001) replicated Ponemon (1993a) to examine his findings that a subject's "P" score on the DIT and their behavior is a quadratic relationship. Few studies that used the DIT as a research instrument examined "P" scores along with behavior. For those that tested this relationship it was assumed that the correlation between "P" score and behavior was linear. Bay and Greenberg conducted the research in a laboratory setting while Ponemon used the classroom environment. This setting serves to strengthen the results since the subjects know their behavior is being observed. Results confirm a statistically significant quadratic relationship ( $p\text{-value} = 0.047$ ) for the entire sample but when analyzed by gender there was an unexpected difference. The results found by Bay and Greenberg appear to be the behavior effects of the 56% of the male subjects and not the 44% of the females. Females show a "marginally significant, positive linear relationship" ( $p\text{-value} = 0.076$ ) (P375) and no suggestion of the quadratic

relationship. Thus, Ponemon's findings that subjects with both low "P" scores and high "P" scores appear to behave more unethically than subjects with moderate "P" scores is supported for males. Females with high "P" scores appear to behave unethically.

### **Chapter 3. HYPOTHESES DEVELOPMENT**

Jeffrey (1993) found that upper division students have a higher level of moral development, as measured by the "P" score, than do lower division students. These results provide general support for the stage-sequence theory of moral development advanced by Kohlberg (1969). Armstrong (1993) tested students who chose to take an elective course in ethics. She found the students post-ethics course "P" score was higher than the student's pre-ethics course "P" score. Rest (1979) found that moral reasoning is a distinct cognitive domain that can be taught. Armstrong's 1993 results might have been biased by students' familiarity with the instrument or by the fact that students with an interest in ethics might select an ethics course as an elective. Rest (1986) found that formal education at any level is the primary predictor of moral development. For students who took an ethics course as an elective, Shaub (1994) found a higher level of moral development, as measured by the DIT, than with students who did not take an ethics course. Prior research that used the Defining Issues Test as a measurement instrument did not use a control group when testing students who took an ethics course. All the student subjects in the prior research made a choice to take an ethics course; none were required to take an ethics course as a requirement for graduation.



The present study contributes to the literature by examining the difference in DIT “P” scores between students who took an ethics course as an academic requirement for graduation at the university and students who did not take the required course. To examine the “P” scores of students who took an ethics class as an academic requirement would provide control for the self-selection bias limitation reported in the prior studies for students who took an ethics course as an elective. Based on Kohlberg’s (1969) stage-sequence theory of moral development that moral development increases through a series of life stages, Rest’s (1986) finding that education in general is a predictor of moral development, and Shaub’s (1994) finding that ethics education increases moral development, students who took an ethics course should score higher on the DIT. Thus, the first hypothesis poses a test of this assumption:

**H1:** As measured by the DIT score, the moral development of students at each academic level who have taken an ethics course will be greater than the moral development of students at the same academic level who have not taken this course.

Accounting is a rule-based discipline that requires those who wish to succeed to learn the rules. Schweikart (1992) finds that accounting is more of an art than a science and that “no two accountants will determine the exact same results from the same data”. He finds that generally accepted accounting principles allow “too many unwritten choices” (P 473) that will require accountants to make decisions concerning the application of the various accounting principles and concepts. Students majoring in accounting learn early in their academic career of the many rules in the accounting

profession. Shute (1979), Arlow and Ulrich (1980), Lampe and Finn (1992), and Jeffrey and Weatherholt (1996) report that accounting students and accountants have different learning styles than others in business disciplines and as a result may use a different ethical decision-making framework than other professionals. This may be because accountants are trained “using a rule-based approach” to their discipline (Shaub 1994 P22). As a result accounting students exposed to ethical concepts and principles in an ethics course should be better able than other business students to internalize this knowledge and apply it when making moral decisions. This leads to the second hypothesis:

**H2:** As measured by a DIT score, students majoring in accounting will possess a higher level of moral development than students majoring in non-accounting business, and nonbusiness disciplines.

Rest’s (1986) findings that education of any form is the greatest predictor of moral development has been supported by numerous studies including Ponemon and Glazer (1990), Ponemon (1992), Armstrong (1993), Shaub (1994), and Jeffrey and Weatherholt (1996). These studies report that additional education will result in higher levels of “P” scores for the respondents. Specific education in ethics was shown to be a factor in higher levels of moral development of students and practicing accountants according to St. Pierre, Nelson and Gabbin (1990), Armstrong (1993), Shaub (1994), Sweeney (1995), and Jeffrey and Weatherholt (1996).

While, higher “P” scores were reported for subjects who had specific ethics training, the significance of specific ethics education on the DIT score has not been tested

with a control group across all academic levels. Specific ethics education for a student at a lower academic level should result in a higher DIT score than education in general for students who are at a higher academic level. This information may prove valuable for the accounting profession in light of the increasing acceptance of the 150-hour rule for licensure as a CPA. If a state requires the additional coursework beyond the Bachelors degree, but does not have a specific requirement for an ethics course, the future CPAs may not possess the moral expertise to make informed ethical decisions. Gaa (1995 P261) finds that “moral expertise increases accountants’ ability to meet their fiduciary responsibilities” and to act in the best “interest of stakeholders”. If an ethics course increases moral development (as measured by the “P” score) more than education in general, accounting programs and state boards of accountancy may be prompted to require specific ethics courses for accounting majors and practicing CPAs. This study thus poses the following:

- H3:** Students at any academic level who have taken an ethics course will have a higher level of moral development as measured by a DIT score, than students at higher academic levels that have not taken an ethics course.

## **Chapter 4. RESEARCH METHODOLOGY**

This study was conducted at a private college in the Mid-Atlantic region of the United States. Faculty members in all disciplines of the university were asked to participate in the study and a cross section of disciplines agreed to participate.

## 4.1 Research Design and Explanatory Variables

The research model follows:

“P” score =  $\alpha_0 + \alpha_1 * ethics + \alpha_2 * level + \alpha_3 * major + \alpha_4 * age + \alpha_5 * gender + \varepsilon_1$  where:

P-score is the principled score determined by DIT

*Ethics* is whether the subject has taken ethics class

*Level* is the academic level of the subject

*Major* is the students intended academic major.

Further detail on the coding of the variables is in **Table 3**.

**TABLE 3**

Variables and Coding Descriptions

| VARIABLE      | CODE | DESCRIPTION                |
|---------------|------|----------------------------|
| <i>Ethics</i> | -1   | No ethics course completed |
|               | +1   | Ethics course completed    |
| <i>Level</i>  | -1   | Upper division             |
|               | +1   | Lower division             |
| <i>Major</i>  | -1   | Non-business               |
|               | 0    | Nonaccounting business     |
|               | +1   | Accounting                 |
| <i>Gender</i> | -1   | Male                       |
|               | +1   | Female                     |

The Principled (“P”) score on the Defining Issues Test is the dependent variable. Independent variables are *ethics* (the status of ethics course), *level* (academic level) and *major* (academic major). Control variables are *age* and *gender*. *Age* is a primary factor in the stage-sequence of CMD.

Coding of subject data followed contrast-coding procedures recommended by Cohen and Cohen (1975). Using this procedure, each independent variable is coded as a single variable with a set of contrast codes. Each subject was graded with a "P" score on their DIT. Mean "P" scores were calculated for each group by ethics status, by academic major, and by academic level. A 3x2x3 Factorial Analysis of Variance was used to test the main effects for the independent variables. This is the statistical method used most often in analysis of experimental behavior according to Kerlinger (1986). Kerlinger (1986, P 228) states the method “analyzes the independent and interactive effects of two or more independent variables on a dependent variable”. The dependent variable, “P” score, was analyzed according to each student’s *level* (academic level), *major* (academic major), and *ethics* (if an ethics course was completed or not). *Age* and *gender* were tested as control variables. The DIT forms were purchased from the Center for the Study of Moral Development at the University of Minnesota.

All reported “P” scores were machine scanned and computed by the University of Minnesota. DIT scoring performs a consistency check on the reliability of the subject taking the test. This procedure is designed to identify those subjects who rate each statement with the same answer and/or those subjects who randomly mark the answer sheet without reading the questions or following the instructions. The procedure compares the answers of the twelve rating statements with answers to the four ranking

statements that are associated with each case. If an answer sheet has more than eight inconsistencies in any story and/or more than two stories have any inconsistencies and/or more than one story has more than nine statements with the same answer, then the subject fails the consistency check and is eliminated from the sample.

In addition, the DIT calculates a Meaningless (“M”) score. This represents a lofty, pretentious sounding statement that has no meaning to the story. The meaningless “M” statement is listed with the twelve rating statements that the subject evaluates. A high “M” score on the DIT suggests that the subject is not carefully reading the story but selecting a statement that sounds important to the decision statement but does not represent any stage of thinking. Rest (1986) suggests eliminating any subjects with an “M” score greater than 8 and those who fail the consistency check. Studies using the DIT have 5 to 15 percent of the sample eliminated for failing the consistency check and “M” score limit. This study eliminated 6.8% of the subjects.

## **4.2 Subjects**

Lower division (freshmen and sophomores) were sampled from introductory accounting and business courses and a wide variety of nonbusiness Core courses required by the college such as English, Sociology, Communications, History, Mathematics and Statistics to name a few. Upper division (junior and senior) accounting majors were sampled from traditional junior and senior accounting courses including, intermediate accounting, cost accounting, taxation and auditing. Non-accounting business students were sampled from a number of business classes, such as business management, business

law and principles of economics, required of all School of Business majors including majors in finance, marketing, management and health care administration. Nonbusiness upper division students were sampled from third and fourth year courses in a variety of majors including, education, Spanish, biology, philosophy, English, history, and engineering.

Students must take at least one course in ethics in order to graduate. Students are encouraged, but not required, to take the required ethics courses early in their academic career. In order to encourage the students to take the courses early in their academic career, each semester the college offers at least four of the ten courses that meet the graduation requirement. The required courses are in the areas of philosophy, systematic theology or moral beliefs. As a result, there are students in these classes at all academic levels from freshmen to seniors. Ninety-four females and one hundred eleven males participated in this study. **Table 4** summarizes the final sample of student subjects by division level, ethics class taken or not taken, and academic major.

As seen in **Table 4** some of the sample cells have a minimum number of subjects represented. However, the most obvious difference among the three academic majors is the range in ages. Despite the cell sizes, an analysis of the three majors shows that the mean age for accounting, business and other is 20.05, 19.56 and 22.51 years, respectively. There is a significant difference in the ages of the three majors ( $p=0.001$ ). Post hoc tests show that there is no significance in ages between accounting and business majors but other majors have a significant difference between accounting and business ( $p=0.001$ ).

**TABLE 4**

## Final Sample of Subjects

| <b>PANEL A</b>                                     |   |   |   |   |
|--|---|---|---|---|
| SUBJECTS   | ACCOUNTING  | BUSINESS  | OTHER   | TOTALS  |
| Upper Division with Ethics Class                   | 36  | 25  | 30  | 91  |
| Upper Division without Ethics Class                | 2   | 5   | 10  | 17  |
| Lower Division with Ethics Class                   | 1   | 3   | 4   | 8   |
| Lower Division without Ethics Class                | 34  | 31  | 24  | 89  |
| Totals   | 73  | 64  | 68  | 205   |
| <b>PANEL B</b>                                     |   |   |   |   |
| Upper Division with Ethics Class-cell specifics    | 19 males 20-27 years old, 17 females 20-25 years old. | 13 males 19-21 years old, 12 females 20-22 years old. | 16 males 20-47 years old, 14 females 21-46 years old. | 48 males 19-47 years old, 43 females 20-46 years old. |
| Upper Division without Ethics Class-cell specifics | 1 male and 1 female each 21 years old.                | 4 males 20-21 years old, 1 female 20 years old.       | 3 males 20-24 years old, 7 females 20-28 years old.   | 8 males 20-24 years old, 9 females 20-28 years old.   |
| Lower Division with Ethics Class-cell specifics    | 0 males and 1 female 20 years old.                    | 1 male 19 years old, 2 females 20 years old.          | 1 male 19 years old, 3 females 19-20 years old.       | 2 males 19 years old, 6 females 19-20 years old.      |
| Lower Division without Ethics Class-cell specifics | 19 males 18-20 years old, 15 females 17-20 years old. | 19 males 18-25 years old, 12 females 18-23 years old. | 15 males 17-24 years old, 9 females 17-32 years old.  | 53 males 17-25 years old, 36 females 17-32 years old. |
| <b>PANEL C</b>                                     |   |   |   |   |
| Seniors with Ethics Class                          | 23- 12 males, 11 females                              | 20- 12 males, 8 females                               | 11- 3 males, 8 females                                | 54- 27males, 27 females                               |
| Seniors without Ethics Class                       | 2- 1 male, 1 female                                   | 3 males   | 7- 1 male, 6 females                                  | 12- 5 males, 7 females                                |
| Juniors with Ethics Class                          | 13-7 males, 6 females                                 | 5- 1 males, 4 females                                 | 19- 13 males, 6 females                               | 37- 21 males, 16 females                              |
| Juniors without Ethics Class                       | 0   | 2- 1 male, 1 female                                   | 3- 2 males, 1 female                                  | 5- 3 males, 2 females                                 |
| Sophomores with Ethics Class                       | 1 female  | 3- 1 male, 2 female                                   | 4- 1 male, 3 female                                   | 8- 2 males, 6 females                                 |
| Sophomores without Ethics Class                    | 5- 3 males, 2 females                                 | 5- 1 males, 4 females                                 | 8- 6 males, 2 females                                 | 18- 10 males, 8 females                               |
| Freshmen with Ethics Class                         | 0   | 1 female  | 2- 1 male, 1 female                                   | 3- 1 male, 2 females                                  |
| Freshmen without Ethics Class                      | 29- 16 males, 13 females                              | 25- 18 males, 7 females                               | 14- 8 males, 6 females                                | 68- 42 males, 26 females                              |



### **4.3 Instrument**

The Defining Issues Test (DIT) is the most widely used assessment technique for studying moral judgment (Trevino 1992). It has been used in more than 500 studies and has been found to possess favorable psychometric properties (Trevino 1992). The DIT produces a continuous variable, the "P" score. Principled ("P") scores represent the weight given by a subject to the moral dilemmas presented in six separate cases. Prior research (Rest 1979; Armstrong 1987; Ponemon and Gabhart 1990; Ponemon 1992) found the "P" score to be a "good surrogate measurement for locating a subject along the underlying (moral) developmental continuum" (Jeffrey 1993 P 88) between stages one and six of Kohlberg's (1969) CMD scale.

### **4.4 Procedure**

All subjects were asked to complete the six-case version of the Defining Issues Test, a consent form, and a demographic questionnaire. After a brief introduction to the DIT, the subjects were asked to sign the aforementioned consent form. The students were then asked to complete all six cases and to complete the demographic form. The following demographic data were requested: age, gender, hometown, county and state, cultural/racial background, academic major, academic year, and three questions regarding their required ethics courses. Preceding the questions, the course numbers of the required courses are listed to assist the student in answering the questions. The first question asks whether they had taken any of the courses. The second question asks if they were

currently taking one of the ethics courses. Since the students were sampled early in the semester, any student who had not completed an ethics course was included in the group of subjects who did not have an ethics course. The third question asks the student how many credit hours of the required courses they have taken. Subjects were given approximately 45 minutes to an hour to complete the entire task.

## V. RESULTS

Descriptive statistics are presented in **Table 5**<sup>3</sup>. As shown, the mean scores in each category, except for upper division nonbusiness subjects, are higher for students who have taken an ethics class than those who have not yet taken the class. The difference between the mean “P” score for the nonbusiness students who have taken an ethics class and those who have not is only about one-point. For subjects who have and have not taken the required ethics class, the table shows that the upper division accounting majors have higher “P” scores than the other majors and that females score higher than males. At the lower division level, the nonbusiness students had the highest mean “P” scores in the study. An interesting finding is that in the lower division, subjects who have taken an ethics class have higher minimum scores in the range; however, in the upper division students who have taken an ethics class have lower minimum scores. Due to small cell sizes for some of the categories, this may not result in statistical significance but it does merit attention to discover why the minimum score would decrease after an ethics class.

**TABLE 5**

**DIT SCORES**

| <b>PANEL A</b>                 |                                |                                |                             |                               |                             |             |
|--------------------------------|--------------------------------|--------------------------------|-----------------------------|-------------------------------|-----------------------------|-------------|
| Student Group                  |                                | Accounting                     | Business                    | Non-Business                  | Gender-Female               | Gender-Male |
| Upper Division Ethics Class    | Mean                           | 34.8 (36)                      | 32.4 (25)                   | 32.0 (30)                     | 38.5 (43)                   | 30.2 (48)   |
|                                | Std. Dev.                      | 14.85                          | 13.55                       | 9.82                          | 12.97                       | 11.86       |
|                                | Range                          | 6.7-73.3                       | 8.3-56.7                    | 10.0-51.7                     | 10.0-73.3                   | 6.7-60.0    |
| Upper Division No Ethics Class | Mean                           | 33.4 (2)                       | 26.2 (5)                    | 33.3 (10)                     | 32.4 (9)                    | 23.6 (8)    |
|                                | Std. Dev.                      | 4.74                           | 8.81                        | 8.15                          | 8.25                        | 9.52        |
|                                | Range                          | 30.0-36.7                      | 15.0-34.0                   | 25.0-45.0                     | 18.3-45.0                   | 8.3-36.7    |
| Lower Division Ethics Class    | Mean                           | 33.9 (1)                       | 34.6 (3)                    | 36.1 (4)                      | 33.1 (6)                    | 37.5 (2)    |
|                                | Std. Dev.                      | N/A                            | 11.6                        | 10.8                          | 9.04                        | 3.55        |
|                                | Range                          | N/A                            | 13.3-51.7                   | 20.0-55.0                     | 20.0-45.0                   | 35.0-40.0   |
| Lower Division No Ethics Class | Mean                           | 28.0 (34)                      | 28.9 (31)                   | 31.5 (24)                     | 29.3 (36)                   | 30.2 (53)   |
|                                | Std. Dev.                      | 10.55                          | 14.02                       | 15.35                         | 13.68                       | 12.75       |
|                                | Range                          | 10.0-55.0                      | 11.7-63.3                   | 8.3-73.3                      | 8.3-73.3                    | 8.3-63.3    |
| <b>PANEL B</b>                 |                                | Accounting                     | Business                    | Nonbusiness                   | Females                     | Males       |
| Upper Division Ethics Class    | 36 students<br>20-27 years old | 25 students<br>19-22 years old | 30 students 20-47 years old | 43 females<br>20-46 years old | 48 males<br>19-47 years old |             |
| Upper Division No Ethics Class | 2 students 21 years old        | 5 students 20-21 years old     | 10 students 20-28 years old | 9 females 20-28 years old.    | 8 males 20-24 years old     |             |
| Lower Division Ethics Class    | 1 student 20 years old         | 3 students 19-20 years old     | 4 students 19-20 years old  | 6 females 19-20 years old.    | 2 males 19 years old        |             |
| Lower Division No Ethics Class | 34 students 17-20 years old    | 31 students 18-25 years old    | 24 students 17-32 years old | 36 females 17-32 years old    | 53 males 17-25 years old    |             |

<sup>3</sup> The numbers in parentheses are the number of subjects in the category.

The standard deviation varies among the cells from a low of 3.55 to a high of 15.35. For most of the cells, the smaller N in the cell will result in a lower standard deviation. The range for many of the cells is of interest due to the finding that similar subjects, for example, upper division accounting majors who have taken an ethics class, have the lowest and highest “P” scores at 6.7 and 73.3, respectively. The mean for upper division accounting majors who have taken the ethics class is higher than for those who have not taken the class but the range is also greater for those students. Further investigation of this finding might be warranted in another study.

**Table 5** shows that nonbusiness students are from a wider age range than accounting and business students. Both male and female nonbusiness students are older than students from the other academic majors are. Of considerable interest is that the mean of all the upper division nonbusiness students is 33.2 and the lower division nonbusiness students mean is 32.9. After completion of an *Ethics* class there does not appear to be any difference in “P” scores for students in this academic major.

H1 predicts that “P” scores for students at each academic level who have taken an ethics course will be greater than “P” scores for students at the same academic level who have not taken an ethics course. As shown in **Table 6**<sup>4</sup> there is a significant main effect for *Ethics* with students who have taken an ethics course scoring higher ( $F=6.3$ ,  $p=0.013$ ). Hence, H1 is supported. This result is consistent with Rest’s (1986) finding that specific ethics education increases the moral development significantly more than education in general. H2 predicts that students majoring in accounting will have a higher

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<sup>4</sup> All statistical analyses were done excluding approximately 10% of the outliers with similar results obtained. Outliers were “P” scores below 15 and above 65.

level of moral development as measured by the “P” score than non-accounting business students and nonbusiness majors. The results presented in **Table 6** do not support the hypothesis. The main effect for *Academic Major* is insignificant ( $F=0.83, p=0.438$ ). This finding disputes the idea that accounting students will better internalize the ethical concepts learned and follow the rules better than students majoring in other disciplines. Despite the fact that accounting students have different learning styles (Shute 1979, Arlow and Ulrich 1980, Lampe and Finn 1992, and Jeffrey and Weatherholt 1996), this learning style does not appear to facilitate the application of ethical concepts in a different context. Mean “P” scores for accounting majors were 31.60 which is less than the mean “P” score for non-business majors (33.04), but higher than the mean “P” score for other business majors (29.59). These differences are insignificant.

**Table 6** presents the analyses for the *age* and *gender* covariates. The *Age* covariate shows significant influence ( $F=9.45, p=0.002$ ) on a student’s “P” score. This is consistent with Kohlberg’s (1969) CMD Theory. However, the results do not show strong influence from *Gender* ( $F=3.19, p=0.076$ ) on “P” score. This does not support Shaub (1994) and Bay and Greenberg (2001) who found that females had a significantly higher “P” score than males. The marginally significant results of *gender* in this study will be further examined with additional analyses.

The results in **Table 6** do not show interaction effects for ethics class and academic major ( $F=0.509, p=0.602$ ), ethics class and division level ( $F=0.058, p=0.811$ ), and academic major and division level ( $F=1.224, p=0.296$ ). The three-way interaction of ethics class, academic major and division level does not reveal an interaction effect ( $F=0.157, p=0.855$ ).

**TABLE 6**

**“P” SCORE ANOVA MODEL**

| Source                     | Sum of Squares | DF  | Mean Square | <i>F</i> | <i>p</i> -value |
|----------------------------|----------------|-----|-------------|----------|-----------------|
| <b>Main Effects:</b>       |                |     |             |          |                 |
| Combined                   | 3191.49        | 6   | 531.91      | 3.45     | 0.003           |
| <i>Ethics Class</i>        | 972.22         | 1   | 972.22      | 6.30     | 0.013           |
| <i>Academic Level</i>      | 14.24          | 1   | 14.24       | 0.09     | 0.762           |
| <i>Academic Major</i>      | 255.67         | 2   | 127.83      | 0.83     | 0.438           |
| <i>Covariate Age</i>       | 1457.69        | 1   | 1457.69     | 9.45     | 0.002           |
| <i>Covariate Gender</i>    | 491.66         | 1   | 491.66      | 3.19     | 0.076           |
| <b>2-Way Interactions:</b> |                |     |             |          |                 |
| <i>Ethics*Level</i>        | 8.88           | 1   | 8.88        | 0.06     | 0.811           |
| <i>Ethics*Major</i>        | 157.17         | 2   | 78.59       | 0.51     | 0.602           |
| <i>Level*Major</i>         | 377.64         | 2   | 188.82      | 1.24     | 0.296           |
| <b>3-Way Interaction:</b>  |                |     |             |          |                 |
| <i>Ethics*Level*Major</i>  | 49.55          | 2   | 24.27       | 0.16     | 0.855           |
| Model                      | 3844.52        | 13  | 295.73      | 1.916    | 0.030           |
| Residual                   | 29476.20       | 1   | 29476.20    |          |                 |
| Total                      | 33320.70       | 204 | 163.34      |          |                 |

**Notes for Table 6:**

“P” score=  $\alpha_0 + \alpha_1 * ethics + \alpha_2 * level + \alpha_3 * major + \alpha_4 * age + \alpha_5 * gender + \epsilon_1$  where:

“P”score is the principled score determined by DIT

*Ethics* is a –1, 1 indicator variable equal to 1 when the subject has taken an *Ethics* class and –1 when the subject has not taken an *Ethics* class

*Level* is a –1, 1 indicator variable equal to 1 if the subject’s academic level is lower division and –1 if the subject’s level is upper division

*Major* is a –1, 0, 1 indicator variable equal to –1 if the subject’s intended academic major is nonbusiness, 0 if the subject’s intended major is nonaccounting business and 1 if the subject’s intended major is accounting.

*Gender* is a –1, 1 indicator variable equal to –1 if the subject’s *Gender* is male and 1 if the subject’s *Gender* is female.

The third hypothesis predicts that students at any academic level, who have taken an ethics course, will have a higher “P” score than students at higher academic levels who have not taken an ethics course. **Table 7** presents the results of testing the third hypothesis. This hypothesis is supported for only one level of the seven levels of comparison. Freshmen who took an ethics class had a mean “P” score of 37.23. Juniors who did not take an ethics class had a mean “P” score of 25.42. This shows a statistically significant difference in “P” scores for the two groups ( $t=2.8884$ ,  $p=0.034$ ). In every category, with one exception, comparing the lower academic level that took an ethics class with the upper academic level that did not take an ethics class, the lower level had a higher mean “P” score. These were, however, not significantly different. The exception was a comparison of juniors who took an ethics class with seniors who did not take an ethics class. In that comparison the juniors mean “P” score was 32.82 and the seniors without an ethics class was 32.92.

In addition to the 2x2x3 Analysis of Variance performed on the “P” scores, Kruskal-Wallis nonparametric one-way ANOVAs were conducted. This tests the null hypothesis that all the sample means are identical against the alternative that some means are larger than other sample means. Kruskal-Wallis verifies the ranking of “P” scores performed in the ANOVAs. These nonparametric tests provided results similar to those reported for the 2x2x3 ANOVA analyses.

**TABLE 7**

Mean Principled “P” Scores

|                                     | <u>Mean</u><br><u>“P”</u> | <u>Cell</u><br><u>size</u> | <u>Standard</u><br><u>deviation</u> | <u>T-</u><br><u>value</u> | <u>Sig</u> <sup>5</sup> |
|-------------------------------------|---------------------------|----------------------------|-------------------------------------|---------------------------|-------------------------|
| Lower division with ethics class    | 35.09                     | 19                         | 10.0                                |                           |                         |
| Upper division without ethics class | 30.78                     | 17                         | 8.30                                | 1.31                      | 0.199                   |
|                                     |                           |                            |                                     |                           |                         |
| Freshmen with ethics class          | 37.23                     | 3                          | 5.09                                |                           |                         |
| Sophomores without ethics class     | 29.06                     | 18                         | 13.21                               | 1.05                      | 0.306                   |
| Juniors without ethics class        | 25.42                     | 5                          | 5.54                                | 2.88                      | 0.034                   |
| Seniors without ethics class        | 32.95                     | 12                         | 8.67                                | 0.82                      | 0.428                   |
|                                     |                           |                            |                                     |                           |                         |
| Sophomores with ethics class        | 34.69                     | 8                          | 10.75                               |                           |                         |
| Juniors without ethics class        | 25.42                     | 5                          | 5.54                                | 1.65                      | 0.117                   |
| Seniors without ethics class        | 32.92                     | 12                         | 8.67                                | 0.44                      | 0.662                   |
|                                     |                           |                            |                                     |                           |                         |
| Juniors with ethics class           | 32.82                     | 37                         | 10.26                               |                           |                         |
| Seniors without ethics class        | 32.92                     | 12                         | 12.06                               | 0.029                     | 0.980                   |

The subject data was also analyzed with a general linear regression model. Results (presented in **Table 8**) are consistent with the findings from the 2x2x3 ANOVA (**Table 6**). However, in this analysis the *Gender* variable is significant at the 0.05 level. The *r*-squared of 0.087 (Adjusted *R*-squared = 0.065) and the large residual sum of squares (30407.1) show that a regression model is not a good predictor of “P” scores. The

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<sup>5</sup> *T*-test results as measured by difference in mean “P” scores between the two groups. The *t*-test is a two-tailed test and assumes a 95% confidence level.



relationship examined in the model is a non-linear relationship due to the insignificant results from the *Academic Major* and *Academic Level* independent variables.

**Table 8**

“P” Score General Linear Regression Model

| Source                | Sum of Squares | DF | Mean Square | $F^6$  | $p$ -value |
|-----------------------|----------------|----|-------------|--------|------------|
| Corrected model       | 2913.557       | 5  | 582.711     | 3.814  | 0.003      |
| Intercept             | 46.285         | 1  | 46.285      | 9.083  | 0.000      |
| <i>Ethics Class</i>   | 2.542          | 1  | 2.542       | 2.123  | 0.035      |
| <i>Division Level</i> | -0.805         | 1  | -0.805      | -0.650 | 0.516      |
| <i>Academic Major</i> | -1.391         | 2  | -0.696      | -1.307 | 0.193      |
| <i>Age</i>            | -0.699         | 1  | -0.699      | -2.904 | 0.004      |
| <i>Gender</i>         | 1.717          | 1  | 1.717       | 1.975  | 0.050      |
| Interactions          | -47.606        |    |             |        |            |
| Residual              | 30407.100      |    |             |        |            |
| Corrected total       | 33320.700      |    |             |        |            |

$R$ - squared =0.087 (Adjusted  $R$  -squared = 0.065)

Notes to **Table 8**:

“P” score =  $\alpha_0 + \alpha_1 * ethics + \alpha_2 * level + \alpha_3 * major + \alpha_4 * age + \alpha_5 * gender + \epsilon_1$ , where:

“P”score is the principled score determined by DIT

*Ethics* is a –1, 1 indicator variable equal to 1 when the subject has taken an *Ethics* class and –1 when the subject has not taken an *Ethics* class

*Level* is a –1, 1 indicator variable equal to 1 if the subject’s academic level is lower division and –1 if the subject’s level is upper division

*Major* is a –1, 0, 1 indicator variable equal to –1 if the subject’s intended academic major is nonbusiness, 0 if the subject’s intended major is nonaccounting business and 1 if the subject’s intended major is accounting.

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<sup>6</sup> F-statistic is reported for the corrected model but the statistics program reported  $t$ -test value for constant and variables.

*Gender* is a  $-1, 1$  indicator variable equal to  $-1$  if the subject's *Gender* is male and  $1$  if the subject's *Gender* is female.

Bay and Greenberg (2001) found that the relationship between the dependent variable, probability of ethical behavior, and the "P"score was not linear but quadratic. The data in the current study was plotted with curve estimation and tested for best model fit. After running the data with linear, quadratic, log, cubic, and power models, the power model fit the data only slightly better than the linear model. Transformation was done on the "P"scores and they were squared. The transformed data showed similar results.

Logit analysis was used to test the relationship of the DIT score to the behavior dependent variable by Bay and Greenberg (2001). This was an appropriate tool since the dependent variable was binary. However, in the current study, the dependent variable is the DIT "P"score, which is a continuous variable; thus, logit analysis is not appropriate for testing the relationship. Point biserial correlation is an appropriate analytical tool with a continuous dependent variable. Testing the dependent variable, P-score, with the independent variables, only *Gender* ( $p=0.028$ ) and *Ethics* ( $p=0.036$ ) showed statistical significance. Since the *gender* variable was statistically significant at the  $p=0.05$  level in the regression analysis and had marginally significant results ( $p=0.076$ ) in the ANOVA, additional testing was conducted by running the data in *Gender* segregated analyses.

Male students were analyzed with the ANOVA. The results (presented in **Table 9**) are considerably different from the results presented for all the subjects in **Table 6**. Results show a statistically significant effect for *Major* ( $p=0.003$ ) and marginally significant effect for *Level* ( $p=0.087$ ). The strong effects for *Ethics* and *Age* that were

seen for the all the subjects in **Table 6** are not present for the male subjects. Post hoc tests were conducted for the independent variable, *Major*, using the Bonferroni and Tukey methods. The Bonferroni and Tukey tests are the most frequently used post hoc comparisons and both use the *t*-test as the foundation of their analysis. Both pair-wise tests showed statistically significant differences ( $p=0.003$ ) in the mean “P” scores between the male students who major in nonaccounting business and all other majors. No significant differences were found in the “P” scores between the accounting and business majors nor the accounting and all other majors.

**TABLE 9**  
 “P” SCORE ANOVA MODEL FOR MALES

| Source                    | Sum of Squares | DF  | Mean Square | <i>F</i> | <i>p</i> -value |
|---------------------------|----------------|-----|-------------|----------|-----------------|
| Main Effects:             |                |     |             |          |                 |
| Combined                  | 2164.52        | 5   | 432.91      | 3.13     | 0.012           |
| <i>Ethics Class</i>       | 21.60          | 1   | 21.60       | 0.156    | 0.693           |
| <i>Academic Level</i>     | 414.43         | 1   | 414.43      | 2.99     | 0.087           |
| <i>Academic Major</i>     | 1687.69        | 2   | 843.84      | 6.09     | 0.003           |
| Covariate <i>Age</i>      | 40.74          | 1   | 40.74       | 0.294    | 0.589           |
| 2-Way Interactions:       |                |     |             |          |                 |
| <i>Ethics*Level</i>       | 6.72           | 1   | 6.72        | 0.049    | 0.826           |
| <i>Ethics*Major</i>       | 173.08         | 2   | 86.54       | 0.625    | 0.537           |
| <i>Level*Major</i>        | 299.54         | 2   | 149.77      | 1.08     | 0.343           |
| 3-Way Interaction:        |                |     |             |          |                 |
| <i>Ethics*Level*Major</i> | 39.32          | 1   | 24.27       | 0.284    | 0.595           |
| Model                     | 2569.31        | 11  | 233.57      | 1.69     | 0.087           |
| Residual                  | 13710.9        | 99  | 138.49      |          |                 |
| Total                     | 16280.2        | 110 | 148.00      |          |                 |

Female students were analyzed with the ANOVA. The results (presented in **Table 10**) are similar to the results presented for all the subjects in **Table 6** but different from the results for males (presented in **Table 9**). Results show a statistically significant effect for *Ethics* ( $p= 0.002$ ), *Age* ( $p=0.000$ ) and marginally significant effect for *Major* ( $p=0.097$ ). The strong effect for *Major* that was seen for male subjects in **Table 9** is not present for the female subjects. Post hoc tests were conducted for the variable *Major* using the Bonferroni and Tukey methods. As noted above, the Bonferroni and Tukey tests are the most frequently used post hoc comparisons. Neither of the pair-wise tests showed statistically significant differences in the mean “P” scores among female students who major in accounting, nonaccounting business and all other majors.

**TABLE 10**

“P” SCORE ANOVA MODEL FOR FEMALES

| Source                    | Sum of Squares | DF | Mean Square | <i>F</i> | <i>p</i> -value |
|---------------------------|----------------|----|-------------|----------|-----------------|
| Main Effects:             |                |    |             |          |                 |
| Combined                  | 4245.38        | 5  | 849.08      | 5.87     | 0.000           |
| <i>Ethics Class</i>       | 1441.63        | 1  | 1441.63     | 9.98     | 0.002           |
| <i>Academic Level</i>     | 205.65         | 1  | 205.65      | 1.42     | 0.236           |
| <i>Academic Major</i>     | 693.29         | 2  | 346.64      | 2.39     | 0.097           |
| Covariate <i>Age</i>      | 1904.82        | 1  | 1904.82     | 9.45     | 0.000           |
| 2-Way Interactions:       |                |    |             |          |                 |
| <i>Ethics*Level</i>       | 7.03           | 1  | 7.03        | 0.049    | 0.826           |
| <i>Ethics*Major</i>       | 57.58          | 2  | 28.78       | 0.199    | 0.820           |
| <i>Level*Major</i>        | 83.41          | 2  | 41.70       | 0.289    | 0.750           |
| 3-Way Interaction:        |                |    |             |          |                 |
| <i>Ethics*Level*Major</i> | 10.69          | 1  | 10.69       | 0.074    | 0.786           |
| Model                     | 4473.26        | 11 | 406.66      | 1.92     | 0.004           |
| Residual                  | 11851.5        | 82 | 144.53      |          |                 |
| Total                     | 16324.7        | 93 | 175.54      |          |                 |

## VI. DISCUSSION, LIMITATIONS AND FUTURE RESEARCH

### 6.1 Discussion

The results of this study reveal that students who take an ethics course appear to have a higher level of moral development, as measured by the Defining Issues Test (DIT), than students at the same academic level who have not taken an ethics course. The Defining Issues Test provides a Principled “P” score to measure the degree that an individual assigns to principled moral considerations when deciding ethical dilemmas. The significant differences in “P” scores for university students and graduating accounting majors may be of great concern to educators, employers and society. For example, with the demand for energy growing and the opportunity to invest in new utility construction, accountants, regulators and investors should remember the Nucorp financial collapse of the early 1980s (Frazier, 1983). According to court bankruptcy papers, Chairman Richard Burns constructed a series of fictitious sales, unorthodox accounting treatments and unrealistic claims regarding the firm’s oil reserves. The firm collapsed when a new CFO, Hal Bolton, confronted Burns with evidence that had been hidden. At the time of the bankruptcy filing this was estimated to be the largest energy firm failure in United States history. This failure needs to be remembered. As California and other states rush to alleviate the energy crisis economic conditions will exist for unethical firms to take advantage of the opportunities to manipulate financial information of new energy developers to the public.

As **Table 11** shows, there may have been a general decline in the “P” scores for college students since Rest (1979) reported DIT scores from a standardization sample of the general United States population. Scores have declined in every study cited since 1979, except Shaub (1994), and the surprising fact is that Rest’s scores are based on students who were on average younger than the comparative groups in the later studies. These findings appear to support the data reported in the *US News and World Report* article “The Cheating Game” by Kleiner and Lord (1999). In that report, students at all academic levels do not interpret downloading articles from the Internet and using them as their own work as cheating. Loftus and Smith (1999) found that the ethics of American students are not comparable to the ethics of American students a generation ago and that current students are often aided by their parents. They found that parents have often helped students with their projects and reports and in some cases have paid others to assist their children obtain higher grades in school.

In the current study, findings support Armstrong (1993) and Shaub (1994) that students who take an ethics course appear to have a higher level of moral development. Unlike the current study where all students had to have ethics courses in order to graduate, their studies were subject to possible self-selection bias of the subjects. The current study shows that there is a statistically significant difference between students at each level who have taken at least one ethics course. Armstrong (1993) reported increased Principled scores, also known as the “P” score, for subjects who took a course on Ethics and Professionalism as part of their accounting curriculum. If accounting curricula are to be changed to comply with the 150-hour law, a course in ethics could be a required course. Armstrong (1993) reports that Arthur Andersen & Company’s Business

Ethics Seminars for educators states that the “goal of ethics education is to enhance students moral development, as defined by Kohlberg’s model”.

**TABLE 11**

Mean Principled “P” Scores for All Students in These Studies

| Researcher                             | Lower Division | Seniors |
|--|----------------|---------|
| Rest (1979) <sup>7</sup>               | 31.8           | 42.3    |
| Ponemon and Glazer (1990) <sup>8</sup> | 25.50          | 40.84   |
| Jeffrey (1993)                         | 33.84          | 39.26   |
| Shaub (1994) <sup>9</sup>              | -----          | 41.32   |
| Bonawitz (1997)                        | 31.47          | 36.16   |
| Bonawitz (2002)                        | 30.19          | 33.03   |

As seen in **Table 12**, the overall “P” score by class year confirms the work of Kohlberg (1969) and Rest (1979, 1986, 1990) that age and education are indicators of higher levels of moral development. Seniors have the highest “P” scores and the upper division has a higher “P” score than the lower division. **Table 12** further confirms the findings reported in the ANOVA from **Table 6** that despite the higher “P” score of the upper division they are not statistically significant. In addition, **Table 12** supports the **Table 6** finding that there is no significant difference in “P” scores for the accounting, business and nonbusiness academic majors. That finding does not support Hypothesis 2 and Jeffrey (1993) that accounting students have higher “P” scores than other majors but does tend to support Ponemon and Glazer (1990) who reported that accounting majors

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<sup>7</sup> Rest scores are the means for high school seniors and college students.

<sup>8</sup> Ponemon and Glazer used only freshmen and not freshmen and sophomores for the lower division students in their study.

<sup>9</sup> Shaub studied senior Auditing students and practicing auditors.

have lower levels of moral development as measured by the “P” score than nonaccounting majors. Students at both academic levels who were not majoring in accounting or business had higher “P” scores than accounting and business majors.

**Table 12**

DIT Scores of All Student Subjects by *Major*, Year and *Level*

|                | Accounting | Business | Nonbusiness | All    |
|----------------|------------|----------|-------------|--------|
| Upper Division | 34.767     | 28.878   | 33.195      | 33.026 |
| Seniors        | 33.688     | 33.463   | 33.506      | 33.573 |
| Juniors        | 36.671     | 21.671   | 32.260      | 31.861 |
| Lower Division | 28.080     | 29.915   | 32.847      | 30.189 |
| Sophomores     | 32.00      | 32.087   | 30.381      | 31.338 |
| Freshmen       | 27.451     | 28.453   | 35.312      | 29.590 |
| Total          | 31.604     | 29.598   | 33.040      | 31.531 |

The current study has mixed results on the “P” scores of accounting majors. Senior and junior accounting majors have higher “P” scores than seniors and juniors in other majors despite the finding that the differences are not statistically significant. However, the freshmen accounting majors have the lowest “P” scores of all groups in the lower division. Sophomore accounting majors have “P” scores between sophomore nonbusiness and business majors. Bonferroni<sup>10</sup> pairwise comparisons of the means were conducted and there were no significant pairwise differences among the means of the groups.

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<sup>10</sup> The critical *T*-value was 3.422 with a 0.05 rejection level.



The third hypothesis was partially supported with a statistically significant difference in mean “P” scores found for freshmen that took an ethics class scoring higher than juniors who did not take an ethics class. For every analysis except juniors to seniors, the lower class year with an ethics class had a higher level of moral development, as measured by the “P” score, than the higher class years. This is a finding that appears to question the strength of Kohlberg’s (1969) and Rest’s (1979) findings that older subjects should have higher “P” scores. In addition, they reported that education has a positive correlation with higher “P” scores but they did not specify ethics education in particular. These results appear to show that ethics education in particular has a greater affect on “P” scores than education in general.

Findings based on the *gender* specific analyses appear to show that males and females respond differently to the effects of taking an ethics class. Males do not appear to respond to ethics classes with corresponding increases in their “P” scores. Females show statistically significant increases in their “P” scores after taking an ethics class. In addition, the differences in p-scores are not related to the female student’s academic major but are related to the choice of academic major for male students. For the female students, but not the males students, age is significantly related to their p-score on the DIT. This supports Kohlberg’s (1969) CMD that moral development of an individual to a higher stage is positively correlated to the moral maturity that comes as one ages.

Kohlberg’s (1969) stage-sequence theory posits that the higher the developmental stage, the greater the level of moral development. While moral development does not measure the ethical behavior of an individual, it does provide a reliable scale of the cognitive process of an individual in moral decision-making. Moral development of

future accountants is especially relevant given the rash of negative events facing the profession today caused, in part, by a litigious business environment, continued "downsizing" of major corporations, and mergers of the largest accounting firms (Ponemon 1993). Knowledge of differences in the moral development of students should alert practicing accountants and educators to potential problems resulting from a lack of moral development as measured by the Defining Issues Test.

Employers faced with a general lack of business ethics among employees (Arlow and Ulrich, 1988; Trevino, 1986; Brenner and Molander, 1977), CPA firms' training programs for accountants in the field, and authors of continuing professional education training courses for practicing accountants could benefit from the knowledge gathered in this study. Shaub (1994) reported moral reasoning ability to be associated with auditors' abilities to recognize conflicts of interest, materiality judgments, independence, and internal controls. The addition of ethics classes to professional training programs should increase the moral reasoning ability of individuals in a professional setting.

The knowledge of differences between the moral development of accounting students and all other majors may have implications for educators developing accounting curriculums to comply with the 150-hour law and with the 1989 paper on education prepared by the managing partners of the Big Six accounting firms. This 1989 paper, "Perspectives on Education: Capabilities for Success in the Accounting Profession" (Kullberg, Groves, Gladstone, Horner, Scanlon, O'Malley, Cook and Kangas) specifies general knowledge skill, including "experience in making value judgments" as a part of a student's education. Armstrong (1993) reported increased "P" scores for subjects who took a course on Ethics and Professionalism as part of their accounting program. If

accounting curriculums are to be changed to comply with the 150-hour law, courses in ethics could be included as required courses. Armstrong (1993 P78) reports that Arthur Andersen & Company's Business Ethics Seminars for educators states that the "goal of ethics education is to enhance students' moral development, as defined by Kohlberg's model."

A number of studies have been done on the moral development of accountants and accounting students. Many have used the Defining Issues Test but few have examined accountants or accounting students who have taken an ethics course in a university curriculum. None of the previous studies has had a control group of subjects. The inclusion of a control group has provided stronger support for the evidence gathered from the "P" scores of the subjects. This study's results appear to confirm that an ethics course is associated with a higher "P" score on the DIT. This finding could encourage state boards of accountancy to require an ethics exam with the renewal of the CPA license, as the State of Florida does, and curriculum committees to include an ethics course as part of the curriculum for accounting students.

According to the AICPA (1995), most university accounting majors will become the employees of CPA firms. If the moral development level of these students is low compared with the level of students in other majors, the profession may need to conclude that this comparative low moral development level of the average CPA is a causative factor for the alleged acts of malfeasance that may result in malpractice suits (Bartel, 1990). This may be the starting point for the resolution of a situation that could, if not rectified, substantially change the professional status of the CPA or even destroy it; for

example, by the regulation of the profession through government control (Armstrong, 1993).

Finally, this research may provide the additional information necessary to aid in the development of an instrument for the specific testing of the moral development of accounting majors. Armstrong (1993) developed a sample course for teaching ethics to accounting students. The cases used in this course may provide the framework to develop a specific instrument to test the moral development of accountants. The DIT is a general instrument for testing individuals. Those who seek a career in accounting may respond differently to cases relating to specific accounting and auditing situations than they do to the standard six-story DIT. Much research on moral development may be needed to learn if the accountant and accounting student are attaining the moral and ethical criteria that the profession needs in the next century.

## **6.2. Limitations**

There are limitations to the current study. The results reported in this study may be affected by geographic and/or cultural differences. The subjects in the current study were at a private college in the Mid-Atlantic region. Even the moral atmosphere may differ at state universities or private universities in the same geographic region. The size of the institution may shape students results on the DIT. Students attending an institution where smaller classes are the norm may have the opportunity for greater interaction with faculty and develop cognitive skills earlier than students with little interaction with faculty. In addition, smaller classes could allow a mentoring relationship to exist for

students and faculty that could not exist in large classes. Students who attend private universities may differ from students who attend state universities. The selection of major and courses studied may vary considerably. Faculty members who participate in this type of research may differ from faculty members who do not make their students available for research projects.

As reported by Ponemon (1992), Jeffrey (1993), Shaub (1994) and Jeffrey and Weatherholt (1996) the “DIT” score is a reliable instrument but it is only a surrogate for moral development. The moral development of an individual is shaped by many variables, some of which may not have yet have been identified by researchers. “P” scores do offer a reliable indication of a subject’s moral identification with societal dilemmas and reasoning to solve these dilemmas. Since the cases posed by the moral dilemmas are not accounting focused they may not be the best tool to evaluate how accountants would resolve moral judgments involving underreporting, client violations of internal controls, or tax fraud.

The unexpected decline in ‘P’ scores may be a limitation. Four reasons for this decline in “P” scores are posited: a general decline in moral development, a decline in the reading comprehension of college students, the effects of the “tone at the top”, and/or a lack of attention to the details of the study as exhibited by these subjects. Future research will be needed to determine the reason for the decline.

### 6.3 Future Research

Despite the findings of this study, additional research is still needed to determine the general applicability of these findings. Will the results that an ethics course increases “P” scores hold true in different parts of the country and in varied academic institutions? Research needs to be conducted to determine if the ethics courses that will be taught to accounting majors should follow the principles of ethics from philosophy or be more adapted to the discipline of accounting. If the latter is determined to be the best course of action, should the ethics be based on case law and the AICPA Professional Code of Conduct or follow a case study approach similar to the cases of the DIT?

The gender based differences found in this study merit additional research. If males do not appear to show increased “P” scores after taking an ethics class, what process might serve to increase the moral development of male subjects? Why do males in different academic majors appear to show different levels of moral development? Do male students in accounting need a stimulus other than a classroom setting to increase their ethical understanding? Do male and female students respond differently to different instructional formats for ethics education in accounting? Since the entry-level staff in many accounting firms receive similar training this gender based difference in ethics may require the firms and accounting educators to gear ethics education differently for males and females. This would be a challenging task to assure that students and staff of both genders receive equal ethics training.

Longitudinal studies of students would allow the subjects to be tested at different stages in their professional career. This analysis would aid in understanding if the

subject's DIT "P" score changes during their careers and at what stages these moral development changes occur. If changes in the "P" score are detected, the subjects may be responding to corporate culture (Trevino, 1992), economic pressures (Brenner and Molander, 1977), reward systems (Trevino, 1990), work related pressures (Ponemon, 1992) or a combination of these factors.

Finally, this research may provide the additional information necessary to aid in the development of an instrument for the specific testing of the moral development of accounting majors. Armstrong (1993) developed a sample course for teaching ethics to accounting students. The cases used in this course may provide the framework to develop a specific instrument to test the moral development of accountants. The DIT is a general instrument for testing individuals. Those who seek a career in accounting may respond differently to cases relating to specific accounting and auditing situations than they do to the standard six-story DIT. Much research on moral development may be needed to learn if the accountant and accounting student are attaining the moral and ethical development that the profession needs now and in the future.

The moral dilemmas and poor moral judgment in accounting practice may need to be resolved through other measures. Some of these measures might include a better screening of potential employees in the accounting professions, case studies or role-playing involving ethical decision-making in company provided education, or formal mentoring programs in organizations committed to improving the moral judgment used in business decisions. The opportunities for accounting researchers in ethics particularly during times of economic downturns are many.

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## APPENDIX A

### Survey of the Field

| <b>Author</b>              | <b>Title</b>   | <b>Contents</b>  | <b>Findings/Portions Usable</b>   |
|----------------------------|--|--|---|
| Armstrong (1987)           | Moral development and accounting education.  | Level of moral development and accounting education of practicing CPAs.  | CPAs have DIT scores comparable with adults in general but lower than college students or alumni.   |
| Ponemon and Glazer (1990)  | Accounting education and ethical development: the influence of liberal learning on students and alumni in accounting practice. | Difference in moral development of accounting students, freshmen and seniors, and alumni from liberal arts institution and traditional state university. | Freshmen have lower DIT scores than seniors. Seniors and alumni at the liberal arts institution have higher DIT scores than seniors and alumni at the state university.       |
| Ponemon and Gabhart (1990) | Auditor independence judgments: a cognitive – developmental model and experimental evidence.                                   | Partners and managers from two national CPA firms tested on auditors' conceptions of independence in the framework of ethical decision-making.           | Independence judgments are grounded in the auditor's ethical cognition and are strongly influenced by factors relating to penalty and less influenced by affiliation factors. |
| Ponemon (1992)             | Auditor underreporting of time and moral reasoning: an experimental lab study.   | Experimental lab study of National CPA firm staff auditors' underreporting of time budgets and moral reasoning.  | Auditors with low DIT scores underreport more than auditors with high DIT scores.   |
| Armstrong (1993)           | Ethics and professionalism in accounting education: a sample course.   | Pre and post test comparisons of senior and junior accounting students who took a course in ethics and professionalism.                                  | Students who took the course had a significant increase in DIT scores as compared with the control group.   |

| <b>Author</b>                       | <b>Title</b>  | <b>Contents</b>  | <b>Findings/Portions Usable</b>   |
|-------------------------------------|---|--|---|
| Jeffrey (1993)                      | Ethical development of accounting students, non-accounting business students, and liberal arts students.                        | Ethical development of students in lower division, freshman and sophomores, and senior classes majoring in accounting, business and liberal arts.                  | Seniors have higher levels of moral development than lower division students do and accounting majors have higher levels of moral development than students in other majors do.   |
| Shaub (1994)                        | An analysis of the association of traditional demographic variables with the moral reasoning of auditing students and auditors. | Analysis of traditional demographic variables with senior auditing students and practicing auditors at a national firm.  | Gender, GPA and ethics courses were positively associated with higher levels of moral development. Age, education and professional experience were not associated with higher levels of moral reasoning.  |
| Gaa (1995)                          | Moral Judgment and moral cognition: a comment.  | Analysis of papers of Sweeney (1995) and Etherington and Schulting (1995) and comment on construction of theoretical framework for moral cognition of accountants. | Accountants are performing a socially defined occupational role and as such, their decisions and judgments have an impact on people's and societal welfare.   |
| Douglas, Barker and Schwartz (1995) | An exploratory study of accounting students' professional attitudes: implications for accounting education.                     | Exploratory paper that examines professionalism and how it is expressed by seniors as they prepare to enter the profession.  | Results found that students did not strongly identify with Hall (1968) theoretical theory of professionalism. This may reveal that students do not understand concepts relating to accounting profession and that accounting educators may need to take a more active role in developing identity for students. |

| <b>Author</b>                     | <b>Title</b>  | <b>Contents</b>  | <b>Findings/Portions Usable</b>   |
|-----------------------------------|---|--|---|
| Jeffrey and Weatherholt (1996)    | Ethical development, professional commitment, and rule observance attitudes: a study of CPAs and corporate accountants.           | Ethical development, a professional commitment and rule observance attitude of public accountants at all levels at a national firm and corporate accountants at Fortune 500 firms.   | Accountants with high professional commitment have lower DIT scores than accountants with low professional commitment. Between and within firm differences in DIT scores exist for auditors from national firms.  |
| Wright, Cullinan and Bline (1997) | The relationship between an individual's values and perceptions of moral intensity: an empirical study.                           | Ethical decision-making process involves moral intensity of the issue at hand, the value system of the decision-maker, and professional influences. Student subjects tested to examine differences in moral values systems and perceptions of moral intensity. | Results indicate that among issues of lower moral imperative the subjects values preferences affect moral intensity perceptions and with issues of higher moral imperative, value systems do not appear to influence moral intensity perceptions. These differences are likely to influence ethical decision-making process.  |
| Giacomino and Akers (1998)        | An examination of the differences between personal values and value types of female and male accounting and nonaccounting majors. | Prior research has shown that personal values affect person's behavior. This research examined differences between accounting and nonaccounting business majors personal values (Schwartz, 1992) and value types (Schwartz and Sagiv, 1995).                   | Results indicate value differences between accounting and nonaccounting majors and between males and females. Understanding students' values and their value types can benefit university faculty, administrators and future employers. This knowledge can aid in teaching and training of students, curriculum development, and employer recruiting and retention. |

| Author                       | Title  | Contents   | Findings/Portions Usable  |
|------------------------------|--|--|---|
| Cohen, Pant and Sharp (1998) | The effect of gender and academic discipline diversity on the ethical evaluations, ethical intentions and ethical orientation of potential public accounting recruits. | Study to test for differences in ethical evaluations, intentions and orientation by gender and among accounting, nonaccounting business and liberal arts majors.       | Accounting majors were found to be harsher critics of cases used in research than other majors. They appeared to have higher ethical criteria for viewing questionable actions. These differences conflict with some earlier studies but instrument used was not the DIT.             |
| Bay and Greenberg (2001)     | The relationship of the DIT and behavior: a replication.   | Study to examine the behavior of subjects (dependent variable) with the "P" score of subject in lab experiment in order to determine if behavior related to "P" score. | No significant differences in results between gender or class categories. Male subjects appear to drive study results and relationship is quadratic. Females exhibit linear increasing relationship. Subjects with extreme low/high "P" scores are most likely to behave unethically. |



## APPENDIX B

INSTRUCTION BOOKLET

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# DIT

DEFINING ISSUES TEST  
University of Minnesota  
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### Opinions about Social Problems

The purpose of this questionnaire is to help us understand how people think about social problems. Different people have different opinions about questions of right and wrong. There are no "right" answers to such problems in the way that math problems have right answers. We would like you to tell us what you think about several problem stories.

You will be asked to read a story from this booklet. Then you will be asked to mark your answers on a separate answer sheet. More details about how to do this will follow. But it is important that you fill in your answers on the answer sheet with a #2 pencil. Please make sure that your mark completely fills the little circle, that the mark is dark, and that any erasures that you make are completely clean.

The Identification Number at the top of the answer sheet may already be filled in when you receive your materials. If not, you will receive special instructions about how to fill in that number.

---

In this questionnaire you will be asked to read a story and then to place marks on the answer sheet. In order to illustrate how we would like you to do this, consider the following story:

#### FRANK AND THE CAR

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family's only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy, Frank Jones realized that there were a lot of questions to consider. For instance, should he buy a larger used car or a smaller new car for about the same amount of money? Other questions occur to him.

We note that this is not really a social problem, but it will illustrate our instructions. After you read a story you will then turn to the answer sheet to find the section that corresponds to the story. But in this sample story, we present the questions below (along with some sample answers). Note that all your answers will be marked on the separate answer sheet.

First, on the answer sheet for each story you will be asked to indicate your recommendation for what a person should do. If you tend to favor one action or another (even if you are not completely sure), indicate which one. If you do not favor either action, mark the circle by "can't decide."

Second, read each of the items numbered 1 to 12. Think of the issue that the item is raising. If that issue is important in making a decision, one way or the other, then mark the circle by "great." If that issue is not important or doesn't make sense to you, mark "no." If the issue is relevant but not critical, mark "much," "some," or "little" --depending on how much importance that issue has in your opinion. You may mark several items as "great" (or any other level of importance) -- there is no fixed number of items that must be marked at any one level.

Third, after you have made your marks along the left hand side of each of the 12 items, then at the bottom you will be asked to choose the item that is the most important consideration out of all the items printed there. Pick from among the items provided even if you think that none of the items are of "great" importance. Of the items that are presented there, pick one as the most important (relative to the others), then the second most important, third, and fourth most important.

**SAMPLE ITEMS and SAMPLE ANSWERS:**

FRANK AND THE CAR: ● buy new car    0 can't decide    0 buy used car

Great    Some    No  
 Much    Little

- 
- 0 0 0 0 ● 1. Whether the car dealer was in the same block as where Frank lives.
  - 0 0 0 0 2. Would a used car be more economical in the long run than a new car.
  - 0 0 ● 0 0 3. Whether the color was green, Frank's favorite color.
  - 0 0 0 0 ● 4. Whether the cubic inch displacement was at least 200.
  - 0 0 0 0 5. Would a large, roomy car be better than a compact car.
  - 0 0 0 0 ● 6. Whether the front connibilies were differential.

|                       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| Most important item   | 0 | 0 | 0 | 0 | ● | 0 | 0 | 0 | 0 | 0  | 0  | 0  |
| Second most important | 0 | ● | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  |
| Third most important  | 0 | 0 | ● | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  |
| Fourth most important | ● | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  |

Note that in our sample responses, the first item was considered irrelevant; the second item was considered as a critical issue in making a decision; the third item was considered of only moderate importance; the fourth item was not clear to the person responding whether 200 was good or not, so it was marked "no"; the fifth item was also of critical importance; and the sixth item didn't make any sense, so it was marked "no".

Note that the most important item comes from one of the items marked on the far left hand side. In deciding between item #2 and #5, a person should reread these items, then put one of them as the most important, and the other item as second, etc.

Here is the first story for your consideration. Read the story and then turn to the separate answer sheet to mark your responses. After filling in the four most important items for the story, return to this booklet to read the next story. Please remember to fill in the circle completely, make dark marks, and completely erase all corrections.

---

#### HEINZ AND THE DRUG

In Europe a woman was near death from a special kind of cancer. There was one drug that doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid \$200 for the radium and charged \$2,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife. Should Heinz steal the drug?

---

#### ESCAPED PRISONER

A man had been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For eight years he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day, Mrs. Jones, an old neighbor, recognized him as the man who had escaped from prison eight years before, and whom the police had been looking for. Should Mrs. Jones report Mr. Thompson to the police and have him sent back to prison?

---

#### NEWSPAPER

Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so that he could express many of his opinions. He wanted to speak out against the use of the military in international disputes and to speak out against some of the school's rules, like the rule forbidding boys to wear long hair.

When Fred started his newspaper, he asked his principal for permission. The principal said it would be all right if before every publication Fred would turn in all his articles for the principal's approval. Fred agreed and turned in several articles for approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks.

But the principal had not expected that Fred's newspaper would receive so much attention. Students were so excited by the paper that they began to organize protests against the hair regulation and other school rules. Angry parents objected to Fred's opinions. They phoned the principal telling him that the newspaper was unpatriotic and should not be published. As a result of the rising excitement, the principal ordered Fred to stop publishing. He gave as a reason that Fred's activities were disruptive to the operation of the school. Should the principal stop the newspaper?

#### DOCTOR'S DILEMMA

A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods, she would ask the doctor to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway. Should the doctor give her an overdose of morphine that would make her die?

---

#### WEBSTER

Mr. Webster was the owner and manager of a gas station. He wanted to hire another mechanic to help him, but good mechanics were hard to find. The only person he found who seemed to be a good mechanic was Mr. Lee, but he was Chinese. While Mr. Webster himself didn't have anything against Orientals, he was afraid to hire Mr. Lee because many of his customers didn't like Orientals. His customers might take their business elsewhere if Mr. Lee was working in the gas station.

When Mr. Lee asked Mr. Webster if he could have the job, Mr. Webster said that he had already hired somebody else. But Mr. Webster really had not hired anybody, because he could not find anybody who was a good mechanic besides Mr. Lee. Should Mr. Webster have hired Mr. Lee?

---

#### STUDENT TAKE-OVER

Back in the 1960s at Harvard University there was a student group called Students for a Democratic Society (SDS). SDS students were against the war in Viet Nam, and were against the army training program (ROTC) that helped to send men to fight in Viet Nam. While the war was still going on, the SDS students demanded that Harvard end the army ROTC program as a university course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degree.

Harvard professors agreed with the SDS students. The professors voted to end the ROTC program as a university course. But the President of the University took a different view. He stated that the army program should stay on campus as a course.

The SDS students felt that the President of the University was not going to pay attention to the vote of the professors, and was going to keep the ROTC program as a course on campus. The SDS students then marched to the university's administration building and told everyone else to get out. They said they were taking over the building to force Harvard's President to get rid of the army ROTC program on campus for credit as a course.

Were the students right to take over the administration building?

---

Please make sure that all your marks are dark, fill the circles, and that all erasures are clean.

THANK YOU.



GREAT  
MUCH  
SOME  
LITTLE  
NO

NEWSPAPER:  Should stop it  Can't decide  Should not stop it

- 1. Is the principal more responsible to students or to parents?
- 2. Did the principal give his word that the newspaper could be published for a long time, or did he just promise to approve the newspaper one issue at a time?
- 3. Would the students start protesting even more if the principal stopped the newspaper?
- 4. When the welfare of the school is threatened, does the principal have the right to give orders to students?
- 5. Does the principal have the freedom of speech to say "no" in this case?
- 6. If the principal stopped the newspaper would he be preventing full discussion of important problems?
- 7. Whether the principal's order would make Fred lose faith in the principal.
- 8. Whether Fred was really loyal to his school and patriotic to his country.
- 9. What effect would stopping the paper have on the student's education in critical thinking and judgment?
- 10. Whether Fred was in any way violating the rights of others in publishing his own opinions.
- 11. Whether the principal should be influenced by some angry parents when it is the principal that knows best what is going on in the school.
- 12. Whether Fred was using the newspaper to stir up hatred and discontent.

- Most important item  1  2  3  4  5  6  7  8  9  10  11  12
- Second most important  1  2  3  4  5  6  7  8  9  10  11  12
- Third most important  1  2  3  4  5  6  7  8  9  10  11  12
- Fourth most important  1  2  3  4  5  6  7  8  9  10  11  12

GREAT  
MUCH  
SOME  
LITTLE  
NO

DOCTOR'S DILEMMA:  He should give the lady an overdose that will make her die  Can't decide  Should not give the overdose

- 1. Whether the woman's family is in favor of giving her the overdose or not.
- 2. Is the doctor obligated by the same laws as everybody else if giving an overdose would be the same as killing her.
- 3. Whether people would be much better off without society regimenting their lives and even their deaths.
- 4. Whether the doctor could make it appear like an accident.
- 5. Does the state have the right to force continued existence on those who don't want to live.
- 6. What is the value of death prior to society's perspective on personal values.
- 7. Whether the doctor has sympathy for the woman's suffering or cares more about what society might think.
- 8. Is helping to end another's life ever a responsible act of cooperation.
- 9. Whether only God should decide when a person's life should end.
- 10. What values the doctor has set for himself in his own personal code of behavior.
- 11. Can society afford to let everybody end their lives when they want to.
- 12. Can society allow suicides or mercy killing and still protect the lives of individuals who want to live.

- Most important item  1  2  3  4  5  6  7  8  9  10  11  12
- Second most important  1  2  3  4  5  6  7  8  9  10  11  12
- Third most important  1  2  3  4  5  6  7  8  9  10  11  12
- Fourth most important  1  2  3  4  5  6  7  8  9  10  11  12

**PLEASE DO NOT WRITE IN THIS AREA**

GREAT  
MUCH  
SOME  
LITTLE  
NO

WEBSTER:  Should have hired Mr. Lee     Can't decide     Should not have hired him

1. Does the owner of a business have the right to make his own business decisions or not?
2. Whether there is a law that forbids racial discrimination in hiring for jobs.
3. Whether Mr. Webster is prejudiced against orientals himself or whether he means nothing personal in refusing the job.
4. Whether hiring a good mechanic or paying attention to his customers' wishes would be best for his business.
5. What individual differences ought to be relevant in deciding how society's rules are filled?
6. Whether the greedy and competitive capitalistic system ought to be completely abandoned.
7. Do a majority of people in Mr. Webster's society feel like his customers or are a majority against prejudice?
8. Whether hiring capable men like Mr. Lee would use talents that would otherwise be lost to society.
9. Would refusing the job to Mr. Lee be consistent with Mr. Webster's own moral beliefs?
10. Could Mr. Webster be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?
11. Whether the Christian commandment to love your fellow man applies to this case.
12. If someone's in need, shouldn't he be helped regardless of what you get back from him?

Most important item     1  2  3  4  5  6  7  8  9  10  11  12

Second most important     1  2  3  4  5  6  7  8  9  10  11  12

Third most important     1  2  3  4  5  6  7  8  9  10  11  12

Fourth most important     1  2  3  4  5  6  7  8  9  10  11  12

GREAT  
MUCH  
SOME  
LITTLE  
NO

STUDENTS:  Take it over     Can't decide     Not take it over

1. Are the students doing this to really help other people or are they doing it just for kicks.
2. Do the students have any right to take over property that doesn't belong to them.
3. Do the students realize that they might be arrested and fined, and even expelled from school.
4. Would taking over the building in the long run benefit more people to a greater extent.
5. Whether the president stayed within the limits of his authority in ignoring the faculty vote.
6. Will the takeover anger the public and give all students a bad name.
7. Is taking over a building consistent with principles of justice.
8. Would allowing one student take-over encourage many other student take-overs.
9. Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative.
10. Whether running the university ought to be in the hands of a few administrators or in the hands of all the people.
11. Are the students following principles which they believe are above the law.
12. Whether or not university decisions ought to be respected by students.

Most important item     1  2  3  4  5  6  7  8  9  10  11  12

Second most important     1  2  3  4  5  6  7  8  9  10  11  12

Third most important     1  2  3  4  5  6  7  8  9  10  11  12

Fourth most important     1  2  3  4  5  6  7  8  9  10  11  12

PLEASE DO NOT WRITE IN THIS AREA





## VITA

Mary Feeney Bonawitz

|                          |   |
|--------------------------|---|
| June 1951                | Born, New York City, New York   |
| June 1970-August 1977    | Administrative Assistant<br>Chase Manhattan Bank<br>New York, New York                        |
| October 1977-July 1978   | Supervisor<br>Vermont National Bank<br>Brattleboro, Vermont                                   |
| May 1981                 | B.S., Accounting<br>State University of New York<br>Albany, New York                          |
| June 1981-August 1983    | Senior Accountant<br>Urbach, Kahn & Werlin, PC, CPA<br>Albany, New York                       |
| August 1983-May 1984     | Graduate Assistant<br>State University of New York<br>Albany, New York                        |
| May 1984                 | M.S., Accounting<br>State University of New York<br>Albany, New York                          |
| August 1984-May 1985     | Lecturer in Accounting<br>State University of New York<br>Albany, New York                    |
| July 1985-July 1988      | Audit Manager<br>Brammer, Chasen & O'Connell, CPA<br>St. Thomas, United States Virgin Islands |
| August 1988-May 1990     | Assistant Professor<br>Wilkes University<br>Wilkes-Barre, Pennsylvania                        |
| January 1991-August 1997 | Adjunct Instructor<br>Indian River Community College<br>Ft. Pierce, Florida                   |

March 1992-July 1998      Adjunct Instructor  
Florida Institute of Technology  
Melbourne, Florida

August 1998-present      Instructor  
Pennsylvania State University-Capital College  
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## PUBLICATIONS AND PRESENTATIONS

Bonawitz, M.F. October 2001 Continuing Professional Education of two hours on *FASB, GASB and EITF Update* for the ASWA Annual Conference, Scottsdale, Arizona.

Bonawitz, M.F. May 2001 Continuing Professional Education of four hours *International Accounting, FASB, GASB and EITF Update* for the ASWA SE Regional Conference, Ft. Walton Beach, Florida.

Bonawitz, M.F. and D'Intino, R.S. June 2000. *Telecommunication Equity Price Responses to Greenspan's Humphrey-Hawkins Congressional Testimony*. Paper presented at the Pennsylvania Economic Association Annual Conference, Clarion University, Pennsylvania and reported in the Proceedings of the Pennsylvania Economic Association 2000 Conference.

Bonawitz, M. F., Schoenebeck, K., Hobold, H. October 1999 two hours of Continuing Professional Education on *Strategic Cost Management* for the ASWA Annual Conference, Seattle, Washington.

Bonawitz, M.F. March 1999 moderated *Teaching Values* session at Mid-Atlantic Regional Meeting of American Accounting Association in Harrisburg, Pennsylvania.

Bonawitz, M.F. (1999) *From Her Point of View*. Florida CPA Today, Volume 15 (1) 5-6.

Bonawitz, M.F. (1998) *International Accounting*. The EDGE, Volume XLVIII (6) 1.

Bonawitz, M.F. (1996) *The Value of Leadership*. Coordinator, Volume XLVII (4) 3.

Bonawitz, M.F. Editor, *The Public Fund Digest* published by the International Consortium on Governmental Financial Management from 1993-1994.

Bonawitz, M.F. Editorial board for *The Woman CPA* 1991.

## LICENSES

Certified Public Accountant in Florida, New York, Pennsylvania and the U.S. Virgin Islands.