

THE RELATIONSHIP OF RELIGIOSITY ON THE ETHICAL AWARENESS AND  
BEHAVIOR OF COLLEGE STUDENTS

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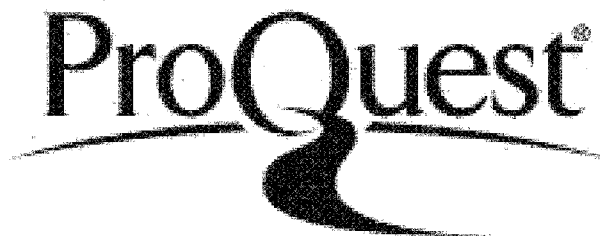


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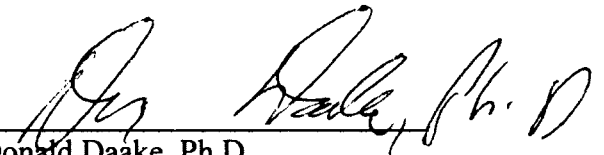
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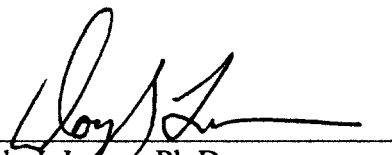


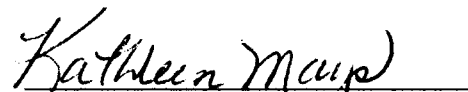
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# **The Relationship of Religiosity on the Ethical Awareness and Behavior of College Students**

**Michael D. Walker**

**Dissertation Committee Chair: Donald Daake, Ph.D.**

## **ABSTRACT**

Ethical failures have plagued business in recent years. Information sources are replete with situations where ethical breakdowns have occurred due to poor personal moral philosophy. These ethical failures have caused a focus on ethics not only in corporate settings but also in educational and research arenas. Such unethical behavior is both costly to corporations and embarrassing to educational institutions. When employees and graduates act unethically, researchers begin to ask questions.

What impacts ethical awareness and behavior is one of the questions asked. This study explores the relationship between religion and ethical awareness by examining more closely the intensity of the religious commitment, called religiosity. This is done to better understand the predictors and drivers of ethical awareness and predicted ethical behavior of individuals.

Quantitative data were gathered from over 380 undergraduate students from seven institutions, using pen-to-paper surveys. This survey looked at decision-making with regards to ethical situations, religious salience and actual ethical behavior. Responses were analyzed using both parametric and non-parametric tests.

As a measure for religiosity, this study used both a single question and a multi-item identifier. This was done in response to a call for a multi-item gauge for religiosity (Vitell, 2009). One researcher stated that “religion seems far too complex an arena of

human behavior not to include many different and unrelated types of variables” (Dittes, 1969, p. 618). The multi-item identifier for religiosity used here is superior to the single item used most often.

Education, gender and age were addressed as factors that might influence ethical awareness. Results determined that stand alone courses and age were not significant, yet these results show when gender does impact ethical awareness, females are more ethical than males.

Actual behavior was addressed and found where higher religiosity exists, students were less likely to participate in unethical behavior. Because ethical intentions are not the same as actual behavior, the inclusion of behavior in this study is by far the most significant element present in this research.

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## CHAPTER 1 – INTRODUCTION TO THE STUDY

“Religion has something to offer business.”  
James Culliton (1949)

In 1949, James Culliton wrote his *Harvard Business Review* article “Business and Religion.” He states that businessmen owe it to themselves to see what religion has to offer (p. 269). These remarks over half a century ago sparked an interest in religion and business that continues today. Scott J. Vitell (2009) states “religion *definitely does* have something to offer business, especially business *ethics*” (p. 155). This research project is designed to explore whether the ethical behavior of university students from various majors is impacted by a level of religious devotion or religiosity. Specifically, does the level of their religiosity affect their ethical awareness or behavior?

Prior research in this area has produced widely varying results and the impact of religious commitment on business ethics is unclear. Much of this confusion arises from the weakness in the measurement for religiosity. Most studies use a self-reported, single item like church attendance or prayer to measure religiosity. Studies are needed that use a multi-item measure of religiosity to make it more robust. In addition, most studies involving the impact of religiosity on ethics seem to deal solely with ethical intent, not behavior. The failure of looking beyond ethical intent to actual behavior has not been explored in the literature. Therefore, this research project is being conducted in an attempt to fill this void.

## **Background of the Study**

An individual's set of beliefs, attitudes, and values provides the framework for considering ethical dilemmas. This framework of ethical decision making is called one's personal moral philosophy (Barnett, Bass and Brown, 1996) or ethical attitude (Conroy and Emerson, 2004). There are vast numbers of personal moral philosophies that individuals may adopt (Neubaum, Pagell, Drexler, McKee-Ryan, and Larson, 2009). Barnett et al. (1996) define *personal moral philosophy* as the set of beliefs, attitudes and values providing a framework for shaping and considering ethical dilemmas. Why individuals make different moral choices when faced with the same set of circumstances has long concerned researchers (e.g. Freud, 1927; Kohlberg, 1983; Longenecker, McKinney and Moore, 2004; Neubaum et al., 2009; Sharp, 1898). Scholars have suggested that individuals use their own personal moral philosophy to interpret and process the situation (Neubaum et. al., 2009). This philosophy provides the basis within which ethical decisions are made (Forsyth and Nye, 1990), yet the extent of the influence is dependent upon a number of related concerns (Kurtines, 1984).

Ethical failures have plagued business in recent years. These unethical behaviors in business have become common occurrences (Terpstra, Rozell, and Robinson, 1993). Newspapers, magazines, television and other information sources are replete with business situations where ethical breakdowns have occurred due to poor personal moral philosophy. Enron, Arthur Andersen, WorldCom, Qwest, Adelphia, and Tyco make up a short list of companies involved in ethical failures over the past decade or more. Recent ethical failures like the Madoff Ponzi scheme, the corruption investigation of Illinois Governor Blagojevich or those involving other governors, senators and members of

congress emphasize how attentive the public is to proper ethical practice. Even the nation's financial crisis that started in 2007 has attracted attention regarding ethical practices.

In response to these failures, there has been a resurgence of interest in spirituality and religion in the workplace, after a long period in which "...religion and spirituality have been literally exorcised from modern forms of institutional organization" (Kim, Fisher and McCalman, 2009, p. 1). As mentioned earlier, in his article on religion and business, J. W. Culliton (1949) stated that "...religion has something to offer business" (p. 265). *Business Ethics Quarterly* chose to devote a special issue to the subject of religion and business ethics in 1997 (Vol. 7:2, March 1997). In 1999, the Academy of Management created an interest group entitled "Management Spirituality and Religion." The stated purpose of this interest group according to their website is "to encourage professional scholarship in the relationship between management, spirituality and religion" (The Academy of Management, 2003). *Business and Professional Ethics* published an issue focusing on Christian perspectives on business ethics in 2004 (Vol. 23, No. 4, 2004). In addition, academic journals such as the *Journal of Management, Spirituality and Religion* and *Business Spirit Journal* are dedicated to exploring the connection of religion and business affairs by providing information, inspiration and research on these topics.

One topic of interest in business and business education is the relationship between religiosity and ethics. Some scholars have demonstrated the theoretical connection between business ethics and religious belief (e.g. Albaum and Peterson, 2006; Bloodgood, Turnley and Mudrack, 2007; Clark and Dawson, 1996; Conroy and Emerson,



2004; Epstein, 1997 and 2002; Jewe, 2008; Kennedy and Lawton, 1998; Kim et al., 2009; Longenecker et al., 2004; Weaver and Agle, 2002). Some studies included business owners or others associated with business and ethical decisions as subjects, while other studies focused on college students. Of specific interest to this research is Conroy and Emerson (2004) who extended prior research on the relationship between religion and ethics and their effect on the ethical attitude of students. Their research used a vignette-style survey instrument to test whether ethical attitudes are impacted by religiosity, which was their first hypothesis (H1) and whether ethical attitudes are affected by education in religion, ethics or theology, their second hypothesis (H2). The Conroy and Emerson (2004) study is a practical study about religion and ethics. It addresses the concerns raised in previous studies about small sample size by using a sample size of 850 students. In addition, their study uses students from two different universities.

### **Purpose of the Study and Research Question**

The recent financial crisis and banking collapse, moral failure of political candidates, and misconduct by professional athletes have shaken the public confidence in the integrity of leaders in the United States. Unethical behavior in business has attracted attention. Incidences of fraud, accounting failures, false advertising, corporate kickbacks, bribery, tax evasion, embezzlement and insider trading are topics in current news. Scandals involving large corporations like Enron, Tyco, WorldCom, Arthur Anderson, and Adelphia gained the attention of the public, corporate and academic sectors with a focus on ethical practice and teaching. Prison sentences for unethical choices and behavior have impacted numerous high-ranking officials, including Andrew Fastow of

Enron, Sam Waksal of ImClone, Dennis Kozlowski of Tyco International, Bernie Ebbers of WorldCom, and Martha Stewart, to list a few.

These ethical failures have caused a focus on ethics not only in corporate settings but also in educational and research arenas. Such unethical behavior is both costly to corporations and embarrassing to educational institutions. When employees and graduates act unethically, researchers begin to ask questions. The primary question asked deals with the *causes* of poor ethical judgment. What influences one person to act ethically, yet another person to act unethically? One area that is receiving attention is religion. Theoretically, some have hypothesized and/or demonstrated there is a relationship between the characteristics of religion and ethical attitude or awareness (Albaum and Peterson, 2006; Conroy and Emerson, 2004; Kennedy and Lawton, 1998; Longenecker et al., 2004; Weaver and Agle, 2002).

This study explores that relationship between religion and ethical awareness in college students by examining more closely the intensity of the religious commitment, labeled religiosity, of the student. This is done to better understand the predictors and drivers of ethical awareness and predicted ethical behavior of college students in some non-religious and religious-affiliated institutions. The stated purpose of this paper is to test the impact religiosity has on the ethical awareness of students and if religiosity eventually influences the ethical behavior of students. More specifically, this study will seek to answer the following research question: *Does religiosity impact the ethical awareness of college students, and is this an influence on their ethical behavior?*

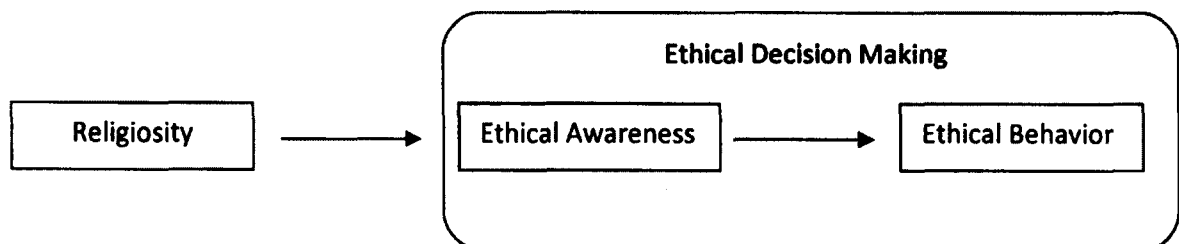
This study is designed to expand the work done by Conroy and Emerson (2004). It will potentially support the findings of that study by using a cross-sectional study

extending its generalizations. This cross-sectional study seeks to eliminate issues raised in the original conclusions about the demographic profile of the sample and the single measurement for religiosity. Conroy and Emerson (2004) stated the need for further studies to be done attempting “to broaden the demographic profile of the samples” (p. 392). Their study only surveyed students at two schools located in one southern state. This research identifies multiple colleges and universities in various geographic areas, not just one.

This cross-sectional study will also address issues raised by Conroy and Emerson (2004) and other researchers regarding how religiosity is measured. One researcher states the impact of religiosity on ethical development is a pertinent variable for further assessment; a measurement tool for religiosity is needed (Burks and Sellani, 2008). This study will use a previously developed instrument for measuring religiosity and avoid the concern of single religious attributes or self-reporting variables. Vitell (2009) shares a concern with the limited amount of studies that examine the impact of religiosity on ethical judgments, intentions, and/or behavior, calling this a “major gap” in the literature. A primary goal and model of this study is to further develop research that links religiosity with ethical awareness and ultimately ethical behavior through ethical decision making (Figure 1).

**Figure 1**

*Model for the Impact of Religiosity on Ethical Decision Making through Ethical Awareness to Ethical Behavior*



## **Professional Significance and Contribution of the Study**

The results of this study will bring value by adding to the existing knowledge base and by increasing understanding on several levels. The debate over the efficacy of ethics education is addressed in this study. In addition, the impact of religiosity on ethical awareness and the need for strengthening the measurement for religiosity are tackled here. Furthermore, as future business leaders, college students are again surveyed asking them to respond to ethical scenarios, providing a measurement for ethical awareness. Finally, ethical behavior is included in this study, expanding the limited research addressing not only perception, but actual behavior.

### **Ethics education.**

One impact of this study will be on those teaching business ethics in the undergraduate and the graduate level arenas. Teaching business ethics to undergraduate students seems to be receiving some attention but is still under scrutiny as to its efficacy. Recent scandals at major corporations and with public individuals raise the need for more attention to ethics at the educational level (Evans, Trevino, and Weaver, 2006; Ferrell, 2005; Ferrell, Fraedrich, and Ferrell, 2008; Gioia, 2002; Jennings, 2003; Rae and Wong, 2004). Evans et al., (2006) express that the current ethics education could leave students with a “fragmented, multi-method approach to ethical issues instead of an overarching ethical perspective or framework” (p. 279). Ethical attitudes at the college level are acquired by “formal classroom education, observation of business practices, and informal education-related experiences” (Albaum and Peterson, 2006, p. 301).

Accreditation bodies do not give specific standards for ethics education, yet they do require ethics and corporate social responsibility to be a part of the business

curriculum for a school to receive accreditation (Gioia, 2002; Laczniak and Murphy, 2005). The increase in the number of studies, articles and interviews published in business magazines and academic journals indicates the concern related to business ethics. There is a need for the development and expression of ethical attitudes and behaviors in college students and future business leaders. This study will provide educational institutions additional information about elements that impact ethics in college students.

### **Religiosity impact.**

It is hoped that the results of this study will reveal more clearly the influence religiosity has on the development of ethical awareness and eventually behavior of college students. A link between ethics and religion seems apparent (Parboteeah, Hoegl, and Cullen, 2008; Tittle and Welch, 1983; Vitell, 2009; Weaver and Agle, 2002). Religions and their inherent value systems form the basis for what many consider right and wrong (Turner, 1997). Religions inculcate followers with certain values and expectational bonds through regular exposure to their customs, norms, laws, writings, and practices (Field, 1979). These expectations often provide direction for what is considered ethical behavior in most of the world's religions (Fisher, 2001).

However, despite this concept of a link between religion and ethics, research has provided mixed conclusions on the relationship (Burks and Sellani, 2008; Tittle and Welch, 1983; Weaver and Agle, 2002). These mixed results are believed to be due to conceptual and methodological issues (Burks and Sellani, 2008; Parboteeah et al., 2008). Vitell (2009) concludes that there is a significant gap in the literature involving studies about religiosity's impact on ethical judgments and/or behavior. This mixed conclusion

provides compelling reason for this study focusing on religiosity and its impact on ethical awareness and behavior at the undergraduate level. This study will reduce the gap in the literature involving studies about the impact of religion on ethical awareness and ethical behavior.

**Measurement for religiosity.**

A multi-item gauge for religiosity is needed (Vitell, 2009). Church attendance alone is not satisfactory as a measurement of religiosity. Most studies tend to consider one-dimensional self-reported items for religion, such as church attendance or religious affiliation (e.g. Agle and Van Buren, 1999; Schwarts and Huisman, 1995). When multidimensional views of religion are used in empirical testing, the results appear to give a healthier understanding of the correlation between ethics and religiosity (Parboteeah et al., 2008). One researcher stated that “religion seems far too complex an arena of human behavior not to include many different and unrelated types of variables” (Dittes, 1969, p. 618).

Even though some studies have considered multiple dimensions for religiosity, these appear to be random selections without any theoretical support (e.g. Agle and Van Buren, 1999). In addition, other studies used numerous factors to measure religiosity, but then a selection was made to use only one factor that best fit their results (e.g. Conroy and Emerson, 2004). This study uses the “Salience in Religious Commitment Scale” (Roof and Perkins, 1975) taken from the Hill and Hood book, *Measures of Religiosity* (1999, p. 214-215). Theoretically, by using a previously developed scale to measure religiosity, the results of this study will enhance future research in the area of religion and ethics.

### **College students.**

Over the past two decades, many of the studies of business ethics have used college students as participants. Students are often used both because they will be future business leaders and because they are readily available. Thus, college students are an appropriate group to study.

Albaum and Peterson (2006) expressed that by studying the ethical attitude of current students, “it may be possible to predict the future ethical behavior of business leaders, perhaps even influence that behavior through appropriate business education” (p. 301). College students are the next generation of leaders in many fields, but especially in business. If these future leaders are to act ethically, then how is their ethical attitude formed?

Cheating at the collegiate level is considered a deviant behavior or unethical behavior because it varies from the cultural norm of academic integrity. Similarly, violation of work-place policies might also be considered unethical behavior. The question then becomes, is participation in unethical behavior (notably cheating) a predictor of participation in unethical behavior in future settings such as the workplace? Research shows a correlation between academic dishonesty and other unethical behavior including alcohol abuse (Kerkvliet, 1994), theft from employers (Hilbert, 1985), shoplifting (Beck and Ajzen, 1991), and cheating on income taxes (Fass, 1989). This study will provide additional information about what impacts the ethical decisions of college students who will later be leaders in business and other areas.

### **Ethical behavior.**

It is noted that studies to measure religiosity's impact on ethical behavior are missing from the research (Vitell, 2009). Measuring ethical behavior may be difficult, but is needed to provide potentially significant information to the knowledge base. Ethical intentions are not the same as ethical behavior. The use of nine self-reported behavior questions is introduced in this study to measure behavior. The examination of the impact that religiosity might have on behavior is included in this study.

### **Overview of Methodology**

A quick overview of the methodology will be beneficial at this point. A full explanation will follow in Chapter 3, *Research Method*.

Though not a replication, this study uses the Conroy and Emerson (2004) study as a starting point and as a model for investigation. This study also uses vignettes to gauge ethical attitude and a series of questions to measure ethical behavior. To measure ethical attitude, this study includes 13 vignettes used by Conroy and Emerson (2004) plus it introduces additional vignettes unique to this study. Since the original vignettes are over two decades old, these new vignettes present contemporary situations that demonstrate ethical dilemmas and will compliment the vignettes used in the original study.

In addition, to measure religiosity, their study looked at various self-reported aspects of religion and then selected church attendance because it provided the best results. This study will include a question about church attendance but also employs a multi-item scale to evaluate religiosity. The surveys included in this study use the "Salience in Religious Commitment Scale" (Roof and Perkins, 1975) taken from the Hill



and Hood book, *Measures of Religiosity* (1999, p. 214-215). The purpose of this scale is to measure religious salience in an individual's life, often referred to as religiosity.

Like the Conroy and Emerson study (2004), this research is primarily quantitative in nature. The research hypotheses are tested utilizing a collegiate student population from selected colleges in the United States. The design for this sampling is a single-stage convenience sample, utilizing a self-reporting questionnaire for data collection. This format follows similar studies by other researchers who have utilized undergraduate and graduate students as survey population for the purpose of researching the relationship between religiosity and ethical awareness (Albaum and Peterson, 2006; Clark and Dawson, 1996; Conroy and Emerson, 2004; Jewe, 2008; Kennedy and Lawton, 1998; Knotts, Lopez and Mesak, 2000).

Students are asked to answer several questions about areas of ethical behavior in the survey. Questions deal with two areas of unethical behavior, violation of legal standards and organizational norms. Specific topics deal with speeding and underage drinking which violate the law. In addition, cheating and lying which violate academic norms and organizational rules are included.

The analysis is conducted for the purpose of measuring the relationship between the participant's responses to the vignette and their level of religiosity. Some of the independent variables, like gender and education, will be used as dummy variables. The inclusion of a Likert scale opens up debate as to the type of data collected. There are two schools of thought. One group states that the data is interval and parametric statistics are appropriate, while other say the data is ordinal; thus non-parametric statistics are required. Since Conroy and Emerson (2004), used parametric tests, this study will also

run similar tests for comparison. In addition, non-parametric statistics will be employed in order to satisfy those that feel the data is ordinal in nature. The inclusion of both types of tests should eliminate the debate over the abuse of Likert scales (Jamieson, 2004).

### **Limitations of the Study**

Limitations to this study should be noted. There are three potential areas of limitation associated with this study: perception versus reality, sample population issues, and lack of universally acceptable definitions. These are discussed individually.

#### **Perception versus reality.**

Although some have concluded that religiosity characteristics may impact moral or ethical sensitivity, judgment or intention without impacting behavior, it could be concluded that religiosity may impact ethical behavior (Rest et al., 1974). While this survey extends the measurement for religiosity, the scale is based upon self-reported information that some may not see as actual religious significance.

In addition, this survey measures the ethical attitude of students based on their perception regarding the ethical situations. Although the vignettes do not measure the respondent's ethical behavior, the reaction to the vignettes provide an attitudinal response to the ethical situations. Some have concluded that one's ethical attitude implies what the action will be, yet it does not measure actual behavior. Ethical behavior will be measured in a separate section of the survey and then comparisons will be made between ethical attitude and ethical behavior.

A major limitation of previous studies was that the research attempted to measure only an individual's attitude towards ethical behavior, rather than measuring the actual behavior itself. An additional section measuring ethical behavior is introduced in this

study. Assumptions in this study include the accuracy of responses from the respondents. Since the ethical behavior is self-reported, it may not be accepted as actual behavior. What one says he/she will do is not always what he/she will do.

All of the data are self-reported, introducing the possibility of response bias and under reporting of behavior and neutralization. The issue of response bias is addressed when testing the measurement model. The results should not indicate a significant response bias. Care is also taken to minimize additional concerns regarding self-reporting. Surveys will be administered without the faculty member present and no form of identifying information is requested. The proctors will explain that students' responses will be completely anonymous and that only aggregate results will be reported.

#### **Sample population issues.**

The study is also limited in its failure to achieve a proportional representation of all college students. Also, due to the fact that this study is limited in the total number of specific religious groups, it is impossible to draw conclusions that can be generalized to all religions. Further research might be conducted to compare specific religious groups and their responses. Some have warned that the study of undergraduate students and religion should be viewed with skepticism due to their age (Tittle and Welch, 1983). This study will not solve this concern.

This study uses a convenience sampling from various institutions, so cooperation is needed. Although the surveys will be conducted at schools in various geographic areas, the students may come from other areas, thus the ability to deduce any type of geographic pattern will most likely not be possible without making extreme assumptions. An additional limitation relates to the source of the data. College students served as the

subjects. Studies need to be conducted to determine whether these findings generalize to a broader population.

**Lack of universally accepted definitions.**

Much of the struggle with the study of ethics, and business ethics in particular, is the lack of well-defined key constructs (Randall and Gibson, 1990). The inclusion of an additional construct for religiosity is a step forward in responding to this need for a more specific definition, but the need for further refinement and appropriate measurements remains.

**Definition of Key Terms**

One might expect to find in literature universally accepted definitions for elements used in research, but this is not the case. Randall and Gibson (1990) share a concern that there are no such definitions and encourage researchers to provide a full disclosure of research methods and clearly defined key constructs in business ethics research. According to Tenbrunsel and Smith-Crowe (2008), if it is not important to provide definitions then the field of ethical decision making is without meaning. The following definitions for key constructs of this research are given to provide clarity and meaning to this research. By defining some key terms, the meaningful contribution of this study to the literature can be increased. These definitions are presented in the order these occur in a model (Figure 3) presented later in Chapter 2 and include:

Religiosity	Religious salience	Moral
Ethical	Ethical attitude	Ethical awareness
Ethical decision	Ethical issue	Moral agent
Ethical behavior		

A number of definitions for *religiosity* exist. Religiosity is defined by McDaniel and Burnett (1990) as a belief in God accompanied by a commitment to follow principles believed to be set by God. Bjarnason (2007) suggests that religiosity is comprised of three major dimensions: a religious affiliation, religious activities, and religious beliefs. Emile Durkheim (1915/1965) classified religion in this way:

A religion is a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden—beliefs and practices which unite into one single moral community called the Church, all those who adhere to them (62).

This study will use the definition of another researcher that classifies religiosity or religious commitment as “the extent to which an individual is committed to the religion he or she professes and its teachings, such as the individual attitudes and behaviors that reflect this commitment” (Johnson, Jang, Larson and Li, 2001, p. 25).

*Religious salience* is the importance or significance an individual places on his or her religion. The extent to which religion affects one’s beliefs and behavior depends on the individual’s level of religiosity and the importance one places on the religion itself (Sood and Nasu, 1995). This study uses the “Salience in Religious Commitment Scale” (Roof and Perkins, 1975) taken from the Hill and Hood book, *Measures of Religiosity* (1999, p. 214-215). The purpose of this scale is to measure the importance of religion in an individual’s life, often referred to as religious salience. Religious salience as measured by the scale is used as the definition for religiosity in this study.

The terms *moral* and *ethical* have a long history of being used interchangeably in most literature. In De Fato (II. i) Aristotle's use of the Greek word 'ethikos' was substituted by Cicero with the Latin word 'morale' (Ciulla, 2006). According to the *Webster's New World Dictionary* (1995), the words *moral* and *ethics* have very similar meanings. The word 'moral' is defined as being concerned with principles of right and wrong or conforming to standards of behavior based on principles; adhering to ethical principles. Similarly, the dictionary defines 'ethics' as motivation based on ideas of right and wrong; the philosophical study of moral values. Many researchers fail to provide adequate definitions of these terms (Tenbrunsel and Smith-Crowe, 2008). In her presentation at the World Forum on Ethics, Joanna Cuilla (2006) stated "some people like to make a distinction between ethics and morality, arguing that ethics is about social values and morality is about personal values" (p. 58). She goes on to say,

Aside from linguistic considerations, it is not useful to divide ethics into public and personal ethics. Ethics is about relationships with other people and living things and, as such, the personal is the public. If we start separating public and private ethics, we find ourselves sliding into ethical relativism, which makes for tough going when leaders have to make real decisions about what is right and wrong both at home and in international contexts (p. 58).

Determining a definition for these core dependent variables is critical to the understanding of the research. Although the terms ethics and morals have been used interchangeably, the focus of this study will be on ethics as the study of morals. Thus

ethics is being concerned with principles of right and wrong, conforming to standards of behavior.

*Ethical attitude* expresses an individual's mental position or emotional state about a situation. According to the *Webster's New World Dictionary* (1995), the term *attitude* is defined as a mental position, feeling or emotion about a fact or state. In literature, *ethical attitude* has been used to represent behavioral intention (i.e. Reidenbach, Robin and Dawson, 1991; Roozen, Pelsmacker and Bostyn, 2001) or ethical awareness (i.e. Conroy and Emerson, 2004). Some researchers develop scales or constructs to measure ethical attitude, while others use scenario techniques. This study uses well-defined scenarios of situations containing ethical issues to measure the respondents' ethical attitude or awareness.

The term *ethical awareness* is drawn from Rest's (1986) four-component model for individual ethical decision making and behavior. His four steps of ethical decision making are: moral awareness, moral judgment, moral intent and moral behavior (Rest, 1986). According to Rest, morality provides the basic foundation for determining how to deal with conflicts or to optimize the benefit of people living together in groups. This awareness of a situation involving right and wrong is the initial step in the ethical decision-making process. Using the term *ethical attitude* or *ethical awareness* to describe an individual's understanding of right and wrong or how to best proceed when actions impact others is appropriate in this study. (In this study, the terms *ethical attitude* and *ethical awareness* are considered equivalent and will be used interchangeably, depending on context.)

*Ethical decision* is defined as a decision that is both legal and morally acceptable to the larger community (Church, Gaa, Nainar and Shehata, 2005; Jones, 1991). In contrast, an *unethical decision* is either illegal or morally unacceptable to the larger community (Kelman and Hamilton, 1989). Traditionally, ethical decision making is based on the rational decision-making model which assumes a systematic process to arrive at one best outcome. Yet recent work has challenged this thinking, asserting that the ethical decision-making process is influenced by biases, emotions and intuition (Tenbrunsel and Smith-Crowe, 2008). For this study, an *ethical decision* is one that does not violate either legal or morally acceptable behavior of the larger community.

According to Velasquez and Rostankowski (1985), an *ethical issue* is present when a person's voluntary actions benefit others. For there to be an issue, there must be consequences due to the action or decision based on choices, or volition, on the part of the decision maker (Jones, 1991). Thus, many decisions are ethical because they have moral components.

A *moral agent* is the person that makes the moral decision, even if he or she fails to recognize the moral issue at stake (Jones, 1991). This is important because in the ethical decision-making models, a central element is the recognition of an ethical issue. If the individual acts ethically or unethically without awareness, then it is difficult to study ethical decision making. Thus, the need to see what impacts the ethical or moral attitude of an individual is important.

*Ethical behavior* refers to behavior that is based on standards of right and wrong that prescribe what people ought to do, usually in terms of rights, obligations, fairness, benefits to society, or specific virtues (Velasquez, Andre, Shanks, and Meyer, 1987). In



addition we might consider behavior deviant or unethical if it varies from the cultural norm. For example, we consider cheating at the collegiate level an unethical behavior since it varies from the cultural norm of academic integrity. Thus, ethical behavior is behavior that agrees with the universally accepted actions that are supported by consistent and well-rounded reasons.

### **Summary**

As has been stated above, this study seeks to test the impact religiosity has on the ethical awareness of students and if that awareness eventually influences the ethical behavior of students. More specifically, this study seeks to answer the following research question: *Does religiosity impact the ethical awareness of college students, and is this an influence on their ethical behavior?* This issue, along with the various related items outlined above, serves as the foundation for this research. As a next step in this research process, this study moves to a review of the wealth of literature that has been written on the concepts that are at the core of this issue. Six hypotheses rise out of this literature review, and their testing becomes the focus of the remainder of this research process.

## **CHAPTER 2 — LITERATURE REVIEW**

The focus of this research project is on the impact religiosity has on the ethical awareness of college students and whether it is an influence on their ethical behavior. Specifically, where students express a high importance on religious practice and adherence, do they think and act ethically? This chapter will provide a review of the appropriate literature that can facilitate a better understanding of this focus.

Based on a review of the relevant streams of research, six hypotheses were developed and tested. This chapter reviews both theoretical as well as empirical articles. Major attention is given in this review to the concepts of religiosity, ethical awareness, and ethical decision making.

The review is organized into four sections. The first section deals with key areas of religiosity. The second section focuses on ethical attitude or awareness and various factors, other than religiosity, that are common in the research literature. The third section deals with ethical decision making, while the fourth section addresses ethical behavior. Within the sections, the literature is presented in clearly identified categorical groupings. This chapter concludes with the development of the hypotheses. Finally, a short summary of the chapter is included.

### **Concept One—The Existence and Importance of Religiosity**

#### **Construct of religiosity.**

“Religion is one of the more frequently mentioned determinants of the moral values that underpin ethical standards” (Emerson and McKinney, 2010, p. 2). Religion has been defined as a system of beliefs and practices by which a group interprets and responds about areas in which they feel strongly (Johnston, 1975). “Religion promotes

social solidarity, partly by providing norms that reduce conflict and also by imposing sanctions against antisocial conduct” (Kennedy and Lawton, 1998, p. 17). Religious followers are impacted by the religion they observe. These tenets shape and control the followers’ beliefs and behaviors (Ramly, Chai, and Lung, 2008). Religion establishes rules and obligations as well as sanctions that directly control and influence behavior of the followers (Harrell, 1986). An example of this might be the prohibition on alcohol consumption for conservative Protestant Christians or Muslims. In addition, religion has the ability to shape culture, norms, attitudes and values in society (Al Habshi and Syed-Agil, 1994). Thus, religion exercises important control over beliefs and behaviors (Kennedy and Lawton, 1998).

Although some have given definitions for religion, religiosity and religious beliefs, researchers struggle to develop adequate definitions for these ideas (Barnett et al., 1996). Religiosity is “the extent to which an individual is committed to the religion he or she professes and its teachings, such as the individual attitudes and behaviors reflect this commitment” (Johnson et al., 2001, p. 25). The influence religion has on the ethical orientation of individuals stems from the personal nature of ethics. The degree to which religion influences one’s behavior and actions is determined by the intensity of religiosity and the significance one gives to the religion itself (Sood and Nasu, 1995). Magill (1992) reported that individuals used personal religion to rationalize the ethical nature of behavior. Huffman (1988) claimed that religiosity was one of the strongest determinants of values. Religion constructs formal and informal norms and provides people a freedom/constraint duality by prescribing behavior with some acceptable boundaries (Fararo and Skvoretz, 1986; Parbateeah et al, 2008). These norms are codified into

religious writings such as the Koran or the Bible. Thus, religious persons display value systems that vary from those less religious and the non-religious (Mokhlis, 2006).

This study focuses on major religious influences in the United States of America (hereafter referred to as America). The rationale for this is that the respondents used in this study are from America. In a study conducted in 2008, 76% of Americans identified themselves as Christians, mostly as Catholics or associated with Protestant denominations (Kosmin and Kaysar, 2009). In addition, approximately 2.7 million individuals classified themselves as Jewish in religious belief, not just ethnic Jews. These three selected groups are the major religious influences in American culture.

***Three major religious streams in American culture.***

“Religions often incorporate role expectations for their adherents to have particular religious experiences” (Weaver and Agle, 2002, p. 83). In American culture the three main religious streams, Catholicism, Protestantism, and Judaism, from the Judeo-Christian heritage have traditions, rituals and/or practices as part of their teachings. Devout Jews say the *Shema*, or daily prayer, and observe the *Shabbat*, or Sabbath. The *Eucharist* of the Catholic Church includes Mass and participation in the Holy Sacraments. A Catholic in good standing does this at least weekly. Similarly, Protestant groups encourage tithing, daily Bible study and weekly church attendance.

The three main religions that have influenced American culture are Judaism, Catholicism and Protestantism, and all three of these religions use the Hebrew Bible as the starting point for their teachings (Green, 1999; Shaw and Berry, 2007). Even religions that do not follow the Hebrew Bible contain universal moral tenets (Ali, Camp and Gibbs, 2000; Conroy and Emerson, 2004; Holmes, 1984) or traditions that provide

enlightening moral direction (Epstein, 2002; Friedman, 2000). These elements provide the foundation for business ethics (Abeng, 1997; Epstein, 2002; Green 1999).

### *Judaism.*

Judaism, with the foundation of the Torah (Old Testament) and the Talmud (oral teachings of the Torah), forged the basis for Jewish law and ethics and allowed followers to be involved in trade and commerce even in diverse diaspora environments (Green, 1999). Ethicists, both Jewish and non-Jewish, have studied these traditions and tried to apply conventional standards to modern business conditions like workplace safety, rights to privacy, bankruptcy, product safety and liability to list a few (Green, 1999; Levine, 1987; Schnall, 1993; Tamari, 1987, 1990, 1997).

### *Catholicism.*

Catholicism grew from the early Christian community where many were often ascetic in their efforts to create an alternative society in order to avoid the worldly accommodations that were taking place in the Roman era. This initiated the monastic movement of the early Catholic Church (Green, 1999). During the medieval social world the Catholics began to develop the desire to help those poorer members of society and gave rise to the propensity to focus on social justice more than business ethics. There is also an emphasis on economic justice because of the Catholic teaching that one's faith can not be separated from actions taken in the economic sphere (Velasquez and Brady, 1997). Catholic tradition regarding social thought and economic justice has been an important influence on key issues of current business ethics (Green 1999; Naughton and Laczniak, 1993). John Boatright, Gerald Cavanagh, Thomas Donaldson, Al Gini, Kenneth Goodpaster, John Hauck, Dennis McCann, Manuel Velaquez, Patricia

Werhane, and Oliver Williams are all examples of individual writers of business and business ethics literature that write from a Catholic perspective.

### *Protestantism.*

Protestantism has had the greatest impact in shaping the American culture's attitude toward business and ethics (Green, 1999). Protestant teaching not only involves a formal system of worship but also directions for social relationships (Shaw and Berry, 2007). Within these directions for social interaction are principles and rules. One example is "The Golden Rule" which states "Do unto others as you would have them do unto you..." (Matthew 7:12). At one time, currently liberal denominations were the progressive group within the Protestant movement but have been replaced by Evangelicals, who emphasize inerrancy of the Bible in matters of faith, morals and personal piety in ethics. This causes an emphasis on individual piety and integrity over that of social justice or corporate ethics (Green, 1999). Shirley Roels (1997) states, "Evangelicals are adamant about their belief in moral absolutes, based in the Ten Commandments, but seem less worried about spelling out detailed implications of these absolutes in the workplace" (p. 116). This thinking creates a potential gap between belief and behavior.

### **Religiosity and the study of ethics.**

Most, if not all, religions of the world have moral teachings that in some way indicate some disapproval of unethical actions. Therefore, it is logical to assume that religious people would be more ethical and less tolerant of unethical behavior. Empirical research has looked at this assumption but with mixed results.

Before 1960, ethical issues even in business were discussed within the domains of philosophy or theology. Churches, synagogues, and mosques were addressing ethical

issues. In the following years, the shift moved from personal responsibility using religious standards to corporate responsibility using corporate standards. Government regulations, task forces and ethical compliance rose in importance. “The current trend is away from legally based compliance initiatives in organizations to cultural initiatives that make ethics part of core organizational values” (Ferrell, Fraedrich and Ferrell, 2008, p. 16). Moral philosophers create logical theories of normative ethics, the root of which is the definition of the terms *ethical*. Researchers and writers, like Kant (1785/1964) and Rawls (1999), in the field of deontological theory define right and wrong in terms of *a priori* principles making it easy to classify variables as ethical or unethical independent of situation or context. Lawrence Kohlberg (1980) found the following:

Like most philosophers from Kant to Hare, Baier, Aiken, etc., we define morality in terms of the formal character of a moral judgment or a moral point of view, rather than in terms of its content. Impersonality, ideality, universalizability, and preemptiveness are among the formal characteristics of a moral judgment, a moral reason being one which has such properties as these. (p. 54)

Gill (2004) adds “ethical principles are linked with, and dependent on, purposes” (p. 22). In regard to religious teaching, God’s laws are laws of conduct and action, not simply laws of nature (Tenbrunsel and Smith-Crowe, 2008).

***The link between religion and ethics.***

Despite the concept of a link between religion and ethics, research has provided mixed conclusions on the relationship (Burkes and Sellani, 2008; Tittle and Welch, 1983; Weaver and Agle, 2002). A link between ethics and religion seems apparent to researchers (Parboteeah et al., 2008; Tittle and Welch, 1983; Weaver and Agle, 2002).

Religions and their inherent value systems form the basis for what many consider right and wrong (Turner, 1997). Through regular adherence and significance, religions impart certain values and “expectational bonds or reciprocal expectations of predictability” (Field, 1979). These expectations often provide direction for what is considered ethical behavior in most of the world’s religions (Fisher, 2001). The varied results found in research are believed to be due to conceptual and methodological issues (Burks and Sellani, 2008; Parboteeah et al., 2008). This mixed conclusion provides compelling reason for this study focusing on religiosity and its impact on ethical awareness and behavior at the undergraduate level.

*Religion and ethical awareness.*

Some studies attempted to evaluate the relationship of religion to ethical awareness (Allmon, Page and Roberts, 2000; Burkes and Sellani, 2008; Conroy and Emerson, 2004; Porco, 2003; Wimalarsiri, 2001). Many of these studies are specific to one area of ethical practice. Some of the topics include insider trading (Terpstra, et al. 1993) and student cheating (Allmon et al., 2000; Barnett et al., 1996), yet in most cases, it was found that those respondents who reported a high degree of religiosity tended to be more ethically oriented (Albaum and Peterson, 2006; Conroy and Emerson, 2004; Miesing and Preble, 1985; Smith and Oakley, 1997).

Longenecker, McKinney and Moore (2004) conducted a study of managers to see if religiosity impacted their ethical decisions and determined that the higher the importance of the managers’ religious practice the more likely they were to demonstrate a higher level of ethical judgment. Emphasis has been given in several studies to the importance of one’s religious identity. Ford and Richardson (1994) conducted an



empirical review of literature on ethical decision making and noted that when religious factors were studied, the only factor showing a significantly positive relationship with ethics was the strength of religious belief.

Previous empirical studies found mixed evidence on the positive influences of religiosity on an individual's perception of an ethical situation (O'Fallon and Butterfield, 2005; Weaver and Agle, 2002). Hegarty and Sims (1978, 1979) in their early studies regarding acceptance or rejection of kickbacks found no relationship between one's religious orientation and ethical decision making. In addition, another study found similar results when it examined the relationship between religiosity of managers and ethical judgment (Kidwell, Stevens, and Bethke, 1987). A later study found negative correlations between some measure of religiosity and ethical judgment (Clark and Dawson, 1996). In contrast, some early studies show significant positive relationships between some measures of religiosity and ethical behavior (Kennedy and Lawton, 1998; McNichols and Zimmerer, 1985).

Some studies even found a negative relationship between religiosity and ethical orientation. Both Hunt and Vitell (1993) and Phau and Kea (2007) found that religiosity could affect an individual's perception of an ethical situation and other components of ethical decisions. In addition, both studies discovered that people who practiced their religion were apt to deem themselves more ethically minded than those who did not practice a religion.

Clark and Dawson (1996) used the Intrinsic/Extrinsic Revised Scale of religiousness developed by Gorsuch and McPherson (1989) to measure religiosity but found those with a high score had lower levels of ethical sensitivity. Agle and Van Buren

(1999) looked at graduate students and only found weak and inconsistent support for a positive relationship between qualities of religiousness and favorable attitudes toward corporate social responsibility. Brammer, Williams and Zinkin (2006) used a very broad group of individuals from over 20 countries and representing several major religious groups and found no great preference for corporate social responsibility between those with a religious affiliation and those without.

A religious self-identity based on the teachings of religion, which shapes one's ethical attitude, was found in several studies (Conroy and Emerson, 2004; Weaver and Agle, 2002). When Albaum and Peterson (2006) studied the ethical attitudes of college students they reported that students who claimed to be highly religious tended to behave more ethically than those who were less religious. The importance of a theological or religious commitment in developing a framework for ethical decision making was stressed by Tsalikis and Fritzsche (1989). Later studies reinforce the strong theoretical support on the existence of relationship between religiosity and attitudes towards business ethics. In summary, there have been many studies addressing ethical awareness and religion, with most of these showing a positive relationship between these two elements. Yet the mixed results from the research is linked to the use of widely varying definitions and measures of religiosity and the focus on attitudes without connection to behavior (Weaver and Agle, 2002).

Albaum and Peterson (2006) note that the six studies they reviewed showed religiosity as having a significant influence on the respondent's attitude about business ethics. The deficiency identified is the lack of consistency in the extent of the influence. Their research shows a positive relationship between religiosity and degree of ethicality.

This study includes several questions measuring the importance of the participant's religiosity, as well as a religiosity scale to measure religious salience. Because the relationship between ethics and religion has been repeatedly observed (Agle and Van Buren, 1999; Conroy and Emerson, 2004; Kennedy and Lawton, 1998; Smith and Oakley, 1996; Terpstra et al., 1993) this study seeks to support that finding, but will include the connection to ethical behavior as well.

*Religion and ethical behavior.*

With fairly consistent results the relationship between religion and various behavioral, affective, and cognitive phenomena has been addressed in sociology and psychology studies. Sociological researchers found a strong relationship between religion and both marital patterns (length of marriage, divorce rates) and political behavior. For example, Lehrer and Chiswick (1993) found that couples where both were adherents to the same faith were less likely to divorce than those of different faiths or non-religious. In regard to politics, religiosity impacted voting behavior of the general public (Layman, 1997) and among members of Congress in the United States (Fastnow, Grant, and Rudolph, 1999). Psychology studies maintain the claim that religiosity is related to personality (Maltby, 1999) and cognition (Pancer, Jackson, Hunsberger, Pratt, and Lea, 1995). It also supports the concept that some forms of religion help individuals handle traumatic experiences and negative life events (Pargament, 1990, Pargament, Olsen, Reilly, Falgout, Ensing, and Van Haitsma, 1992).

When considering religiosity and its relationship to ethical behaviors the picture is not as clear. Empirical studies found mixed evidence on the positive impact of religiosity on an individual's awareness of an ethical situation (Ramly, Chai, and Lung, 2008). One

study found that religious people are inclined to be more tolerant of ethically questionable corporate behavior (Clark and Dawson, 1996). Yet, Agle and Van Buren (1999) were unable to find support for a connection between religious rearing and corporate social responsibility.

### **Criticisms, concerns and rebuttals.**

Studies on religiosity and business ethics received a threefold criticism from some researchers due to the inability to draw conclusions from the research. First, there is concern regarding the limited use of student samples, which may or may not provide an adequate picture of the general public (Tittle and Welch, 1983; Weaver and Agle, 2002). Secondly, most of the studies focus on attitudinal measures of ethics, which may have social desirability biases (Weaver and Agle, 2002). Lastly, the lack of a universally accepted definition and measures of religiosity were criticized (Barnett et al., 1996). Weaver and Agle (2002) state “if religiosity is conceptualized and measured just in terms of easily observed behaviors such as church attendance, we risk missing potentially important motivational and cognitive differences and vice versa” (p. 80).

This study addresses these three major criticisms of previous research. The use of student samples may not be an adequate picture of the general public, but by using students “it may be possible to predict the future ethical behavior of business leaders, perhaps even influence that behavior through appropriate business education” (Albaum and Peterson, 2006, p. 301). In response to most of research focusing on ethical attitude, this study will use of a collection of nine self-reported behavior questions to measure behavior. This study extends the research beyond ethical awareness to ethical behavior to deal with this criticism of previous research. Finally, with the use of a multi-item scale

that has previously been used to measure religiosity, the results of this study will enhance future research in the area of religion and ethics. It is believed that this study addresses the concerns voiced by earlier research.

### **Operationalization of religiosity for ethics research.**

In regard to theoretical issue, most studies tend to consider one-dimensional concepts for religion, such as church attendance or religious affiliation (e.g. Agle and Van Buren, 1999; Schwartz and Huisman, 1995). Church attendance alone is not a satisfactory measure of religiosity, but the use of a multi-dimensional measure is needed (Wilkes, Burnett and Howell, 1986; Vitell, 2009). In studies using a single item measurement for religiosity, such as church attendance and/or religious affiliation, there has rarely been a significant link between ethics and religiosity (e.g. Hegarty and Sims, 1978, 1979; Kidwell et al., 1987). The salience of religion is much more important in predicting ethical attitudes/judgments than are single item variables (Longenecker et al., 2004; Vitell, 2009). When multidimensional views of religion are used in empirical testing the results appears to give healthier understanding of the correlation between ethics and religiosity (Parboteeah et al. 2008). One researcher stated that “religion seems far too complex an arena of human behavior not to include many different and unrelated types of variables” (Dittes, 1969, p. 618). Vitell (2009) recognized the “inherent complexity of the religious construct” and calls for a multidimensional scale to study the intricate construct of religiosity (p. 158).

In addition, even though some studies have considered multiple dimensions, these were done without consideration for conceptual support for their choices (e.g. Agle and Van Buren, 1999). McDaniel and Burnett (1990) used several different measures of

religiosity with results indicating a strong commitment to one's religious belief was much more significant than religious affiliation in one's attitude toward customer service.

Although this and other earlier studies do not examine ethical issues per se, the findings concerning how religiosity was measured are important for subsequent studies involving religiosity and ethics (Vitell, 2009). In some studies, several dimensions of religiosity were used but then selection was made from those dimensions to fit the study's results (e.g. Conroy and Emerson, 2004).

In contrast, there are studies that have found a positive relationship between one-dimensional elements of religion and ethical principles. One example is Terpstra, et al. (1993). They found religious beliefs in undergraduate students to be an important determinant of ethical attitudes. One study which used hypothetical business scenarios found that business students who reported that their religion was very important in making daily decisions were less accepting of questionable ethical behaviors than those that placed less importance on religion in decision making, (Smith and Oakley, 1996). Conroy and Emerson (2004), when looking at regular church attendance of students, found those that attended regularly were less tolerant of unethical behavior described in business situation vignettes.

Parboteeah, Hoegl and Cullen (2008) studied over 63,000 individuals from 44 countries and found that religious commitment and the practice of religion did make people less willing to justify unethical behavior. Longenecker et al. (2004) surveyed business professionals and discovered that those for whom religion was of modest or substantial importance demonstrated a higher level of ethical judgment than those for whom religion had little or no importance. In the study of religious importance done by

Emerson and McKinney (2010), they found business professionals holding religion in high importance to be significantly less likely to accept questionable ethical behavior. Because of the limits of mixed results and the limits of single-use items to measure religiosity, this study operationalized the construct of religiousness using a multi-dimensional measurement of religiosity. The tool used is the “Salience in Religious Commitment Scale” (Roof and Perkins, 1975) taken from the Hill and Hood book, *Measures of Religiosity* (1999, p. 214-215). This scale uses several questions to establish the importance of religion to the individual. This results in a religiosity score. Reliability or internal consistency of the scale was tested by using Cronbach’s alpha. Cronbach’s alpha was used to test the reliability of the data from the religiosity scale against existing studies using the salience of faith scale. The Cronbach’s alpha for the salience of faith scale was .739. This compares favorably with Roof’s alpha of .72. Theoretically, by using a previously developed scale to measure religiosity, the results of this study will enhance future research in the area of religion and ethics.

In summary, religion and ethics have been closely aligned in previous research. In most incidences the relationship is positive, yet the results have been mixed. The criticisms address inconsistencies and scope of previous research. Well defined constructs and the inclusion of ethical behavior allow this study to fill the gaps identified in previous research.

### **Concept Two—Ethical Decision Making**

#### **Ethics or morals.**

Before going further, there is a need to discuss the terms at the root of this review, *ethical* or *moral*. Concern arises among some researchers that the terms *moral* and

*ethical* are used interchangeably without providing adequate definitions. Without a common understanding of the foundational terms research will remain incompatible, confused and atheoretical (Tenbrunsel and Smith-Crowe, 2008). This lack of definitions ultimately allows the terms to be defined by study participants and their definitions will remain unknown to anyone who reads the articles or studies the research (Randall and Gibson, 1990). Authors including Dubinsky and Loken (1989), Ferrell and Gresham (1985), Hunt and Vitell (1986), and Trevino (1986) fail to provide any adequate definition of these terms. In contrast, there are researchers that provide clearly stated definitions of ethical belief and conduct. Bowman (1976), Brenner and Molander (1977), Brown and King (1982), and Browning and Zabriskie (1983) provide their study participants well-stated definitions of ethical conduct and belief. Randall and Gibson (1990) state, "To build a cumulative data base of business ethics research, key constructs in business ethics research need to be clearly defined" (p. 462).

Researchers often use the term *ethical* to define *moral* and *moral* to define *ethical*. Rest (1986) shares a very precise definition for behavioral ethics when he shares his explanation for the term morality. When speaking of morality he states, "...we intend to refer to a particular type of social value, that having to do with how humans cooperate and coordinate their activities in the service of furthering human welfare, and how they adjudicate conflicts among individual interests" (p. 3). At least one study (Trevino, Weaver and Reynolds, 2006) considers the terms "ethical" and "moral" synonymous and uses them interchangeably. The ability to provide an adequate and universally accepted definition that explains the substance of what is ethical is lacking (Tenbrunsel and Smith-Crowe, 2008).



This study uses the term *ethical* rather than *moral* because ethics appears to be impacted by more than what is right or wrong (moral). Ethical elements are those items that are universally accepted to be both legal and appropriate according to cultural and organizational rules and norms.

#### **Ethical decision-making models.**

Ethical decision making is a topic of great interest among researchers. In an attempt to more fully or visually explain ethics, models have been found useful. In the scholarship, a multitude of models and frameworks have been developed and proposed. Loe, Ferrell and Mansfield (2000) reviewed eighty studies published between 1961 and 1997. Some researchers have proposed various models in an effort to explain and predict the process used by individuals in making ethical decisions (Ford and Richardson, 1994; Weiss, 2006; Tenbrunsel and Smith-Crowe, 2008). Two recent models for ethical decision making are those presented by Ferrell, Fraedrich and Ferrell (2008) and Tenbrunsel and Smith-Crowe (2008).

There is a great diversity of perspectives on what makes someone choose to act ethically. Psychological theorists have various views on this. Bandura (1977) and Goldiamond (1968) believe there is not any special motivation to be moral because everyone merely responds to learned social behavior and this is often called *morality*. Altruism (Hoffman, 1981; Wilson, 1975), conscience (Aronfreed, 1968; Eysenck, 1976), social understanding (Dewey, 1959; Piaget, 1965), experiences (Kohlberg, 1985), self-identity and integrity (Blasi, 1984; Damon, 1984), and moral motivation (Durkheim, 1961) are some reasons stated by psychologist as moral motivations.

The process of ethical decision making and behavior is complex (Weaver and Agle, 2002). Research focusing on ethical decision making tries to not only define what is ethical and the process of ethical decision making (Tenbrunsel and Smith-Crowe, 2008), but it seeks to identify variables of influence (Conroy and Emerson, 2004, Parboteeah et al., 2008). Some have noted the need for more investigation in management contexts to assess the accuracy of existing research (Weaver and Agle, 2002). They call for more testing using models (Ford and Richardson, 1994).

In general, ethical decision-making models divide the hypothesized influences on an individual's decision behavior into two broad categories. Both categories involve several variables, but the first category deals with variables associated with the individual decision maker. This study addresses the first category which stresses individual factors that are uniquely associated with the individual decision maker. The second category focuses on the variables which form and define the situation or context in which the individual makes the decision (Ford and Richardson, 1994).

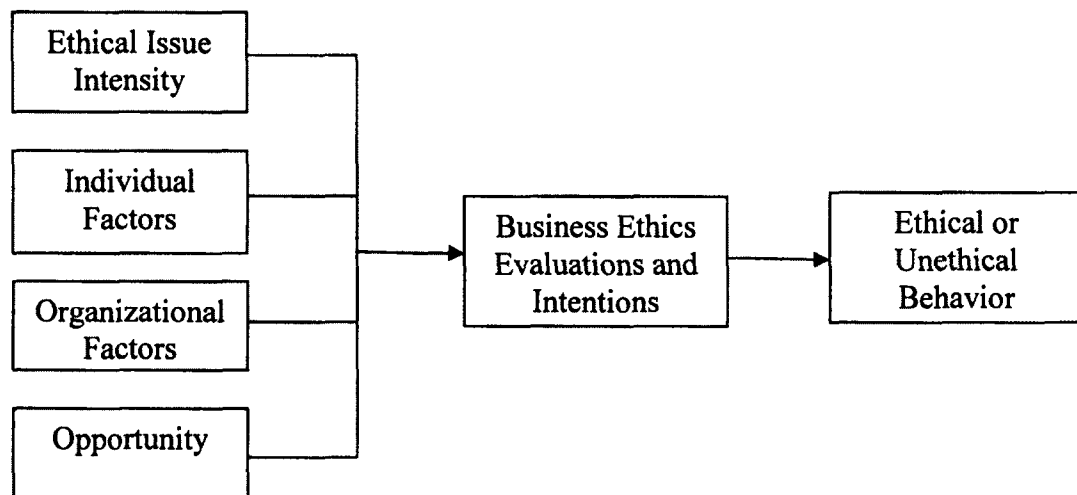
Other research literature studies variables that are situational in nature but are not emphasized in this study. These factors include referent groups (Dubinsky and Loken, 1989; Izraeli 1988), rewards and sanctions (Fritzsche and Becker, 1983; Hunt, Chonko, and Wilcox, 1984), codes of conduct (Akaah and Riordan, 1989; Ferrell and Skinner, 1988), type of ethical conflict (Weber, 1990a), organization effects (Akaah, 1992; Delaney and Sockell, 1992), industry type (Akaah and Riordan, 1989), and business competitiveness (Dubinsky and Ingram, 1984; Hegarty and Sims, 1978). Once this research is complete future research might combine both categories of models to further enrich understanding.

***Framework for ethical decision making in business.***

Ferrell, Fraedrich, and Ferrell (2008) propose a framework for understanding ethical decision making in business (Figure 2) that includes factors that influence one's ethical decision making. These factors influence the evaluation and intentions that eventually lead to the behavior, either ethical or unethical. Ferrell et al. (2008) propose the need for a better understanding of the influences and the process of ethical decision making in business situations. Decision makers will be better prepared to analyze critical ethical dilemmas and thus, make better ethical decisions.

**Figure 2**

*Framework for Understanding Ethical Decision Making in Business (Ferrell, Fraedrich and Ferrell, 2008)*



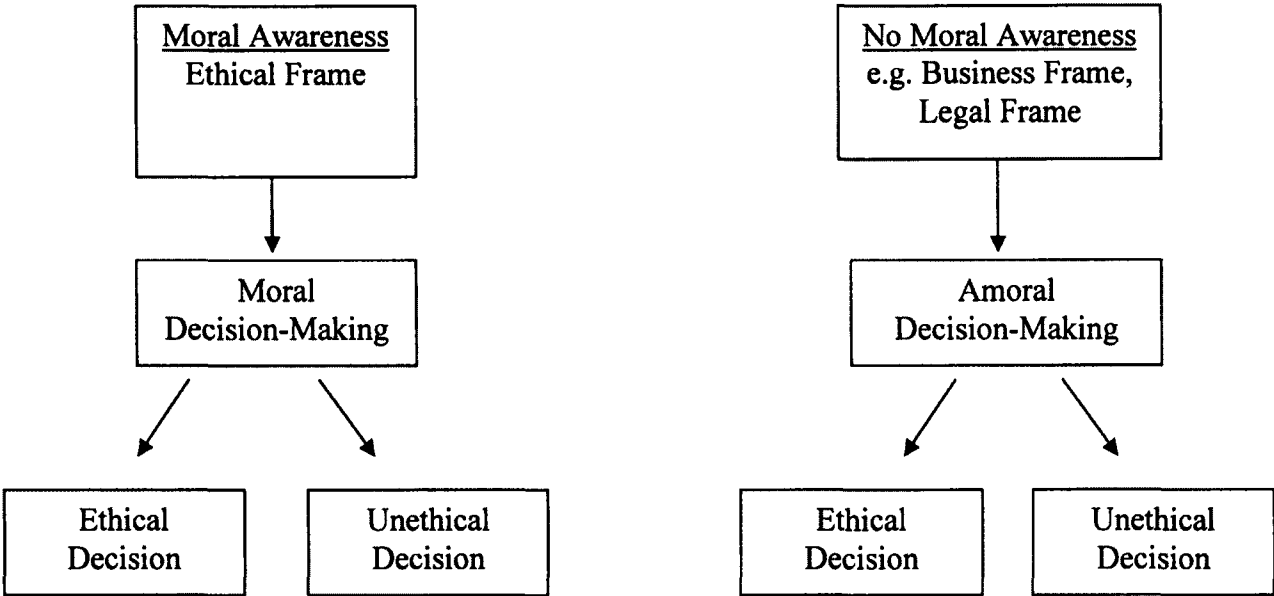
***Model of ethical decision making.***

Tenbrunsel and Smith-Crowe (2008) voice a concern about the lack of definitions, theory and models when dealing with ethical decision making. Their model (Figure 3) is designed to provide a focus for ethical decision making and various features involved in

the process. The development of their model uncovered three important components in the ethical decision-making process: moral awareness, moral decision making, and amoral decision making. Their model is drawn from previous models but is significant in some areas. The authors make a distinction between situations in which a person is aware of a moral issue (ethical frame) and those where individuals are unaware of a moral issue (business or legal frame). They consider moral awareness as “a crucial point in moral decision making” (p. 553). These authors share the desire to see future research in the area of ethical decision making to address the roles of emotion, the subconscious, and intuition in the process of identifying factors that influence the underlying process of ethical decision making.

**Figure 3**

*Model of Ethical Decision Making (Tenbrunsel and Smith-Crowe, 2008)*

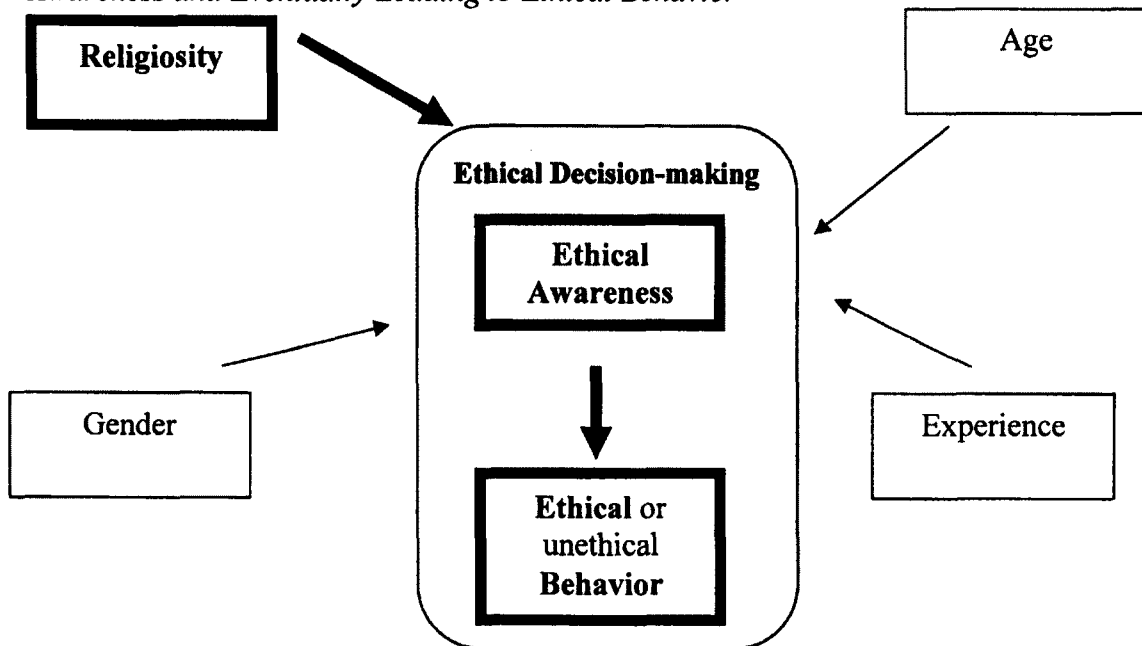


***Proposed model for the impact of religiosity.***

The model used in this study (Figure 4) is a modified version of the one provided by Tenbrunsel and Smith-Crowe (2008). The present study examines religion and the impact that it has on ethical decision making in college students. The emphasis here is given to situations where individuals are aware there is an ethical issue, so the focus of this study will use the left side of the model (Figure 3) concerned with moral decision making, not the right side that deals with amoral decision making. In response to the call for research to identify factors that are an underlying influence in the decision-making process, the model (Figure 3) is expanded by adding features prior to the awareness frame. In addition, the need to carry research beyond mere decision making or awareness to behavior is added. The highlighted path in the decision-making process is the area of focus for this study.

**Figure 4**

*Proposed Model for Impact of Religiosity on Ethical Decision Making Using Ethical Awareness and Eventually Leading to Ethical Behavior*



Another difference between the previous model (Figure 3) and this model (Figure 4) is terminology. This study uses the term ethical rather than moral. Emphasis in the model for this study (Figure 4) is placed on ethical over moral, although the terms are often used interchangeably.

**Traditional theories of ethics/ethical decision making.**

It is helpful to consider the foundation on which ethical decision making is built: moral judgment, development and decision making. Some traditional theories come from the research and teachings of Piaget, Kohlberg and Rest.

“Ethical decision-making research is entrenched in an assumption that ethical behavior is primarily a cognitive process, but recent research in many different areas has challenged that view and is dramatically expanding our perspective” (Trevino, Weaver and Reynolds, 2006, p. 979). These assumptions are based on early works on ethics and ethical decision making.

Piaget’s Cognitive Moral Judgment theory (1932) and Kohlberg’s Theory of Cognitive Moral Development (1981) are two of the most influential theories of moral development. These both emphasize cognition as the central component of ethical development. Piaget’s theory posits that moral maturity and cognitive development go together. His studies were conducted on a very limited group of young (5 to 13 year old) children. Kohlberg’s theory is better suited for assessment of ethics in adults (Kurpis, Beqiri and Helgeson, 2008).

***Kohlberg’s six stages of moral development.***

Kohlberg’s (1981) theory states that society moves through six stages of moral development. The journey starts with the punishment orientation state as the lowest level

and moves to the morality of conscience state at the highest level. Kohlberg believes that the higher levels of cognitive moral development are better than the lower levels because these allow for improved social adjustment and philosophically superior universal standards of justice and fairness (Kohlberg, 1981). According to Kohlberg, changes in morality in society are the results of cultural changes. He uses the Defining Issues Test, which considers ethical dilemmas, to measure an individual's level of moral development.

Kohlberg's six stages of moral development are:

1. The stage of punishment and obedience—*right* is simply literal obedience to rules and authority. Right and wrong are only associated with the person who has power, never any philosophical reasoning.
2. The stage of individual instrumental purpose and exchange—*right* is simply that which serves one's own needs. Decisions are not made solely on rules any longer but are based on fairness to self.
3. The stage of mutual interpersonal expectations, relationships, and conformity—in this stage emphasis shifts from self to others. The well-being of others is introduced here.
4. The stage of social system and conscience maintenance—in this stage attention is given to one's duty to society, not just specific individuals, but society as a whole is considered. Duty, respect, and maintaining order become focal points.

5. The stage of prior rights, social contract, and utility—a sense of obligation or commitment comes into play. Recognition that moral and legal points of view may conflict is also present.
6. The stage of universal ethical principles—belief that universal ethical principles are present and everyone should follow these. Inalienable rights, like justice and equality, are valid based on the premise of universality, not just custom or society's laws.

***Rest's four component model.***

Rest, Narvaez, Thoma, and Bebeau (2000) emphasize that morality is a multi-component process and extends past the theories of Kohlberg. They have developed a four component model, the Rest model of morality. They use the main tenet of Kohlberg's model as only a single component of their model. The field of descriptive ethics advanced in the 1980s and 1990s due to the development of theoretical models by several researchers using Rest's 1986 work as a foundation (e.g. Jones, 1991; Rest, 1986; Trevino, 1986).

Rest's four components of ethical decision making are:

1. moral awareness or sensitivity—being able to interpret the situation and recognize a moral problem where decisions affect the welfare of others. “What must be done?” The answer to this question is the role of moral judgment (Moore and Chang, 2006).
2. moral judgment—deciding which course of action is morally right or the ability to make a decision based on some moral ideal. Moral judgments differ from social norms because the latter is based on rote



patterns of behavior. Moral judgment is a cognitive-developmental attribute allowing the individual to adopt cooperative schemes that shift from short-term needs to long-term societal needs (Kohlberg, 1980; 1981).

3. moral intent or motivation—commitment to taking moral actions, prioritizing moral values over other values and taking personal responsibility. At this stage social understanding may influence moral behavior because there is a perspective of mutual benefit, thus moral obligations may override self-interest (Moore and Chang, 2006).
4. moral character or behavior—overcoming fatigue and temptation, persisting in a moral task, executing and implementing the moral intention (Rest, 1986, Rest et al, 2000). Ego-strength, self-regulation and self-efficacy may have a greater impact at this stage. For example, where ego-strength is stronger--*ceteris paribus*--people are less likely to cheat on a test (Moore and Chang, 2006). People focus on positive goals and maintain self-control longer (Mischel and Mischel, 1976). The hope of value or worth can aid in the development of coping behavior when facing obstacles (Bandura, 1977).

One researcher contends that Rest's study suggests that each section in the process is conceptually separate and that achievement in one phase does not mean achievement in another phase (Jones, 1991).

### **Trends and issues.**

Trevino (1986) offered a competing model to that of Rest's even though she does not directly state such. She titled her model, the *person-situation interactionist model*. Her model starts with an ethical dilemma and moves to a cognitive stage. In contrast, Kohlberg's *cognitive moral development model* becomes operative (Jones, 1991). Judgments made in the cognitive stages are restrained by situational factors (job context, organizational culture) and individual factors (ego, locus of control). Ergo moral judgments affect ethical and unethical behavior (Jones, 1991). While important, due to necessary limits of scope, this study will not focus on the situational factors involved in the cognitive studies. This is an area for future research.

Theoretical models of ethical decision making have been proposed by a number of authors in an effort to explain and predict the process by which people make ethical decisions. These models range from the contingency framework of Ferrell and Gresham (1985) to the situational-individual interaction model of Trevino (1986) to the moral intensity model of Jones (1991). These models and others might be used as a foundation for an empirical study on the process of ethical decision making but there has been a lack of interest in theory testing (Randall and Gibson, 1990). Trevino (1986) voiced concern that most of the writings on ethical decision making were non-empirical. O'Fallon and Butterfield (2005) in their empirical review found very consistent findings from over two decades of research. "Idealism and deontology are generally positively related to ethical decision making, while relativism, teleology, and other factors...are generally negatively related to ethical decision making" (p. 379).

Normative ethics seems to be avoided by most researchers since they resist trying to define ethical behavior (Tenbrunsel and Smith-Crowe, 2008). Critics express concern that business as a discipline attempts to remove intentionality, and likewise ethics and morality, from theoretical frameworks (Ghoshal, 2005; Tenbrunsel and Smith-Crowe, 2008). This concept makes sense when dealing with cells, plants, or animals because these are not able to make value judgments, but in management there is choice and human intentionality (Ghoshal, 2005; Tenbrunsel and Smith-Crowe, 2008). Since management involves decisions that impact others, it is a moral activity. One writer sees business as essentially pragmatic, thus choosing whatever works (Sandelands, 2008). “If we don’t believe it is important to define what an ethical decision is, or don’t believe it is our place to do so, then we are a field without meaning. If we do believe that such a definition is necessary, then we have no choice but to motivate an understanding of what the normative basis of those values should be and how *ethical* should be measured” (Tenbrunsel and Smith-Crowe, 2008, p. 551).

Ferrell and Gresham (1985) state they are not concerned with “judging” what is ethical or unethical but only concerned with “the determinants of decision-making behavior which is ultimately defined as ethical/unethical by participants and observers. Rather than advocate a particular moral doctrine, we examine contexts and variables that determine ethical decisions in the managerial process” (p. 88). This is the difference between descriptive and normative approaches to ethical decision making. The goal of the descriptive ethics is to study what people do, while normative ethics focuses on what people should do (Tenbrunsel and Smith-Crowe, 2008).

### **Contemporary reviews of ethical decision-making literature.**

The study of ethical decision making has grown significantly in the past decade evidenced by at least three recent and impressive reviews (O'Fallon and Butterfield, 2005; Tenbrunsel and Smith-Crowe, 2008; Trevino, Weaver, and Reynolds, 2006) which show the increase in studies on ethical decision making, yet the weaknesses that continue to exist. These weaknesses include the lack of theoretical grounding, problems in operationalization and measurement of ethical behavior, and the lack of consideration of interaction effects. The reviews by O'Fallon and Butterfield (2005) and Trevino et al. (2006) identified the prominent place that situational factors occupy as an influence on moral awareness.

#### ***O'Fallon and Butterfield review 2005.***

Michael J. O'Fallon and Kenneth D. Butterfield (2005) conducted an empirical review of the ethical decision-making literature from 1996-2003. Their research shows ethics, as a field, is usually divided into at least two areas: normative ethics and descriptive ethics. Normative ethics deals with moral philosophy and theology, teaching individuals how they should act. Descriptive or empirical ethics is concerned with management and business and the attempt to explain a behavior (O'Fallon and Butterfield, 2005). Normative ethics tries to explain what people should do ethically. Descriptive ethics explains what people think about morality or what people think is right (<http://philosophy.lander.edu/index.html>).

Descriptive ethics has made great strides in describing how individuals actually think and act when faced with ethical situations. Much of this advancement has come from the theoretical and empirical contributors in the field of ethics (O'Fallon and

Butterfield, 2005). These empirical studies use dependent variables taken from Rest's 1986 work (moral awareness, moral judgment, moral intent, and moral behavior) and various independent variables. The independent variables include individual factors (gender, age, education, nationality and religion), moral intensity, and organizational factors (O'Fallon and Butterfield, 2005).

O'Fallon and Butterfield (2005) note that researchers tend to focus previous studies on the last three components of Rest's (1986) model. In their review, only 28 studies looked at moral awareness, while 185 looked at moral judgment, 86 at moral intent, and 85 at behavior. They theorize that moral awareness has received limited attention because it is the first step in the model and has been viewed as an independent variable. Rest addressed the complexity of the first step--raising issues on the attempt to list the various factors--when he stated the "interpretation of the particular situation in terms of what actions [are] possible, who [including oneself] would be affected by each course of action, and how the interested parties would regard such effects on their welfare" (1986, p. 3). It has been suggested that researchers seek to determine what precedes moral awareness (O'Fallon and Butterfield, 2005). This might help identify factors that impact one's awareness "that she/he could do something that would affect the interests, welfare, or expectations of other people" (Rest, 1986, p.5).

Although previous reviews covered the same topic (Ford and Richardson, 1994; Loe, Ferrell and Mansfield, 2000), there were two additional objectives for the O'Fallon and Butterfield (2005) review. The first was to extend the time period of empirical reviews on this subject from 1996 to 2003. The second objective was to compare the findings of their research to those of the two previous reviews. This allows for

comparison of findings, to expose trends and to illuminate directions for future studies (O'Fallon and Butterfield, 2005). What impacts ethical or moral awareness needs to be addressed (O'Fallon and Butterfield, 2005). Ethical culture might be one of these influences. Trevino (1990) defined ethical culture as a multidimensional construct made up of an assortment of formal and informal systems of behavioral control. These formal systems are comprised of elements such as leadership, policies, authority structures and reward systems, while informal systems are comprised of norms, heroes, rituals, myths and language. The extent to which a well-established system encourages ethical conduct may increase an individual's ability to recognize ethical issues (Trevino, 1990; O'Fallon and Butterfield, 2005).

The interaction between the formal and informal aspects of ethical culture is an area of research that has seen little attention (O'Fallon and Butterfield, 2005). In addition a call for research on moral intensity has been expressed (Loe, Ferrell and Mansfield, 2000). What variables influence the ethical decision-making process? Researchers have conducted many studies focusing on individual variables that influence ethical decision making. O'Fallon and Butterfield (2005) identified 384 variables used in studies between 1996 and 2003.

Some of the individual factors that were covered in their review were gender, education, nationality, age, and religion. The most common factor used in studies is gender though these studies have indicated mixed results. The most recent studies show no significant gender difference. If significance was found, women were determined to behave more ethically than men under certain circumstances.

Over 40 studies reviewed education or work experience. Most of the research indicates a positive relationship between education or work experience and ethical decision making. The major impact is not with education or even the type of education but appears when practitioners are compared to students. When practitioners were compared to students, almost half of the studies show students to be less ethical than practitioners (O'Fallon and Butterfield, 2005).

Nationality, as a factor, seems to have an influence on ethical decision making, but the extent of that influence is unclear. This is because multiple nations have been studied, but the ability to make comparisons across studies is very difficult.

Age was a factor used in twenty-one studies. It is interesting that previous studies showed a positive relationship between age and ethical decision making, yet O'Fallon and Butterfield's (2005) review shows mixed or inconclusive results. "These mixed results may suggest a more complex relationship between age and ethical decision making than is captured by these studies" (O'Fallon and Butterfield, 2005, p. 392).

Where religion, in some form or another, was used as a factor of influence on ethical decision making, most showed a positive relationship with ethical decision making. Only the strength of religious belief was found to be significantly related to ethical norms.

***Trevino, Weaver and Reynolds review 2006.***

"The importance of ethical behavior to an organization has never been more apparent, and in recent years researchers have generated a great deal of knowledge about the management of ethical behavior in organizations" (Trevino, Weaver and Reynolds, 2006, p. 951). This thinking prompted Trevino and others to conduct a review of ethical

behavior in organizations. They used a very liberal definition of behavioral ethics. They looked at individual behavior that was “subject to or judged according to generally accepted moral norms of behavior” (p. 952). In addition, their study is not exhaustive, but a look at key literature they considered to be major contributors to the field. Their review is based on the Rest (1986) model.

*Moral awareness.*

Trevino et al. (2006) identify two major approaches taken in their study of research. First, the focus is on individual moral and ethical sensitivity, which is the ability of the individual to recognize that a decision has ethical content (Sparks and Hunt, 1998). Secondly, they note that there are many factors, including the individuals themselves, which can shape ethical awareness. In addition, they note that Butterfield, Trevino and Weaver (2000) used a scenario-based study to look at contextual factors that can influence ethical awareness. The studies note that women tend to have a greater ability to identify ethical issues. Also, with training and experience, one can improve ethical sensitivity.

A recommendation for future research calls for clarification of core constructs. They call for a need to “align the theory of moral awareness with the methods used to study it” (p. 954). In addition, there is a need to make a difference between moral awareness and moral judgment.

*Moral judgment.*

Much of the research on moral judgment focuses on the framework of Kohlberg’s (1969) cognitive moral development. Although there appears to be a link between moral awareness and moral judgment, the amount of research on the topic is very limited



(Trevino, Weaver and Reynolds, 2006). “If most adults’ thinking about right and wrong is highly susceptible to external influence, then the management of such conduct through attention to norms, peer behavior,... climate, culture, and so on becomes important” (Trevino, et al, 2006, p. 955).

They note that much of the research on the cognitive moral development depends on Rest’s Defining Issues Test (DIT). This test is now in a revised version (DIT2) available from the Center for the Study of Ethical Development at the University of Minnesota. Other researchers used interview methodology (e.g. Weber, 1990). Cognitive moral development is strongly associated with age and experience, yet their review notes no significant difference associated to gender.

The first two areas of Rest’s (1986) model, moral awareness and moral judgment, are considered to be cognitive processes that lead to moral intent or motivation and finally moral behavior. Some studies found a moderate correlation between moral cognition and behavior (Blasi, 1980; Kohlberg, 1969; Trevino and Youngblood, 1990) while others found significant differences between judgment and action (e.g. Weber and Gillespie, 1998). Thus, Trevino and associates recommend more attention be given to the way ethical judgment and ethical behavior link to ethical motivation and ethical action.

#### *Moral motivation.*

Moral motivation was described by Rest, Narvaez, Bebeau and Thoma (1999) as a person’s “degree of commitment to taking the moral course of action, valuing moral values over other values, and taking responsibility for moral outcomes” (p. 101). Moral reasoning is not always enough to understanding moral behavior. Furthermore, moral reasoning is not necessary for moral behavior to occur (Trevino et al, 2006). One

researcher notes that moral behavior arises from a process “marked by struggle, inner battles, and hesitations... (M)oral desires are so strong and unconflicted, so central in the actors’ motivational system, and so identified with their core identities, that moral action follows from a kind of spontaneous necessity...” (Blasi, 2005, p. 84-85).

Some research claims an intuition type approach to ethical motivation. This makes ethical motivation more reflexive than deliberate (Reynolds, 2006). The difficulty in measuring intuition is noted, but even if some moral judgment and motivation does not involve a “conscious, intentional reasoning process” (Trevino, et al, 2006, p. 962), it is clear that in some situations moral judgment does involve cognitive, intentional reasoning.

This review also notes the trend in theory and research to focus on the formation of a moral identity. This idea posits in order for the researcher to understand whether a person’s moral judgments motivate moral behavior one “must know about not only the person’s moral beliefs but also the person’s understanding of self in relation to those moral beliefs” (Damon, 1984, p. 110). Weaver and Agle (2002) theorized that an individual’s religious identity plays an important role in moral motivation but can be influenced by organizational factors.

#### *Moral behavior.*

Individual differences are common with research on moral behavior. In most studies, ethical behavior is linked to cognitive moral development. Another area of research is locus of control, where individuals with internal locus of control are more likely to see an association between their behavior and the outcomes of that behavior.

This tends to make the individual take the responsibility for his ethical behavior (Trevino and Youngblood, 1990).

Two influences on ethical behavior according to the research include ethical culture (Trevino, 1990), and attitudes and behaviors of peers (Zey-Ferrell and Ferrell, 1982). Most of the focus in this review is based on the organizational behavior and the moral norms of the organization. These norms are interpreted by the individual as rules and thus adherence is practiced less on an individual basis and more on obedience to rules.

This review suggests that future research give focus to theory development, rigor of methodology, attention to neglected areas of study, and translation of results to benefit the practitioner. The authors raise the concern that most of the research on ethical decision making is grounded in the assumption that decision making is primarily a cognitive process. It is noted that recent research has challenged this view and research that will expand this thinking is encouraged.

***Tenbrunsel and Smith-Crowe review 2008.***

The third and most recent of the three reviews emphasized here is one by Tenbrunsel and Smith-Crowe (2008). Their stated purpose was to review the literature on ethical decision making with a focus on behavioral, or descriptive, ethics. Their focus was on defining the current situation and identifying its future course. The results of their review is displayed in the model presented earlier (Figure 3) on page 39. In addition, they developed a typology of dependent variables involved with ethical decision making.

Like other reviews, they note the lack of a universal definition of the term *ethical*. This lack is considered a serious fundamental issue in the field of ethical decision

making. Their review is an attempt to categorize the literature, as well as provide a model for future work. The model is based on the three important components in ethical decision making: moral awareness, moral decision making, and amoral decision making. The distinction between moral and amoral decision making is a focus of their study and is based on the decision maker's knowledge of whether or not a situation is moral.

Their model differs from previous studies in several key ways. First, this review moves away from the framework of Rest's (1986) as embraced by others (O'Fallon and Butterfield, 2005). Second, this review uses the perspective of the decision maker and the situation faced by each. They argue that the decision structures "theoretically inform moral awareness" (p.552). Another key difference is their inclusion of the amoral perspective. "'Good' and 'bad' people make 'good' and 'bad' decisions; sometimes they are aware that the decisions they are making have ethical implications and other times they are not" (p. 553). They introduce the idea that the decisions can be ethical or unethical even when the moral awareness is there.

#### *Moral awareness.*

Moral awareness is a critical component of ethical decision making. Ethical decision making requires the decision maker to be morally aware and is a very important part of Rest's (1986) model of moral decision making on which many of current theories are based. When talking about their model Hunt and Vitell (1986) state, "If the individual does not perceive some ethical content in a problem situation, subsequent elements of the model do not come into play" (p. 761).

This review places emphasis on explanation of the construct of moral awareness. Rest (1986) explains being morally aware as "identifying what we can in a particular

situation, figuring out what the consequences to all parties would be for each line of action, and identifying and trying to understand our own gut feelings on the matter”(p. 3). Rest, in the same work, later adds that in order to achieve moral awareness, “the person must have been able to make some sort of interpretation of the particular situation in terms of what actions were possible, who would be affected by each course of action, and how the interested parties would regard such effects on their welfare” (p. 7).

Even with this background, it is noted that trying to measure the construct of moral awareness is problematic. Tenbrunsel and Smith-Crowe (2008) note that moral awareness is most often measured by openly asking respondents whether an issue presents an ethical dilemma, thus initiating the possibility of a moral dimension that might not have been perceived if the question were not asked (Trevino et al., 2006). Some studies use scenarios to present an ethical situation (Conroy and Emerson, 2004; Longenecker et al. 2004). This review finds that most of the measures are “reflective of the ethical importance of an issue (cf. Jones, 1991) rather than actual awareness of an issue” (p. 556).

*Individual factors and situational categories.*

Even though there is a great deal of research on moral awareness, much of it focuses on predictors of awareness. These factors are divided in this review between individual factors and situational categories. The individual factors are similar to those of earlier research and include: gender; nationality; and experience, whether cultural, religious or educational.

The studies on gender found mixed results or no effect (e.g. Hegarty and Sims, 1978) though some reveal that females are more morally aware (e.g. Ameen, Guffey, and

McMillan, 1996). There was a lack of consistency when nationality and culture were researched as an impact on moral awareness. When respondents from the United States were compared to those of other cultures, they were more likely to consider a situation to contain an ethical issue. The need to handle the possible clash between culture and nationality was the focus of some studies. Hofstede (1980) developed a theory on national culture to compare differing cultures and many of the studies reviewed applied this theory, yet these are most impactful when studies compare cultures within a national setting, for example, American versus Japanese culture within American business practices.

Ethical experience resulting from various factors, like those on gender, demonstrated varied results. In this review by Tenbrunsel and Smith-Crowe (2008) the variables, similar to those in this current study used to measure ethical experience, included age, religion and education. This review shows that in some studies age had a positive impact on ethical awareness, yet not in all situations. Religion when “spiritual values are more important than material values” allowed the individual to identify ethical content in vignettes (e.g. Singhapakdi, Marta, Rallapalli, and Rao, 2000).

Two areas identified in this review by Tenbrunsel and Smith-Crowe (2008) acknowledged as having the most consistent effect on ethical behavior are issue intensity and ethical infrastructure. Issue intensity was originally identified by Jones (1991) and was divided into six components:

1. magnitude of consequences
2. concentration of effect
3. probability of effect

4. temporal immediacy
5. social consensus
6. proximity.

In addition, Jones (1991) claimed a positive relationship between moral awareness and moral intensity. Most studies support this claim, although the ability to identify exactly which of the six components is predictive of awareness is difficult.

*Moral decision making.*

Their review supports the claim that moral awareness is critical for ethical decision making (Tenbrunsel and Smith-Crowe, 2008). The discussion of decision frames is emphasized in this review. The fact that much of the research has focused on only one decision frame, whether the respondent sees a situation as an ethical one, adds support to the model of decision making (Figure 2) introduced by these reviewers. Their focus is on whether a person even recognizes the scenario as having ethical implications or not.

“For the moral decision-making process to begin, a person must recognize the moral issues” (Jones, 1991, p. 380). Research supports the progress of Rest’s (1986) model of moral decision making. Moral awareness is an influence on the other three components in the model: moral judgment, moral intent and moral behavior. Again, an emphasis is given in the review that the ability to make predictions from moral awareness, moral judgment and moral intent to moral behavior is not available. In addition, it is noted that in many of the studies, moral awareness is assumed rather than measured.

Like the findings earlier with moral awareness, the results were mixed when individual factors of gender, culture, and experience were reviewed in relationship to

moral decision making. Some studies show a positive relationship between the individual factors and the decision made, while others show a negative relationship. For the most part, studies involving religion appear to have a positive relationship with moral judgment (e.g., Clark and Dawson, 1996; Wagner and Sanders, 2001), and behavior (e.g., Kennedy and Lawton, 1996).

Traditional research assumed that ethical decision making was a rational process of systematic progress arriving at a decision. Recent studies theorize the process is influenced by biases, emotions and intuition. The rational approach rose from the “contingency model” of Ferrell and Gresham (1985) and Rest (1986) and led to the synthesis model of Jones (1991). This rational process has been supported by empirical research. Moral awareness has been linked to judgment (e.g., Singhapakdi et al., 2000), judgment has been linked to intention (e.g., Barnett, 2001, Wagner and Sanders, 2001), and intention has been linked to behavior (e.g., Wagner and Sanders, 2001).

The links provided in research have now come under question. Research seeks to remove biases that impede a rational decision-making process, yet one’s worldview may bias perceptions. Biases mentioned in this review include discounting the future, denying uncertainty, and risk-framing. Personal values are often compared to values of others and these biased perceptions lead individuals to feel their position is moral and the other person’s is not. Additionally, intuition and emotion are factors of influence in decision making.

In summary, this review calls for research with a well-defined construct of ethical decision making. In addition, the traditional assumptions cannot be accepted without



support. Tenbrunsel and Smith-Crowe (2008) call for research to be based on theoretical frameworks.

### **Wrap-up**

Michael J. O’Fallon and Kenneth D. Butterfield (2005) conducted an empirical review of the ethical decision-making literature from 1996-2003. They identified the increased knowledge of individual, situational, and issue-related factors of influence on ethical decision making as strengths. Measurement and operationalization of ethical behavior, along with the lack of theoretical grounding and consideration of interaction effects were considered as weaknesses. Trevino et al. (2006) noted additional progress in the field of ethical decision making and behavior, yet record the concern that research is “entrenched in an assumption that ethical behavior is primarily a cognitive process” (p. 979). Finally, Tenbrunsel and Smith-Crowe (2008) describe the field of ethical decision making as “alive and vibrant” (p. 593). They call for the need to break down old assumptions and to build a theoretical platform upon which work in behavioral ethics can continue to grow.

### **Concept Three--Conroy and Emerson (2004)—A Model of Investigation**

#### **Introduction to Conroy and Emerson (2004).**

This present study uses the research conducted by Conroy and Emerson (2004) as a model for investigation and is an extension of their research, including the vignettes for measuring ethical attitude or awareness. Thus, a brief review of their research is necessary.

Conroy and Emerson used surveys to elicit responses regarding the ethical acceptability of particular vignettes. These responses were ordered or ranked in terms of

less or more ethical. Their twenty-five vignettes were used to address a variety of ethically questionable situations. These issues included various dimensions of ethical behavior including legal versus illegal, physical versus non-physical harm, gender discrimination, bribery and ethical codes of conduct. These vignettes have been used by other researchers and were based largely on works by Longenecker, McKinney and Moore (1989), Clark and Dawson (1996), Fritzsche and Becker, (1982), and Harris (1991). A full list of the 13 vignettes used by Conroy and Emerson (2004) and in this study is included in Appendix A.

Conroy and Emerson (2004) were seeking to extend the previous works of others analyzing the roles of religiosity, gender, age, and ethics courses in affecting the ethical attitude of students. Although religiosity was addressed earlier in concept one, a brief summary will be included here also. Each of the remaining areas addressed by others prior to their study and included in theirs will now be discussed. Information will address the findings of Conroy and Emerson (2004) but will include additional information that is important to the understanding of previous research on these variables.

### **Religiosity.**

Religiosity is most often measured by using a self-reported single item like prayer/meditation frequency, church attendance or religious affiliation. Conroy and Emerson (2004) used several similar self-reported items to measure religiosity but determined that frequency of church attendance provided the best and most consistent measure of religiosity. The use of this type of measure for religiosity has been identified as inferior and calls have been made for multi-item measurements for religious salience

(Dittes, 1969; Parboteeah et al., 2008; Vitell, 2009; Wilkes et al., 1986). This current study uses a previously published multi-item scale to measure religiosity.

**Other relevant variables.**

***Gender.***

Gender socialization theory (Gilligan 1982; 2000) contends that males and females perceive ethical issues differently because of differences in socialization. According to Moores and Chang (2006), “females are socialized to maintain relationships and empathize with others, while males are socialized according to principles of fairness and equity” (170). Kohlberg (1969) contradicts this with his cognitive development theory stating that responses of men and women are very similar because they both base their moral reasoning on justice. O’Fallon and Butterfield (2005) completed a review of empirical ethical decision-making literature that resulted in the conclusion that “literature examining gender continues to produce fairly consistent findings. There are often no differences found between males and females, but when differences are found, females are more ethical than males” (p. 379).

Not only may an individual’s religiosity influence ethical awareness and/or behavior, but other individual attributes, such as gender, may also have an impact. The findings of O’Fallon and Butterfield (2005) in their empirical review of literature regarding ethical decision making found mixed results regarding the impact of gender on ethical awareness. According to these researchers, recent literature reported little or no significant gender differences in most studies. In some studies, gender has been found to be a significant predictor of ethical attitudes and perceptions (Conroy and Emerson, 2004; Ramly, Chai, and Lung, 2008).

In most, if not all, studies where gender was significant, females reported to be more sensitive to ethical situations and were less tolerant of unethical behavior (e.g. Cohen, Pant and Sharp, 2001). Beltramini, Peterson, and Kozmetsky (1984) determined that there was a “consistent tendency for the females in the sample to express more concern than the males in the sample, regardless of the issue” (p. 199).

Borkowski and Ugras (1998) performed a meta-analysis of 56 studies and concluded that female students reveal stronger ethical “attitudes” than male students. Yet, O’Fallon and Butterfield (2005) in their empirical review show that most ethical decision-making research reported few or no significant gender differences (e.g. Abdolmohammadi and Sultan, 2002) or when significance was noted, found women to behave more ethically than men in some situations (e.g. Cohen et al, 2001). These findings agree with previous findings of Ford and Richardson (1994) and Loe et al. (2000).

Not all researchers agree that women in general have a higher ethical attitude than men. Some researchers concluded that men and women make ethical decisions in distinct ways and this can be observed when the situations are “context specific” (Callahan, 1990; Derry, 1987, 1989; Keller, 1988; Smith and Oakley, 1997). Some have tried to theoretically explain this gender difference. Gilligan (2000) concludes that men and women have different moral orientations. Men focus more on “justice” while women are more “cause” oriented.

Males and females are obviously different in more ways than just physicality. Differences in the way males and females respond in situations have been studied by

many, yet with inconclusive findings. This study will provide additional information on how religiosity and gender impact ethical attitudes and behavior of college students.

***Age.***

Although one might conclude that age is positively correlated with ethical decision making, the studies for the most part show “mixed and inconsistent results” (O’Fallon and Butterfield, 2005, p. 391). The difficulty in confirming the relationship between age and ethical decision making appears to be in the complex relationship between the two and the complexity in capturing this relationship.

When considering age effects, many researchers agree with the meta-analysis of Borkowski and Ugras (1998) that stated older respondents are more ethical than younger ones (Allmon et al. 2000; Conroy and Emerson, 2004; Miesing and Preble, 1985; Terpstra et al. 1993). Other studies found that students have a lower ethical standard than those already in a business environment, including executives (Arlow and Ulrich, 1980; Stevens, 1984). This conclusion may support Kohlberg’s (1981) stages of moral development which supports the potential moral maturation over an individual’s lifetime.

With “mixed and inconsistent results” (O’Fallon and Butterfield 2005, p. 391) the need to study further the impact of age on ethical decision making is needed. This study will divide college students in segmented ranges to evaluate the impact of age on ethical decision making.

***Education.***

***Fault.***

Much of the blame for recent scandals in business has been placed on business education. Ghoshal (2005) and Mitroff (2004) as critics of business education site the

lack of ethical reasoning in current business education. Too much emphasis has been placed on profits and other amoral aspects of business at the expense of other goals (Neubaum, et al. 2009). Ghoshal (2005) faults business education for the unethical scandals. He states, “by propagating ideologically inspired amoral theories, business schools have actively freed their students from any sense of moral responsibility” (Ghoshal, 2005, p. 76).

Another fault associated with education is based on the Kurt Lewin (1945) idea that “nothing is as practical as a good theory” (p. 129). Actually the blame falls on the other side of this saying: “Nothing is as dangerous as a bad theory.” “I have so far developed the proposition that bad management theories are, at present, destroying good management practices” (Ghoshal, 2005, p. 86).

#### *Teaching/administration and accreditation.*

Most faculty and administrators, as well as accrediting bodies, agree that an emphasis on ethical teaching and training is necessary to increase ethical awareness and possibly to raise moral judgment for good ethical practice (e.g. Bok, 1988; Piper, 1993; Rest, 1986; Salmans, 1987; Sims and Sims, 1991; Smith and Oakley, 1996).

The Association to Advance Collegiate Schools of Business (AACSB), a leading accrediting body for business schools, requires business schools to include ethics education in the curriculum but does not tell the school how this is to be done. Ethics can be included within the standard curriculum or a stand-alone course can be created. The Accreditation Council for Business Schools and Programs (ACBSP), another accrediting body for business schools, lists Business Ethics as an area of curriculum that must be

included with a minimum of 30 coverage hours, but does not require a stand-alone course.

Collins and Wartick (1995) performed a review of business ethics education over a period of years and revealed an increase in ethics courses through the 1970s and 1980s, but then noted a decline in the 1990s. This ebb and flow has been attributed to changes in institutional pressure, specifically accreditation bodies (Swanson and Frederick, 2005).

#### *Ethics courses.*

The attempts to test the success of ethics courses on the ethical development and awareness of students have yielded mixed results (Conroy and Emerson, 2004). Rest et al. (1974) developed the Defining Issues Test (DIT) in hopes of measuring the moral understanding of individuals. The DIT has been used in many studies for this purpose. Borkowski and Ugras (1998) conducted a meta-analysis of 56 empirical studies published between 1985 and 1994 and show most researchers were unable to discern a significant difference between business and non-business students.

Although research has been conducted on the impact ethics education makes on ethical attitude, the results are varied. Martin (1987) found no significant difference between those who had taken a course in ethics and those who had not in regard to their responses to ethical questions. This study was followed by many additional studies that tried to establish whether ethics education in itself causes anyone to have a higher ethical attitude or not (e.g. Conroy and Emerson, 2004; Kristol, 1987; Magnet, 1986; Murray, 1987; Vogel, 1987).

The findings on the effects of ethics courses have been described as temporary (Arlow and Ulrich, 1985; Weber, 1990), limited (Duizend and McCann, 1998; Harris,

1991; Roberts and Allmon, 2000), immaterial (Borkowski and Ugras, 1992; Martin, 1981; Miller and Miller, 1976; Smith and Oakley, 1996; Wynd and Mager, 1989), or insignificant (Conroy and Emerson, 2004). Conroy and Emerson (2004) studied ethical perception from a general sense and not from a specific code of conduct as did previous studies (Green and Weber, 1997; Loe and Weeks, 2000; Rest et al. 1974). Boyd (1981) found that a simple course in business and society can “significantly accelerate” moral development in some college students.

*Religion/theology courses.*

These findings in response to courses in ethics can also be applied to courses in religion. Conroy and Emerson (2004) also looked at the influence of the completion of a course in religion and found the impact to be very weak when compared to religious commitment (church attendance). This indicates that practicing one’s religion, even in terms of just attending religious services, impacts ethical decision making more than a course in religion. Vitell (2009) states, “the mere knowledge of religion, or religious history, by itself, is much less likely to impact ethical attitudes than the practicing of one’s religion (p. 158).

Kohlberg’s (1981) theory of moral development and the stages of development allow for the role of education to be an influence on moral development. Boyd (1981) used a test developed by Rest and others (1974) to see if courses in business and society would influence moral development. He found that courses do have a positive impact on some college students. Others have done similar tests with comparable results (e.g. Glenn, 1992; Green and Weber, 1997; Jones and Ottaway, 2001; Loe and Weeks, 2000; Sims, 2002; Weber and Glyptis, 2000).



A debate about the impact of education on the ethical attitude of students still exists (Conroy and Emerson, 2004). Accreditation bodies encourage the inclusion of ethics in the education process, but specific standards are not required. Although courses may have impact on some students, research concerning the educational impact on ethics is needed. This study will look at both ethics courses and religion/theology courses to see if these impact ethical attitudes in college students.

*Wrap-up on variables.*

Although a universal agreement on the benefit of addressing business ethics exists, there is no such consensus on what impacts the decision of individuals. The well documented influence of religiosity on ethical attitude is present but the measurement of religiosity is inconsistent. Gender and age have also received much attention in research. Yet less is known about the impact of education on ethical attitude of students. Although each of these variables has been addressed in research, the results are inconclusive in most studies. This current study extends previous work analyzing the roles of religiosity, gender, age and education on ethics. Six hypotheses are tested and focus on individual variables of decision making.

**Hypotheses**

Based on the preceding literature review, six hypotheses emerge. Like this study, Conroy and Emerson (2004) researched the impact of religion on the ethical attitudes of college students. Although the findings of Conroy and Emerson (2004) benefit the research, this study will extend the research that they started. They looked at four variables: religion, age, gender and education and the impact of each on the ethical attitude of college students. This current study includes the four original variables, but

extends the previous study in two ways. First, the need to make the measurement of religiosity more robust is included. Furthermore, this study extends the focus on ethics beyond ethical attitude to ethical behavior.

### **Hypotheses development.**

This study will develop six hypotheses related to religiosity, experience, gender, age and finally ethical behavior. The first five hypotheses address the variables of impact often addressed in similar research. Two hypotheses focus on religiosity, as well as one for each of the other variables: experience/education, gender and age. A final hypothesis addresses ethical behavior. These hypotheses are used to discern the impact of religiosity on the ethical awareness and behavior of college students.

### ***Hypotheses of religiosity.***

The first two hypotheses address religiosity. The first hypothesis is adapted from one used by Conroy and Emerson (2004). In addition, the second hypothesis is introduced to evaluate the importance of religious commitment in regards to ethical attitude. Conroy and Emerson (2004) asked various questions in their study with different measures of religiosity, including religious affiliation, church attendance, prayer/meditation frequency, and a self-reported level of religiosity. Although the various elements were collected, the sole measurement for religiosity used in their study was church attendance. They used the self-reported element of “attends church weekly” as a proxy variable for religiosity.

Concerns were raised about the mixed results when looking at relationship between religion and ethics (Parboteeah et al., 2008). Most studies tend to focus on one dimensional aspects of religion, such as church attendance or religious affiliation (e.g.

Agle and Van Buren, 1999; Conroy and Emerson, 2004; Schwartz and Huisman, 1995). The surveys included in this study use the “Salience in Religious Commitment Scale” (Roof and Perkins, 1975) taken from the Hill and Hood book, *Measures of Religiosity* (1999, p. 214-215). The purpose of this scale is to measure the importance of religion in an individual’s life, often referred to as religious salience as a measurement of religiosity.

Since most religions and their related beliefs include strong tenets about appropriate ethical behaviors, it has been argued that religious beliefs are negatively related to the justification of unethical behavior (Parboteeah et al., 2008; Tittle and Welch, 1983; Weaver and Agle, 2002). Sociology and psychology studies have addressed the relationship between religion and various cognitive (knowing), affective (feeling), and behavioral (doing) phenomena (Cornwall, Albrecht, Cunningham and Pitcher, 1986).

In the cognitive domain of personal religious experience, the individual expresses the “knowledge dimensions of religion” (De Jong, Faulkner and Warland, 1976). A high degree of religiosity suggests that a person has a moral foundation built on religion (Vitell and Paolillo, 2003). Some have suggested that those who believe in God are likely to avoid unethical behavior because they fear being caught by an omniscient God (Conroy and Emerson, 2004).

In the affective domain of personal religious experience, the individual “encompasses feelings toward religious beings, objects, or institutions” (Cornwall et al., 1986, p. 227). This suggests the degree to which a person is committed to God and religion (Parboteeah, et al., 2008). This is the emotional aspect of religiosity. The affective aspect of religion is the subjective mode of religion, thus reflecting the degree to which people are committed to God or some deity (Cornwall et al., 1986). Therefore, the

more spiritually committed people are, the more likely unethical behavior and thinking contradict their religious beliefs.

Since the original hypothesis was simply stated by Conroy and Emerson (2004): “Ethical attitudes are unaffected by religiosity,” a change has been made to allow a valuation for the salience of religion commitment. As in the study by Conroy and Emerson (2004), weekly church attendance will be used as a one dimensional measurement for cognitive religiosity; in addition, the salience measurement of religiosity will be used in hopes of capturing an affective element of religion.

*Hypothesis 1: Church attendance by college students does not influence ethical awareness of these same students. (Religiosity1).*

*Hypothesis 2: Salience of religion (religiosity) is not related to the ethical awareness of college students. (Religiosity2).*

***Hypothesis of education.***

The extant literature studies variables other than religion that influence an individual’s evaluation of ethical situations. One of the factors in research is education. Much of the findings regarding this variable are mixed. The data will provide information on this variable so it will be used in this study.

There continues to be a debate on whether teaching business ethics to undergraduate students can impact ethical awareness. Kohlberg (1981) developed his stage theory for moral development and implies in his model the potential role education has to influence an individual’s moral development. Testing of the impact ethics courses have had on this development have been mixed. Conroy and Emerson (2004) decided to

include in their study the relationship of ethics course work and the response students gave to ethically questionable situations.

*Hypothesis 3: Courses in ethics, religion, or theology do not impact the ethical awareness of college students.*

*Hypothesis of gender.*

Borkowski and Ugras (1998) completed a meta-analysis of 47 studies and concluded that female students exhibit “stronger ethical attitudes” than men. Beltramini, Peterson, and Kozmetsky (1984) determined that there was a “consistent tendency for the females in the sample to express more concern than the males in the sample, regardless of the issue” (p. 199).

Not all researchers agree that women in general have a higher ethical attitude than men. Some researchers concluded that men and women make ethical decisions in distinct ways and this can be observed when the situations are “context specific” (Callahan, 1990; Derry, 1987, 1989; Keller, 1988; Smith and Oakley, 1997).

Some have tried to theoretically explain this gender difference. Gilligan (2000) concludes that men and women have different moral orientations. Men focus more on “justice” while women are more “cause” oriented. Kohlberg (1969) contradicts this with his cognitive development theory stating that men and women are very similar because they both base their moral reasoning on justice. This literature review and the study of Conroy and Emerson (2004) are basis for including gender in this study.

*Hypothesis 4: Gender does not affect the ethical awareness of college students.*

### ***Hypothesis of age.***

When considering the impact of age on ethical awareness, many researchers agree with the Borkowski and Ugras (1998) meta-analysis that stated older respondents exhibit a higher ethical attitude than younger individuals (Allmon, Page and Roberts, 2000; Conroy and Emerson, 2004; Miesing and Preble, 1985; Terpstra et al. 1993). Other studies found that students have a lower ethical attitude than those already in a business environment, including executives (Arlow and Ulrich, 1980; Stevens, 1984). Based on the literature and the work of Conroy and Emerson (2004) age will be included as variables.

*Hypothesis 5: Age does not affect the ethical awareness of college students.*

### ***Hypothesis of behavior.***

The relationship between ethical attitude or moral intent and moral behavior is one of the links that is missing in research (O'Fallon and Butterfield, 2005). Between 1996 and 2005, only one study was located that chose to investigate this relationship (Wagner and Sanders, 2001). Although moral intent is planned behavior and might imply a link between said intent and action, research has demonstrated that intentions may not become reality (Weber and Gillespie, 1998). The use of vignettes is common in ethical research but has been called into question regarding the results. It is unclear whether one is actually measuring behavior or some other construct, mainly, intent (O'Fallon and Butterfield, 2005). Alternative methods have been suggested including lab studies or simulations to deal with the concerns regarding the over-use of scenarios (e.g. Randall and Gibson, 1990). Measuring ethical behavior was not included in Conroy and Emerson

(2004), but as a major contribution of this study the inclusion may close the gap in research between ethical awareness and behavior.

*Hypothesis 6: The religiosity of college students does not influence their ethical behavior.*

### **Summary of Literature Review**

In summary, the preceding literature review provides the theoretical underpinning of this study. The literature describes the ethical decision-making foundation with its problems and various theories. The literature shows the crucial role of ethical behavior by participants in a market-based economic system long recognized by researchers and writers. Prior studies, particularly those of Conroy and Emerson (2004), lead to the development of six hypotheses regarding various aspects that may impact ethical attitude and/or behavior. The methodology for this study will be described fully in the next chapter.

### **Chapter 3 – Methodology**

The topic of this study, the impact of religiosity on the ethical attitude and behavior of college students, lends itself to a quantitative study. There is an emphasis in literature seeking to link religious faith and business life. Vitell (2009) addressed a gap in the literature stream that examines religiosity's impact on ethical judgments, intentions and behavior. This study employed a multiphase single-stage, pen to paper convenience sample, utilizing a self-reporting questionnaire for data collection. This chapter explains the methods used to conduct this research. This proposed methodology was not intended to be inflexible and adjustments were made as necessary as the research progressed.

Of specific interest to this study was the research of Conroy and Emerson (2004) that extended prior research on the relationship between religion and ethics and their effect on the ethical attitude of students. Their research used a vignette-style survey instrument to test whether ethical attitudes of the students are impacted by religiosity. Using vignettes in a survey is believed to elicit a higher quality of data for this type of research than the use of simple questions (Alexander and Becker, 1978).

The literature review shows numerous studies have been conducted attempting to show variables that impact ethical attitude, but few have addressed the link between ethical attitude and ethical behavior. The majority of studies look to Rest (1986) and his four-step model of moral decision making, while others attempt to connect ethical decision making to Kohlberg's (1981) stage development.

This study addressed the areas encouraged by Conroy and Emerson (2004) for future studies. They call for an expansion of the demographic profile of the samples and



further testing of the robustness of the results. The need to study ethical behavior, not just ethical attitudes, is expressed also.

### **Rationale for an Expansion/Extension Study**

This present study is more than a replication of the Conroy and Emerson (2004) study; it is an extension or expansion study. A proliferation of studies have been done focusing on the theoretical connection between business ethics and religious belief (e.g. Albaum and Peterson, 2006; Clark and Dawson, 1996; Conroy and Emerson, 2004; Epstein, 1997 and 2002; Jewe, 2008; Kennedy and Lawton, 1998; Longenecker et al. 2004; Weaver and Agle, 2002). Conroy and Emerson (2004) who expanded the earlier research on the relationship between religion and ethics curricula and its affect on the ethical attitude of students is of special interest. This research seeks to support the findings of their study by using a cross-sectional population to generalize the results.

Conroy and Emerson stated the need for further studies to be done attempting “to broaden the demographic profile of the samples” (2004, p. 392). The earlier study questioned students from two institutions, both of which were located in the same southern state. This study provided a better demographic profile of the population by using students from institutions in various states and from different regions of the country. This geographic expansion allows a generalization of the results.

As an expansion study, it is intended to overcome the following shortcomings in prior research which include: (1) a call for increased reliability; (2) a need for more validity; (3) a desire for additional generalizations (Mack, 1951). This study addressed these three benefits of an expansion study.

Increased reliability to support or refute the findings of the Conroy and Emerson (2004) study is addressed by using students from multiple institutions and not those schools in the original study. Also, additional questions asked in the survey aided in better measuring the religiosity factor. The validity of the findings can be improved by the additional measure of religiosity included in this present study (Hypothesis 2). Religiosity was measured only by frequency of church attendance in the original study. In addition, the generalization of the study was improved by identifying institutions in various geographic regions, not merely in the southern region of the United States as in the Conroy and Emerson (2004) study. Table 3.1 shows the list of schools included in this study along with the geographic area of the school, any religious affiliation and the whether the institution is public or private. This support demonstrates how this qualifies as an expansion study.

**Table 3.1**

*Participating Institution List*

<b>Institution</b>	<b>Association</b>	<b>Public/Private</b>	<b>Geographic Area</b>
Grove City College	Christian No direct association	Private	Pennsylvania
Olivet Nazarene University	Christian Nazarene	Private	Illinois
East Texas Baptist University	Christian Baptist	Private	Texas
Free Will Baptist Bible College	Christian Free Will Baptist	Private	Tennessee
LeTourneau University	Christian Interdenominational	Private	Texas
Tuskegee Institute	Independent State-related	Private	Alabama
Warner University	Christian Church of God	Private	Florida

## **Overview of Methodology**

As stated earlier, this expansion study employed a multiphase single-stage, pen to paper convenience sample, utilizing a self-reporting questionnaire for data collection. The research hypothesis was tested utilizing a collegiate student population from selected colleges in the United States. The questionnaire was given to undergraduate college students from various institutions. Statistical analysis of the quantitative data provided a general understanding of the research problem.

Since there is a need to generalize the research of Conroy and Emerson (2004) by using more than two southern universities, this study has identified multiple private Christian institutions from various geographic areas of the United States. The institutions in Table 3.1 have been targeted because these fulfill the desired parameters for the generalization of the study:

### **A Multiphase Approach**

This study employed a multiphase approach. There were a total of 4 phases. The first 3 phases were preliminary in nature, and were intended to provide helpful information used to improve the design of the survey. A description of each phase, the purpose of that particular phase, and the outcomes of these phases are listed below.

#### **Results of Phase 1 of the Study (Initial Pilot Survey).**

The first pilot test included a full list of 25 vignettes included in the original study by Conroy and Emerson (2004). It was determined that some of the vignettes were dated and many of the respondents found the situations confusing and unclear. In addition concern arose over the length of the original list so it was shortened. As a result of this finding, the Phase 2 pilot survey was altered to include sixteen of the original vignettes to

allow room for the inclusion of vignettes with more contemporary topics and verbiage. Some verbiage in the original vignettes was updated for clarity.

### **Results of Phase 2 of the Study (Pilot Survey 2).**

The second pilot survey included sixteen of the original vignettes plus sixteen additional scenarios addressing contemporary issues. This second phase was shared with three business professors to confirm validity and clarity before being shared with students. The results of the second pilot test showed variety in the answers, but the complaint was that there were too many vignettes to read thus causing the survey to take too long. Since additional questions were to be included, it was determined to eliminate any questions that seemed redundant or confusing. This was done and the number of vignettes was reduced to twenty-nine. This pilot test showed variety in the answers allowing for the inclusion of the additional scenarios.

### **Results of Phase 3 of the Study (Pilot Survey 3).**

The results of the final pilot survey were able to provide assurance that the survey was understandable and respondents were able to complete the survey in the time-frame of around twenty to twenty-five minutes. This pilot survey included the twenty-nine vignettes, plus additional questions on behavior, faith and religion, and demographic questions. A group of twenty-five students was selected and completed the survey. Data were entered into SPSS and tests were performed. After a review and limited analysis of the data by two business professors, it was concluded that the data was suitable for running full analyses and that the respondents were able to answer the questions with understanding and clarity. Feedback was requested from the participants and minimal changes were made in preparation for the final phase. The survey was completed and

prepared for distribution.

#### **General Issues Regarding Phase 4 (The Survey/Data Collection)**

Copies of the survey were provided to each institution and Human Subject Committee approval was received where required. Students were given pen-to-paper surveys. Students in various classes and academic levels were used in order to get differing viewpoints. Demographic questions were included to allow for comparison of students with similar classifications. The surveys were conducted following strict operational guidelines to insure validity and acceptability of the results. The desire was to have fifty (50) or more students from each institution to participate with a final number of surveys being equal to or greater than 250. The Conroy and Emerson (2004) study had a relatively large sample of 850 students, but these students were from only two schools. Spreading the sample over multiple institutions sought a broader demographic profile than the prior study.

The focus of this research was to look at the relationship between religion and ethics in college students. Elements necessary for this research included the need to measure ethical attitude, religiosity, educational experience and ethical behavior. In addition, general demographic information was collected.

#### **Measuring Ethical Attitude**

The questionnaire included vignettes incorporated in the research of Conroy and Emerson (2004). Each vignette, in a one to three-sentence statement, deals with a business situation that presents an ethical dilemma. A pilot test of sixteen of the original vignettes was conducted but the results were very predictable and lacked variety. It was determined that additional vignettes were needed that addressed contemporary issues.

Sixteen additional scenarios were created and shared with knowledgeable individuals and the content was determined valid. These were included in a second pilot test. This pilot test showed variety in the answers allowing for the inclusion of the additional scenarios.

Respondents are asked to evaluate each situation on the basis of their personal values and the ethical issues involved, ranging from 1, “never acceptable” to 7, “always acceptable.” A 7-point scale was used to increase variability in responses. Mean scores were calculated after responses were summed for sense of ethical awareness or attitude. In addition, mode scores were determined as a reference of central tendency. Each vignette describes a different ethically questionable situation, thus respondents with lower average scores would show greater ethical judgment because they exhibit a stronger condemnation for the action. The potential for systematic bias was minimized by using vignettes taken from earlier research and by running pilot tests of the combined list of vignettes.

Those surveyed were asked to respond to the survey instrument that includes twenty-nine vignettes including thirteen of those from the Conroy and Emerson (2004) study. The vignettes are provided in the Appendix A. The original vignettes are shown in italics for identification means only. (The italics were removed in the surveys used by respondents.) These vignettes were derived from questionnaires designed by Clark and Dawson (1996), Fritzsche and Becker (1982); Harris (1991); and Longenecker, et al. (1989). Furthermore, these vignettes have been used in a number of surveys (Conroy and Emerson, 2004; Hornsby, Kuratko, Naffzinger, LaFollett and Hodgetts, 1994; Longenecker, et al. 2004; Smith and Oakley, 1996; Weeks, Moore, McKinney and

Longenecker, 1999). An additional sixteen vignettes were added to the survey to address contemporary issues.

### **Measuring Religiosity**

In previous studies religiosity was operationalized in various ways, including the Religious Orientation Scale (Allport and Ross, 1967), Hoge's (1972) religious motivation scale, the Quest scale (Batson and Ventis, 1982), and the Duke religious index (Koenig, Parkerson and Meador, 1997), among others. One of the most widely used scales in research (Donahue, 1985; King and Crowther, 2004) is the Religious Orientation Scale, which is based on the Allport's (1950) conceptualization of intrinsic and extrinsic religiousness. This Religious Orientation Scale focuses on motivation for religiousness, not the salience of religion which is the focus of this study.

The approach used to measure religiosity in this study is a religious commitment scale, measuring the salience or importance of the religious commitment. Peter C. Hill and Ralph W. Hood, Jr. (1999) compiled a book entitled *Measures of Religiosity* as a reference for researchers seeking a tool for measuring religiosity. The survey included in this study uses the "Salience in Religious Commitment Scale" (Roof and Perkins, 1975) from the Hill and Hood book (p. 214-215). The purpose of this scale is to measure the importance an individual places on being religious.

This simple scale has three items as presented in the Appendix B. The first two questions use multiple choice options and the third item uses a 4-point Likert-type scale. The scale is scored by summing the values assigned to each question with total scores ranging from 3 to 11. The scale is trichotomized with scores of 10-11 indicating "high" religious salience; scores of 8-9 "medium" salience; scores 3-7 as "low" salience.

Although these levels are available, the authors caution against using the scale as a linear measure of salience. The scale does not allow for a graduation of religious intensity, rather the respondents have either high religiosity (scores of 10 and 11) or not-high religiosity (summed scores of 9 and below). Mean scores of students with high religious salience were tested against those with not-high salience in each category using *t* tests.

The scale has a reliability coefficient of .72 and relies heavily on face validity. The scale has a .81 correlation coefficient with a companion test of religious orthodoxy (Roof and Perkins, 1975). This is an easily administered addition to the Conroy and Emerson (2004) study and will provide the rigor needed to support the religiosity element of this study. Items 36, 37 and 38 in the survey instrument comprised this scale.

Additional questions of religious content are included to measure spiritual discipline or religiosity. These questions include self-reported elements about formal association such as membership; service work to cover altruistic elements; attendance; giving or financial support; personal study including reading of sacred writings; and daily prayer. These additional elements will provide information for future study and an extra element of religiosity.

### **Measuring Educational Experience**

Students were asked questions to evaluate their education experience. Like Conroy and Emerson (2004), this survey asks students to give their academic classification. This will provide the data to allow statistical analysis by academic classification to see if there are any differences. In addition, there are two questions about courses the students have taken. One question deals with courses in ethics while another about courses in religion and/or theology. Unlike the previous study, these last



two questions ask the number of classes in each category the student has taken. The students will select either “none,” “one,” “two” or “three or more” with respect to the number of classes in ethics, religion or theology. Responses will be divided into those with no classes and those having taken at least one class. This allows the possibility of statistical comparison based on the level of educational experience. These questions provide multiple categories to measure educational experience.

### **Measuring Ethical Behavior**

Measuring actual behavior in situations involving ethical issues is missing from most research (Vitell, 2009). This type of study is difficult to administer and has not been attempted very often. In this study, nine questions are presented that measure ethical behavior in the various areas including cheating, lying, traffic violations and other illegal acts. Since cheating is considered to be unethical by most, if not all educational institutions, this is one ethical behavior area that should be measured in college students. Students were asked questions about the frequency of cheating in their personal experience. In addition, questions dealing with violation of laws are included because these are considered unethical by most. Behaviors that violate cultural norms and legal requirements are included in this survey because these deal with issues that most consider to be ethical issues. Vitell (2009) says the lack of looking at ethical behavior may be the greatest gap in literature. This survey attempts to fill this gap by looking at self-reported actual behavior, not just ethical intentions.

### **Demographic Variables**

Included in the questionnaire are key demographic variables. The demographic items from the research by Conroy and Emerson (2004) included in this study are gender,

age, education level, and whether the respondent has taken a course in ethics and religion/theology. Results from this study will be compared to their findings. The independent variables used to explain the variation in the ordered response variables of ethical awareness are these demographic variables included in the later part of the survey. An additional question about the student's major field of study will be included to see whether this has any impact on the findings.

The survey was pre-tested several times by a convenience sample of college students as well as academic faculty prior to being implemented. The purpose for this process was to ensure clarity of questions, time necessary to complete the survey, ease of use, validity and reliability. Revisions were made based on the feedback from the pre-tests prior to implementation of the actual research. Appendix C shows the full survey.

### **Data Analysis**

The focus of this study is to examine the impact of religiosity on the ethical awareness of college students. Additionally, the research will examine the impact religious salience has on ethical behavior of college students. Student's *t*-tests are the primary statistical methods used. In addition, independent sample ANOVA will be used where appropriate.

Descriptive statistics were established for all questions and the mean, number of respondents, range, minimum response, maximum response, and the standard deviation are displayed in table format in Chapter 4 of this document. Descriptive statistics, as well as other statistical measures on individual questions are also displayed in the following chapter to enhance the understanding of the narrative of that chapter.

After the collection of data from the various institutions, the analysis was performed. Since the data collected for the scenarios in the survey instrument were a typical 7-point scale eliciting respondents to select an answer from a range of 1 to 7, the data are ordinal. The data has an inherent order or sequence, but one cannot assume that the respondent means that the difference between *never acceptable* and *sometimes acceptable* is the same as between *always acceptable* and *sometimes acceptable*. As a result, the dependent variable takes on ordered integer values.

The Conroy and Emerson (2004) study relied upon the means for comparison which is typically done with normally distributed data using parametric statistics. The benefit of the Kolmogorov-Smirnov test is that it checks to see if it may be reasonable to believe that data come from a normal distribution. This test does not answer the question “Do these data come from a normal distribution?” Instead, it answers the secondary question, “Could a data set coming from some normal distribution easily have the same single measure of its overall pattern as this data set?” If the secondary question is answered with “Yes,” then it is reasonable to believe that the data does come from a normal distribution.

By using the Kolmogorov-Smirnov on the Likert style questions, normalcy of the data was determined. This type of estimation procedure provides consistent and efficient estimates of the relationship between the vignette “acceptability” responses and the individual characteristics of the respondent.

The Mann-Whitney  $U$  test is a non-parametric test for significance and was also included in this analysis. This  $U$  test is used in situations where a  $t$  test was performed for

normally distributed data. The use of this test allows for comparison to data from earlier studies and provided data for future studies.

The analysis was conducted for the purpose of measuring the relationship between the participant's response to the vignette and other individual characteristics. The independent variables gender and education were used as dummy variables. The inclusion of the coefficient alpha was used to test for internal consistency reliability. Also mean responses to the vignettes for each variable were compared using one-way ANOVA or *t*-test.

As an extension of the Mann-Whitney *U* test, the Kruskal-Willis one-way analysis of variance test evaluates to see whether samples originate from the same distribution based on the assumption that the population, from which the sample originates, has the same median. This test is very similar to the ANOVA with the data being replaced by the ranks.

When there were only two comparison groups, *t*-tests were used. When there are more than two comparison groups, a one-way analysis of variance or one-way ANOVA is used. Given that, at times, there is more than one independent variable being compared to a single dependent variable, a one-way analysis of variance or one-way ANOVA is used. This test divides up the variance of the dependent variable into two components: the variance attributable to *between-group* differences, and the variance attributable to *within-group* differences, also known as *error*. Thus, this test addresses the question: Is the average amount of difference, or variance, *between* the scores of members of different samples large or small compared to the average amount of variation *within* each sample, otherwise known as random *error*?

Although the ANOVA is a parametric test, it is used in this study as the basic test for analyzing data in this study and for making comparison to previous studies. Comparisons are made between the results of the ANOVA and the non-parametric tests mentioned earlier.

With a need to know that the consistency of the measurement is reliable, the Cronbach's alpha test is used. Since this survey was compiled from previous studies plus additional questions, a test for reliability is needed and the Cronbach's alpha was used. This test measures the correlation between the score for each item and the total score for each individual, and then compares that to the variability present for all individual item scores. The desire is to see an alpha greater than .7 for acceptability.

Frequency calculations were established for all questions and the actual numbers, percentages and other pertinent information are displayed in table format. As with the other descriptive statistics, frequency results on individual questions are also displayed in Chapter 4 of this document to provide specific insight into the analysis.

Relevant statistical results are presented in the form of narrative explanations, matrixes, tables, charts, graphs, etc. A table of the main statistical markers for each question is displayed with the explanation of that section. Where length is an issue, these are displayed in the appendix.

Analysis on this current study was compared to the findings of Conroy and Emerson (2004). It is hoped this current study sustains the previous findings adding support to the idea that religiosity influences ethical awareness and decision making in students and that it extends their research with new insight.

Each hypothesis is stated in the null manner and acceptance or rejection for each will be determined from the results of the statistical analysis. For the first five hypotheses, analyses are performed on the 29 vignettes to determine statistical significance. For the hypothesis to be rejected, more than half (15 or more) of the vignettes must show significance.

Table 3.2 indicates the hypotheses, the survey questions and statistical tests which were used to test each hypothesis.

**Table 3.2**

*Survey Items-Hypothesis Testing*

#	Expanded Hypothesis	Questions	Tests
H1	Church attendance by college students does not influence ethical awareness of these same students.	Q1-29, Q42	Mann Whitney <i>U</i> <i>t</i> -tests
H2	The salience of religion (religiosity) is not related to the ethical awareness of college students.	Q1-29 Q39-41	Mann Whitney <i>U</i> <i>t</i> -tests
H3	Courses in ethics, religion or theology do not impact the ethical awareness of college students.	Q1-29 Q50, 51	Mann Whitney <i>U</i> <i>t</i> -tests/ANOVA
H4	Gender does not affect the ethical awareness of college students.	Q1-29 Q48	Mann Whitney <i>U</i> <i>t</i> -tests/ANOVA
H5	Age does not affect ethical awareness.	Q1-29 Q49	Mann Whitney <i>U</i> <i>t</i> -tests/ANOVA
H6	The religiosity of college students does not influence their ethical behavior.	Q30-38, Q39-41	Mann Whitney <i>U</i> <i>t</i> -tests/ANOVA

**Summary of Methodology**

The purpose of this chapter was to explain the research methodology used to examine the six hypotheses that were developed in Chapter 2. The research design utilized quantitative data acquired through a multiphase single-stage, pen to paper survey of college students. As a proven method for effectively exploring the opinions of participants, the scenarios are an essential part of this quantitative study. The participants were current students of seven various affiliated institutions. Standard statistical measures

were used to conduct the analysis of the data gained from the surveys. Both non-parametric and parametric tests were conducted in this research.

## **Chapter 4 – Results**

This research project was designed to explore whether the ethical behavior of university students is impacted by a level of religious devotion or religiosity. Does regular attendance to religious services impact ethical awareness? If a student has a high religious devotion, does the student express a high ethical awareness concerning ethically questionable situations? Does a student with a high ethical awareness behave more ethically than a student with a lower ethical awareness? These questions have driven the research in the hope of specifically answering the research question: does the level of a student's religiosity affect their ethical awareness or behavior?

This chapter describes and summarizes the analytical steps used to evaluate the research questions and hypotheses described in earlier chapters. This discussion begins with a brief explanation of statistical tests used for evaluation of the data for normality and reliability. These tests include both parametric and non-parametric statistics. Descriptive statistics are presented followed by a discussion of the statistical data results of tests conducted on the six hypotheses.

### **Discussion of Statistical Tests Used**

A number of statistical tests were used to analyze the data and test hypotheses. A quick reference is provided here as a matter of convenience. This information provides some logic behind these choices and explains the measures employed. Certain tests, such as ANOVA, are relatively robust when using large sample sizes, but as a cautionary measure, both parametric and non-parametric tests are conducted. A brief discussion of each of these follows beginning with non-parametric tests used.



### **Non-parametric tests.**

Non-parametric tests do not require parametric assumptions because the interval data collected is converted to ordinal data. The strength of non-parametric tests is the ability to handle ordinal data or data that is not normally distributed even if it is interval-like. Non-parametric tests used include Kolmogorov-Smirnov to test for normalcy, Mann-Whitney *U* test for significance and Kruskal-Willis one-way ANOVA.

The Kolmogorov-Smirnov test shows that the Likert-style responses did not show normal distribution. This was expected but the assessment confirmed it. The results of the non-parametric test performed on each hypothesis will be shown later along with other results providing comparison to the equivalent parametric test.

### **Parametric tests.**

Although data collected in this study is ordinal, tests performed on interval data or normal distribution data will also be used. This is a controversial topic. Much of the social science research treats Likert-type scales as interval data and therefore report means and standard deviation only. The results of these parametric tests allow for comparison to previous studies and also to the non-parametric equivalent when applicable.

### ***The Cronbach's alpha tests.***

To assess the internal reliability of the 29 vignettes used to measure ethical awareness, the computation of a Cronbach's alpha was performed on these. The reported reliability alpha for the original sixteen vignettes is .81 (Conroy and Emerson, 2004; Longenecker et al. 2004). It is believed that the adaptation of ethical awareness items

from previously validated instruments increases the reliability of the results, but a test was conducted for the entire 29 vignettes.

In addition, a Cronbach's alpha was performed on the nine ethical behavior questions. It was noted that two of the ethical behavior questions dealt with job-related issues and the assumption was made that most students work. Several students either did not answer these two questions or made a note that these did not apply. It was determined to run the Cronbach's alpha on the remaining seven questions and to discard the two questions that were related to employment.

Table 4.1 provides the results from the Cronbach's alpha tests. The figure .888 for the ethical awareness vignettes is well above the .7 needed for reliability. Although not as high, the score for the ethical behavior questions was .701. These scores give assurance that the scales provided by the respondents are internally consistent.

**Table 4.1**

*Cronbach's alpha testing reliability.*

<b>Reliability Statistics-Ethical awareness</b>			
	Cronbach's		
	Alpha Based on		
Cronbach's	Standardized		
Alpha	Items	N of Items	
.888	.891	29	

<b>Reliability Statistics-Ethical Behavior</b>			
	Cronbach's		
	Alpha Based on		
Cronbach's	Standardized		
Alpha	Items	N of Items	
.701	.709	7	

*The use of t-tests and ANOVA tests.*

When there are two or three sample means and a need for comparison to find statistical significance, *t*-tests can be used, with three or more sample means ANOVA tests are used. This survey provided sample means that are used to test for statistical significance.

The means, standard deviations, and number of cases will be reported prior to giving the results of the *t*-test. If the results of the test show statistical significance (a low *p*-value) then the null hypothesis will be rejected. Similar to this test is the ANOVA which will be used when possible.

This test partitions the variance of the dependent variable into two components: the variance attributable to *between-group* differences, and the variance attributable to *within-group* differences, also known as *error*. Thus, this test addresses the question: Is the average amount of difference, or variance, *between* the scores of members of different samples large or small compared to the average amount of variation *within* each sample, otherwise known as *random error*. An *F* statistic is calculated using the appropriate degrees of freedom.

Although the ANOVA is a parametric test, it is used in this study as the basic test for analyzing data when comparing groups with three or more categories in this study and for making comparison to previous studies. Again, as pointed out earlier, ANOVA with large sample sizes is relatively robust, but both parametric and non-parametric statistics were used. Comparisons are made between the results of the ANOVA and the non-

parametric tests mentioned earlier. Results of these tests are provided later in this chapter with an explanation of findings by hypothesis.

### ***The use of Cohen's $d$ .***

As a researcher, it is important to look for statistical significance to show that the event studied occurred by chance, but unfortunately, with some tests, statistical significance is all that is determined. In order to determine the magnitude of the observed effect, an effect size statistical test is used. This effect size measurement, in most cases, is a better measure of research than the significance level alone. This is due to the fact that with large sample sizes, even when there is only a small effect present, observation of the statistically significant group differences can be observed. These effect size indices are independent of sample size.

Cohen's  $d$  is the effect size statistic used in this study to indicate the standardized difference between two means. Cohen's  $d$  is defined as the difference between two means divided by a standard deviation for the data. The use of Cohen's  $d$  is an appropriate effect size for the comparison between two means and is used to accompany reporting of  $t$ -test and ANOVA results.

In the development of this test, Cohen (1988) hesitated to define effect sizes since "there is a certain risk inherent in offering conventional operational definitions for those terms for use in power analysis in as diverse field of inquiry as behavior science" (p. 25). He did define effect sizes as *small*,  $d=.2$ , *medium*,  $d=.5$ , and *large*,  $d=.8$ . These same definitions will be used in this research.

### **A Multiphase Approach**

This study employed a multiphase approach. There were a total of four phases.

The first three phases were preliminary in nature and were intended to provide helpful information used to improve the design of the survey. A description of each phase is provided in Chapter 3. This chapter focuses on the results and data analysis done with the results of surveys collected in phase four.

This final phase, pen-to-paper survey of college students had the goal of obtaining a minimum of fifty (50) participants from each school for a total of 250 participants. A total of 403 surveys were received. Of that total, 12 surveys were not complete enough to be used and two were completed by students marking the same response on every question. Those 14 surveys were not included in the final statistical analysis. Although obtaining 50 participants per school in the study was not reached, 389 useable surveys resulted. All survey responses were confidential with no ability to trace responses back to an individual person.

### **General Descriptive Statistic Issues**

A number of different measures were used to analyze the data that were collected in this study. General discussion of the data is provided beginning with the general demographic information and ending with the other areas of the survey in the order as these appeared on the survey.

### **General Descriptive Data**

There were 389 acceptable surveys from this study. Descriptive data for the independent variables are presented in Table 4.2. Participants came from seven identified institutions with nine more surveys submitted from unidentified institutions. Including results from multiple institutions fulfills the request of Conroy and Emerson (2004) to broaden the geographic demographic profile of the sample. Almost exactly half (50.3%)

of the respondents were male. Juniors (34.5%) were the largest academic group while the age group 20 to 21 represented over 55% of the respondents. Demographic questions about courses taken show almost 44% of students have never taken a stand alone course in ethics. In contrast, over 44% have taken three or more classes in theology or religion. Appendix E provides descriptive data by major for the respondents.

**Table 4.2**

*Summary of General Demographic Data*

<b>Respondents</b>	<b>Completed Survey</b>				<b>389</b>			
<b>Number of respondents by school</b>	Tuskegee	Olivet	Warner	Grove City	FWBBC	Letourneau	East Texas Baptist	Other
		61	55	22	97	83	18	44
<b>General Demographic Data for all Respondents</b>								
<b>Church Attendance</b>	Never	Rarely	About once a month		Weekly	Several times a week		
	[Data obscured]							
<b>Academic Status</b>	Freshman		Sophomore		Junior		Senior	
	[Data obscured]							
<b>Courses in Religion or Theology</b>	None		One		Two		Three or more	
	[Data obscured]							
<b>Courses in Ethics</b>	None		One		Two		Three or more	
	[Data obscured]							
<b>Age</b>	19 and less		20-21		22-23		24 and up	
	[Data obscured]							
<b>Gender</b>	Male				Female			
	[Data obscured]							

Two behavior questions were included in this demographic section of the survey. One question dealt with cheating and the other with speeding. These questions went beyond just admission of the action, but whether they were caught in the action. When asked how many time they were caught cheating, 94% of the students reported never, yet when asked the same question about speeding only 66% selected never. In addition, the

Saliency of Religiosity scale was used to provide data categories for religiosity. Using the guideline of the scale's authors, the responses were calculated with 26% falling in the *low* category, 19.1% as *middle*, and 54.9% as *high*. Table 4.3 shows results of these sections.

**Table 4.3**

*Summary of Additional Demographic Data*

Additional Participate Data				
Caught Cheating	Never	Once	Twice	Three +
Caught Speeding	Never	Once	Twice	Three +
Religiosity Level	Low	Med.	High	

In reviewing this demographic data, it became clear that some factors needed to be recoded to perform certain statistical analyses. For example, Conroy and Emerson (2004) asked a simple question about weekly church attendance as their measurement of religiosity. Yet in this survey, students were asked about the frequency of church attendance. Recoding allowed responses to be classified as weekly church attendance or not. Either the students reported attending church weekly or not. The recoding allows for the creation of dummy variables for the data. For instance, questions on courses in ethics, religion or theology, speeding and cheating were asked and recoding was necessary to divide responses into yes or no groups.

The three groups created from the responses to the religiosity scale were recoded into two groups segregating the *high* response group from the others. This allowed for comparison to the results from the *yes* or *no* responses about weekly church attendance.

Table 4.4 shows the data recoded into the variables needed for analysis.

**Table 4.4**

*Recoded Demographic Data and Participant Information*

<b>Weekly Church Attendance</b>	No	Yes
<b>Academic Status</b>	Freshman/Sophomore Students	Upper-class Students
<b>Courses in Religion or Theology</b>	No	Yes
<b>Courses in Ethics</b>	No	Yes
<b>Age</b>	19 and younger	20 or older
<b>Gender</b>	Male	Female
<b>Caught Cheating</b>	No	Yes
<b>Caught Speeding</b>	No	Yes
<b>Religiosity Level</b>	Not High	High

**Ethical awareness/attitude**

As a reminder, the term *ethical awareness* is drawn from Rest's (1986) four-component model for individual ethical decision making and behavior. His four steps of ethical decision making are: moral awareness, moral judgment, moral intent and moral behavior (Rest, 1986). According to Rest, morality provides the basic foundation for determining how to deal with conflicts or to optimize the benefit of people living together



in groups. This awareness of a situation involving right and wrong is the initial step in the ethical decision-making process. Using the term *ethical attitude* or *ethical awareness* to describe an individual's understanding of right and wrong or how to best proceed when actions impact others is appropriate in this study. (In this study, the terms *ethical attitude* and *ethical awareness* are considered equivalent and will be used interchangeably, depending on context.)

Descriptive statistics for each of the 29 vignettes are presented in Table 4.5. As a reminder, students were asked to evaluate each vignette on the basis of their own personal values and the ethical issues involved. The seven-point scale ran between 1 as *never acceptable* to 7 for *always acceptable*. The average mean for all 29 vignettes was 3.05. Using a seven-point scale the midpoint of 4 falls in the middle with three options higher and three options lower, thus the 3.05 is slightly under the midpoint of 4. Only two of the vignettes, Q1 (Suppliers send family package) and Q5 (daughter starting catering business—you hire her) had a mean response score significantly greater than the midpoint. This implies that these two vignettes had the highest average level of ethical acceptability by the students. This may be due to the fact that the ethical issues related to these two questions are subtle and often missed by those not familiar with the legal issues addressed.

Three vignettes (Q4, Q9, and Q10) have a mean response score less than 2.0. This indicates that the issues in these three vignettes have the least acceptability by the students. The lowest of these is Q10 with a mean score of 1.72. This vignette describes the illegal act of a business owner not reporting income correctly. It is interesting to note that two of the three lowest mean scores are associated with illegal actions, yet the other

vignette relates to poor practice, but is not illegal. The illegality described in the two vignettes may not be what is lowering the responses because other vignettes describe situations of illegal behavior and the mean responses are relatively higher. For example three vignettes, Q18, Q24 and Q27, have mean response scores near or above the 3.0 level. One possible reason for the difference in the mean scores reported could be the ability of the respondent to identify with the “victim” described in the vignettes. This is a suggestion of the author of this study and would need to be studied further.

Since Conroy and Emerson (2004) used some of the same vignettes and a seven-point scale also, Table 4.6 shows a comparison mean score for the 13 scenarios used in both their study and this current study. The mean score for the vignettes is lower in 9 of the 13 indicating less acceptability from the current group of respondents than those in the earlier study. Yet, in four of the vignettes, there seems to be more acceptance of the situation. Although there is a shift in acceptance, the differences, for the most part, are minimal. The greatest change in mean score occurred in Q18. This scenario deals with insider stock trading, and the shift of -0.61 from the earlier study to the current one may be due to an influx of information creating more awareness about this issue.

It was determined that additional testing should be done to determine which changes in mean scores between the Conroy and Emerson (2004) results and the current results should be done. Using a two-sample *t* test, nine of the thirteen vignettes used in both studies were significantly different at the 95% confidence level. In four of the vignettes the samples did not show statistical significance. The results of these four vignettes (Q3, Q9, Q19 and Q24) are shaded in Table 4.6.

**Table 4.5***Summary Statistics of Vignette Responses (acceptability scale 0=never to 7=always)*

Vignettes	N	Mean	Std. Dev.
Q1 SUPPLIER SENDS FAMILY PACKAGE	388	5.24	1.821
Q2 WORKING WITH COMPANY TO SECURE FIRST ORDER	388	3.05	1.784
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3,000	387	2.55	1.613
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	389	1.88	1.341
Q5 DAUGHTER STARTING CATERING BUSINESS- YOU HIRE HER	388	5.66	1.272
Q6 BUDGET CUTS ELIMINATES LOYAL EMPLOYEE'S JOB	388	2.97	1.473
Q7 SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	389	3.04	1.804
Q8 TELL CLIENT CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	387	2.11	1.404
Q9 FIRM RECOMMENDS STOCK NOT CONSIDERED A GOOD INVESTMENT	389	1.89	1.137
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	388	1.72	1.290
Q11 SPENDS HOUR A DAY SURFING AND SHOPPING	389	2.48	1.481
Q12 SINGLE MOM SPENDS AN HOUR A DAY ON PHONE WITH KIDS	389	3.32	1.684
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	388	2.85	1.691
Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO INFORMATION	386	3.38	1.769
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	388	2.23	1.363
Q16 USING COMPANY COPIER FOR PERSONAL USE	389	3.46	1.670
Q17 SEND EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	386	3.55	1.527
Q18 DIRECTOR USES INFO. ABOUT STOCK SPLIT- BUYS SHARES	385	2.82	1.675
Q19 EXECUTIVE PROMOTES FRIEND OVER QUALIFIED CANDIDATE	387	2.78	1.625
Q20 ENGINEER DOES NOT REPORT FLAW	387	2.13	1.408
Q21 COMPTROLLER HIDES EMBARRASSING FACTS	388	3.46	1.818
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	384	2.65	1.711
Q23 BREAK CONFIDENCE AND TELL BOSS ABOUT FRIEND'S ACTIONS	382	4.33	1.619
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	380	3.27	1.645
Q25 WORKING SATURDAY & SUNDAY AND MISSING CHURCH	383	3.80	1.731
Q26 WORK ON PERSONAL CONSULTING JOB AT WORK	384	2.97	1.598
Q27 GET UNLICENSED SOFTWARE RATHER THAN SPENDING \$500	383	3.33	1.745
Q28 IRS ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	385	2.20	1.387
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LAID OFF	382	3.31	1.914

**Table 4.6**

*Comparison of Vignette Responses (shaded means are not significantly different)*

VIGNETTES	C & E Mean	C & E Std. Dev.	Current Mean	Current Std. Dev	Mean Diff.
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3000	2.51	1.535	1.341	1.613	0.04
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	1.65	1.075	1.88	1.341	0.23
Q8 FIRMS RECOMMENDS STOCK NOT CONSIDERED A GOOD INVESTMENT	2.02	1.190	1.89	1.137	-0.13
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	1.98	1.390	1.72	1.290	-0.26
Q14 HIRES KEY EMPLOYEE TO GET TO KEY INFORMATION	3.64	1.829	3.38	1.769	-0.26
Q17 SEND EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	4.06	2.124	3.55	1.527	-0.51
Q18 DIRECTOR USES INFORMATION ABOUT STOCK SPLIT—BUYS SHARES	3.43	2.025	2.82	1.675	-0.61
Q19 EXECUTIVE PROMOTES FRIEND OVER QUALIFIED CANDIDATE	2.89	1.572	2.78	1.625	-0.11
Q20 ENGINEER DOES NOT REPORT FLAW	1.72	1.190	2.13	1.408	0.41
Q21 COMPTROLLER HIDES EMBARRASSING FACTS	3.83	1.895	3.46	1.818	-0.37
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	2.36	1.682	2.65	1.711	0.29
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	3.34	1.864	3.27	1.845	-0.07
Q27 GET UNLICENSED SOFTWARE RATHER THAN PAY \$500	3.77	1.899	3.33	1.745	-0.44

## Behavioral Data

The non-parametric Kolmogorov-Smirnov test confirmed that the results from the nine questions about behavior provide non-normal data. Since responses were a Likert-type scale and many questions were designed to provide extreme responses, this was expected. For descriptive purposes, the mean for each question was calculated and is provided in Table 4.7. These behavior questions address either legal issues or violations of cultural norms like cheating. The six-point scale is referenced as follows:

- 0 = *never* have
- 1 = on rare occasions
- 2 = occasionally, but not too often
- 3 = quite frequently
- 4 = most of the time
- 5 = virtually *all the time*

Since the scale for this group of questions used 0 (zero) on one extreme for *never*, a low mean score reflects the response of students that have never participated in the described behavior.

**Table 4.7**

*Descriptive Statistics for Behavior Questions*

VIGNETTES	N	Mean	Std. Dev.
Q30 HOW OFTEN DID YOU DRINK ALCOHOL BEFORE TURNING 18?	389	1.01	1.356
Q31 HOW OFTEN DID YOU LIE TO PARENTS SINCE TURNING 18?	388	1.78	1.167
*Q32 HOW OFTEN DO YOU UNDER REPORT WAGES OR TIPS?	389	.51	1.209
Q33 HOW OFTEN HAVE YOU CHEATED DURING COLLEGE?	389	.98	1.105
Q34 HOW OFTEN DO YOU SPEED?	389	3.37	1.385
Q35 HOW OFTEN HAVE YOU LIED TO PROFESSOR DURING COLLEGE?	389	.92	1.172
*Q36 HOW OFTEN CALLED IN SICK WHEN YOU ARE NOT SICK?	388	.48	.864
Q37 HOW OFTEN DO YOU FAIL TO STOP AT STOP SIGN/ RUN RED LIGHT?	388	1.90	1.477
Q38 HOW OFTEN DO YOU BREAK CAMPUS RULES?	387	1.93	1.526

\*eliminated from final analysis.

Two questions, both of which deal with work issues, had a very low mean response. These questions were originally included due to the assumption that most college students were employed during their education. Some of the respondents marked *never* but placed a note that this question *did not apply*. It was determined that Q32 and Q36 would be removed from the survey because of the concern that others selecting *never* were also not working.

After removing the two questions, the average mean for the remaining seven questions is 1.7. Six of the remaining seven questions have mean scores between .92 and 1.93 which is considerably lower than a uniformly distributed hypothetical mean of 2.5 (see Miesing and Preble, 1985, p. 470). The only question with a mean higher than the uniformly distributed hypothetical mean is Q34. This question asks students how often they speed and the response mean is 3.37. Although speeding is illegal, hence unethical, students seem to participate in this behavior more than any other behavior presented in this survey. Speeding is also addressed in Q53 and will be discussed later.

#### **Faith and Religious Data**

Eight questions make up the faith and religious section. The first three questions come from a previous published scale for religiosity: Roof's Salience of Faith scale (Roof and Perkins, 1975). Cronbach's alpha was used to test the reliability of the data from the religiosity scale against existing studies using the salience of faith scale. The Cronbach's alpha for the salience of faith scale was .739. This compares favorably with Roof's alpha of .72.

The remaining five questions deal with various aspects of religious practice or association. Descriptive data from these questions is found in Table 4.8. Over 80% of the

students attend church at least weekly and participate in daily reading of sacred writings more than rarely. An amazing 90% plus reported participating in daily prayer, yet slightly less than 76% reported participating in service projects more than rarely. These high percentages in religious behavior are in line with the almost 73% of students holding formal membership in a church, denomination, or other religious organization.

**Table 4.8**

*Faith and religiosity descriptive data*

<b>Q42 Church Attendance</b>	Never	Rarely	About once a month	Weekly	Several times a week
	2.3%	9.5%	7.7%	47.3%	33%
<b>Q43 Daily Reading</b>	Never	Rarely	Sometimes	Often	Always
	8.0%	10.8%	32.5%	28.1%	20.6%
<b>Q44 Daily Prayer</b>	Never	Rarely	Sometimes	Often	Always
	3.6%	4.6%	18.8%	30.4%	42.5%
<b>Q45 Service Projects</b>	Never	Rarely	Sometimes	Often	Always
	5.4%	18.9%	44.2%	19.1%	12.4%
<b>Q 46 Formal Membership</b>	Yes	No			
	72.9%	27.1%			

### **Religiosity Demographics**

The recoded information in Tables 4.3 and 4.4 highlights some interesting facts regarding the religious aspect of individual participants and their institutions. The majority of respondents (80.5%) attend religious services weekly at minimum. As expected, this percentage is much greater than the 35.7% reported by Conroy and Emerson (2004) since most of the institutions in this current study hold some religious affiliation. Similarly, almost 82% of the respondents completed at least one course in religion or theology as compared to 63.1% in the previous study. This study indicates over 44% of students surveyed completed three or more courses in religion or theology.

In addition, the self-reported religiosity level of students resulted with almost 55% of the students in the high religiosity level.

The first two hypotheses deal with ethical attitude and religiosity. The scales for religiosity are measured in two ways. This first measure of religiosity (R1) uses the single question about weekly attendance for religious services. This measurement is used here because it is the same measurement used by Conroy and Emerson (2004) and allows direct comparisons to be made. Table 4.9 shows the demographics for R1 with 76 responses having a mean of 2.28 showing they attend religious services less than weekly, while 312 respondents have a mean of 4.41 thus indicating they attend services at least weekly.

**Table 4.9**

*Religiosity 1 (R1)—General Demographic Statistics*

		Frequency	Percent	Valid Percent	Cumulative Percent
Scale	1 NEVER	9	2.3	2.3	2.3
	2 RARELY	37	9.5	9.5	11.9
	3 ABOUT ONCE A MONTH	30	7.7	7.7	19.6
	4 WEEKLY	184	47.3	47.4	67.0
	5 SEVERAL TIMES A WEEK	128	32.9	33.0	100.0
	Total	388	99.7	100.0	
Missing	System	1	.3		
Total		389	100.0		

The second measure of religiosity (R2) looks at the importance or salience of religiosity using more than just weekly attendance of religious services. This scale also corrects the concern of previous researchers (Dittes, 1969; Parboteeah et al., 2008; Vitell,



2009; Wilkes et al., 1986) about a single item measurement for religiosity. The R2 scale or Saliency of Faith scale was developed by Roof and Perkins (1975). This scale has a very strict standard for high versus not-high saliency. Although stringent, this standard was maintained throughout other research, but this researcher is of the opinion that the scale is narrow and restricts variation, and thus is considered a limitation to this study. Even though consideration was given to adjusting the scale, it was determined to maintain the strict scale for this study and encourage later research to employ a less restrictive standard for religiosity.

The demographics for R2 show the mean score of 388 usable responses was 9.02 with 213 respondents having a High Saliency of Faith score (10 or 11) and 175 respondents scoring a Not-High Saliency score (ranging from 3 to 9). Table 4.10 provides the general demographic for R2 used in hypothesis 2 that addresses religiosity measured by the religiosity saliency scale. Ethical awareness as presented by the 29 business scenarios will be studied with respect to this R2 measurement of religiosity.

**Table 4.10**

*Religiosity 2(R2)—General Demographic Statistics*

Saliency factor	Frequency	Percent	Valid Percent	Cumulative Percent
1 high religiosity R2 cumulative score 213 students	10	67	31.5	31.5
	11	146	68.5	68.5
	Total	213	100.0	100.0
2 not-high religiosity R2 cumulative score 175 students	3	2	1.1	1.1
	4	15	8.3	9.5
	5	15	8.3	17.9
	6	32	17.8	35.8
	7	37	20.6	56.5
	8	38	21.2	77.7
	9	40	22.3	100.0
Total	179	99.6	100.0	

## **Hypothesis 1**

*Hypothesis 1—Church attendance by college students does not influence ethical awareness of these same students.*

The premise of this hypothesis is that individuals who attend religious services on a weekly basis are devoted to the religious teachings and more aware of ethical practices encouraged by religion. Conroy and Emerson (2004) used this same hypothesis to measure religiosity and its impact on ethical awareness. In their study, students were given 25 vignettes while in this current study respondents were presented with 29 scenarios. Students were then asked to evaluate each situation on the basis of their own personal values and the ethical issues involved. The responses measured the attitudinal reaction of the students to these ethical situations.

Thirteen of the vignettes used in this current study were also used by Conroy and Emerson (2004). Since the previous study used the same measure of religiosity, church attendance, a direct comparison of results was conducted. Visual and statistical comparison was completed.

This section conveys the results of the testing of the data related to Hypothesis 1. Multiple tests, non-parametric and parametric, were used to test whether the ethical awareness of the students on each vignette is significantly related to church attendance (Religiosity 1).

The results of the *t*-test are presented in Table 4.11.

**Table 4.11***Hypothesis 1—Group Means and Standard Deviations*

Ethical Vignettes	Religiosity Factor—		N	Mean	Std. Dev.	Std. Error
	1 Does Not Attend Weekly Services	2 Attends weekly services				
Q1 SUPPLIER SENDS FAMILY PACKAGE	1	76	4.89	1.929	.221	
	2	311	5.32	1.787	.101	
Q2 WORKING WITH COMPANY TO SECURE FIRST ORDER	1	76	2.96	1.858	.213	
	2	311	3.07	1.766	.100	
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3,000	1	75	2.65	1.538	.178	
	2	311	2.52	1.634	.093	
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	1	76	2.14	1.547	.177	
	2	312	1.81	1.282	.073	
Q5 DAUGHTER STARTING CATERING BUSINESS- YOU HIRE HER	1	75	5.52	1.369	.158	
	2	312	5.71	1.246	.071	
Q6 BUDGET CUTS ELIMINATES LOYAL EMPLOYEE'S JOB	1	75	2.97	1.594	.184	
	2	312	2.98	1.443	.082	
Q7 SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	1	76	3.14	1.860	.213	
	2	312	3.02	1.792	.101	
Q8 TELL CLIENT CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	1	74	2.47	1.657	.193	
	2	312	2.02	1.326	.075	
Q9 FIRM RECOMMENDS STOCK NOT CONSIDERED A GOOD INVESTMENT	1	76	2.09	1.453	.167	
	2	312	1.85	1.043	.059	
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	1	76	2.17	1.603	.184	
	2	311	1.61	1.180	.067	
Q11 SPENDS HOUR A DAY SURFING AND SHOPPING	1	76	2.86	1.655	.190	
	2	312	2.39	1.424	.081	
Q12 SINGLE MOM SPENDS AN HOUR A DAY ON PHONE WITH KIDS	1	76	3.59	1.798	.206	
	2	312	3.26	1.649	.093	
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	1	75	3.04	1.782	.206	
	2	312	2.80	1.668	.094	

**Table 4.11 (cont.)**

Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO INFORMATION	1	75	3.63	1.829	.211
	2	310	3.31	1.754	.100
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	1	76	2.59	1.585	.182
	2	311	2.14	1.291	.073
Q16 USING COMPANY COPIER FOR PERSONAL USE	1	76	3.39	1.729	.198
	2	312	3.48	1.655	.094
Q17 SEND EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	1	75	3.47	1.695	.196
	2	310	3.58	1.485	.084
Q18 DIRECTOR USES INFORMATION ABOUT STOCK SPLIT- BUYS SHARES	1	74	3.07	1.926	.224
	2	310	2.75	1.610	.091
Q19 EXECUTIVE PROMOTES FRIEND OVER QUALIFIED CANDIDATE	1	75	3.03	1.838	.212
	2	311	2.72	1.569	.089
Q20 ENGINEER DOES NOT REPORT FLAW	1	74	2.45	1.580	.184
	2	312	2.04	1.329	.075
Q21 COMPTROLLER HIDES EMBARRASSING FACTS	1	75	3.80	1.993	.230
	2	312	3.37	1.757	.099
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	1	72	2.58	1.710	.201
	2	311	2.67	1.714	.097
Q23 BREAK CONFIDENCE AND TELL BOSS ABOUT FRIEND'S ACTIONS	1	71	4.18	1.615	.192
	2	310	4.35	1.616	.092
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	1	70	3.49	1.692	.202
	2	309	3.22	1.635	.093
Q25 WORKING SATURDAY & SUNDAY AND MISSING CHURCH	1	72	4.69	1.749	.206
	2	310	3.60	1.663	.094
Q26 WORK ON PERSONAL CONSULTING JOB AT WORK	1	72	3.33	1.653	.195
	2	311	2.89	1.575	.089
Q27 GET UNLICENSED SOFTWARE RATHER THAN SPENDING \$500	1	73	3.58	1.731	.203
	2	309	3.28	1.744	.099
Q28 IRS ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	1	73	2.78	1.618	.189
	2	311	2.06	1.294	.073
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LAID OFF	1	72	3.72	1.900	.224
	2	309	3.21	1.910	.109

Respondents were asked in question 42 of the survey to identify how often they participated in religious services. The responses were recoded into two groups: those not attending religious services weekly (*never, rarely, and about once a month*) and those attending services weekly (*weekly and several times a week*). Data analyses were performed to compare the responses of these two groups using the null hypothesis that individuals that attend church weekly will have the same ethical awareness as those that do not attend church weekly.

This hypothesis used all 29 scenarios dealing with ethical awareness. Each item was measured using parametric: *t*-tests, and non-parametric: Mann Whitney *U* test. The proxy variable for religiosity, *attends services weekly*, is statistically significant at the 5% level in eight of the scenarios using the Mann Whitney *U* test and in nine scenarios using the *t* tests. The one vignette (Q20) that is not significant using the non-parametric test is just above the .05 mark of significance.

These results are similar to those found by Conroy and Emerson (2004). Although using a parametric test to confirm their findings was interesting, discovering similar results from the non-parametric tests was also gratifying. This is notable because the results were similar using both types of tests. Their study originally had 25 vignettes and they found in seven of these that religiosity increases one's ethical awareness. This current study determined that in 9 of the vignettes there was an increase in one's ethical awareness if the respondent attended weekly religious services. Of interest is that only Q10 and Q20 were found to be significant in both studies. Results for the vignettes showing significance in both tests are presented in Table 4.12.

**Table 4.12**

*Hypothesis 1—Independent Samples Test*

		Levene's Test		t-test for Equality of Means				Mann-Whit. U	
		Equal. of Var.		t	df	Sig. (2-tailed)	Mean Diff.	Std. Err. Diff.	
Q8 TELL CLIENT CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	Equal variances not assumed	14.052	.000	2.210	96.340	.029	.457	.207	.049
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	Equal variances not assumed	16.406	.000	2.846	95.768	.005	.557	.196	.002
Q11 SPENDS HOUR A DAY SURFING AND SHOPPING	Equal variances assumed	3.335	.069	2.466	386	.014	.464	.188	.029
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	Equal variances not assumed	8.279	.004	2.283	100.649	.025	.447	.196	.032
Q20 ENGINEER DOES NOT REPORT FLAW	Equal variances not assumed	8.568	.004	2.020	98.898	.046	.401	.199	.057
Q25 WORKING SATURDAY & SUNDAY AND MISSING CHURCH	Equal variances assumed	.053	.818	4.982	380	.000	1.094	.220	.000
Q26 WORK ON PERSONAL CONSULTING JOB AT WORK	Equal variances assumed	.202	.653	2.144	381	.033	.446	.208	.030
Q28 IRS ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	Equal variances not assumed	13.976	.000	3.528	94.729	.001	.717	.203	.000
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LAID OFF	Equal variances assumed	.406	.525	2.050	379	.041	.512	.250	.040

Based on these tests, and especially the *t*-test, findings indicate that weekly attendance of religious services is associated with a lower acceptability of inappropriate

ethical behavior presented in 9 of the 29 vignettes. Although the null hypothesis that states church attendance by college students does not influence their ethical awareness is rejected for 9 of the scenarios, overall we fail to reject the null hypothesis because this number does not meet the requirement of fifteen vignettes showing significance to reject the hypothesis in full.

The null hypothesis, H1, that religiosity, as measured by church attendance does not affect ethical attitudes, is rejected. This is consistent with the assumption that a correlation exists between church attendance and the ethical awareness of students, but not in every situation. Overall there is weak support for this hypothesis.

## **Hypothesis 2**

*Hypothesis 2—The salience of religion (religiosity) is not related to the ethical awareness of college students..*

The premise of this hypothesis is that students with a high religious salience will have a higher ethical awareness than those students with less religious salience. Churning, Eby and Roels (1990) suggest that faith plays a significant role in the life of a Christian and those that hold strongly to their faith should process their decisions differently from those that do not hold their faith as highly. This decision making involves shifting the perspective from man's viewpoint to a priority being placed on decisions from God's perspective. Consequently, the null hypothesis is that students with not-high religious salience will have the same ethical awareness as those students with high religious salience.

This hypothesis was measured using the religious salience scale (R2) for religiosity and the 29 business vignettes to measure ethical awareness. Respondents were

asked in questions 39, 40 and 41 to indicate how important faith and religious practice is in their daily lives. The responses were recorded and a point value was given to each response. A break-down of these values and can be found in Appendix B.

Cumulative values were calculated and data was recoded to segregate respondents into two groups. Respondents with a cumulative score of 10 or 11 were classified *high* while scores of 3 to 9 were coded as *not-high*. While the level of 10 or 11 might be considered a high hurdle, it is consistent with previous studies. Data analyses were performed to compare the responses of these two groups using the null hypothesis that individuals with a high salience of faith or religiosity will have the same ethical awareness as those not-high salience students.

This section conveys the results of the testing of the data related to Hypothesis 2. Although multiple tests, both non-parametric and parametric, were used to test whether the ethical awareness of the students on each vignette is significantly related to religious salience (Religiosity 2), the focus of this discussion will be on the non-parametric results. Since there is no direct comparison to Conroy and Emerson (2004), the emphasis here will be on examining the data as ordinal, thus focusing on non-parametric tests.

Descriptive data for the second hypothesis comparing the two groups, not high salience and high salience, is provided in Table 4.13.



**Table 4.13***Hypothesis 2—Group Means and Standard Deviations*

Ethical Vignettes	R2				Std.
	Saliency				Error
	Level	N	Mean	Dev.	Mean
Q1 SUPPLIER SENDS FAMILY PACKAGE	1 not High	175	5.06	1.879	.142
	2 High	212	5.39	1.764	.121
Q2 WORKING WITH COMPANY TO SECURE FIRST ORDER	1 not High	174	3.21	1.845	.140
	2 High	213	2.92	1.723	.118
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3,000	1 not High	173	2.78	1.680	.128
	2 High	213	2.36	1.537	.105
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	1 not High	175	2.19	1.507	.114
	2 High	213	1.62	1.129	.077
Q5 DAUGHTER STARTING CATERING BUSINESS- YOU HIRE HER	1 not High	174	5.60	1.308	.099
	2 High	213	5.73	1.240	.085
Q6 BUDGET CUTS ELIMINATES LOYAL EMPLOYEE'S JOB	1 not High	174	3.26	1.470	.111
	2 High	213	2.75	1.435	.098
Q7 SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	1 not High	175	3.31	1.764	.133
	2 High	213	2.83	1.812	.124
Q8 TELL CLIENTS CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	1 not High	173	2.55	1.604	.122
	2 High	213	1.74	1.093	.075
Q9 FIRM RECOMMENDS STOCK NOT CONSIDER A GOOD INVESTMENT	1 not High	175	2.10	1.276	.096
	2 High	213	1.73	.981	.067
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	1 not High	175	1.91	1.382	.105
	2 High	212	1.57	1.192	.082
Q11 INTERN SPENDS HOUR A DAY SURFING AND SHOPPING	1 not High	175	2.74	1.557	.118
	2 High	213	2.27	1.384	.095
Q12 SINGLE MOM SPENDS AN HOUR A DAY ON PHONE WITH KIDS	1 not High	175	3.41	1.713	.129
	2 High	213	3.25	1.657	.114
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	1 not High	174	3.17	1.734	.131
	2 High	213	2.59	1.613	.111
Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO INFORMATION	1 not High	173	3.60	1.771	.135
	2 High	212	3.19	1.753	.120
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	1 not High	174	2.52	1.461	.111
	2 High	213	2.00	1.230	.084

**Table 4.13 (cont.)**

Ethical Vignettes	R2 Salience Level	N	Mean	Std. Dev.	Std. Error Mean
Q16 USING COMPANY COPIER FOR PERSONAL USE	1 not High	175	3.56	1.670	.126
	2 High	213	3.38	1.666	.114
Q17 SENDING EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	1 not High	174	3.68	1.539	.117
	2 High	211	3.46	1.512	.104
Q18 DIRECTOR USES INFORMATION ABOUT STOCK SPLIT- BUYS SHARES	1 not High	172	3.06	1.733	.132
	2 High	212	2.62	1.609	.110
Q19 EXECUTIVE PROMOTES FRIEND OVER QUALIFIED CANDIDATE	1 not High	174	2.87	1.643	.125
	2 High	212	2.70	1.613	.111
Q20 ENGINEER DOES NOT REPORT FLAW	1 not High	174	2.44	1.567	.119
	2 High	212	1.86	1.162	.080
Q21 COMPTROLLER HIDES EMBARRASSING FACTS	1 not High	175	3.39	1.761	.133
	2 High	212	3.50	1.854	.127
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	1 not High	172	2.88	1.755	.134
	2 High	211	2.47	1.657	.114
Q23 BREAK CONFIDENCE AND TELL BOSS ABOUT FRIEND'S ACTIONS	1 not High	171	4.19	1.631	.125
	2 High	210	4.43	1.598	.110
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	1 not High	170	3.42	1.605	.123
	2 High	209	3.15	1.673	.116
Q25 WORKING SATURDAY & SUNDAY AND MISSING CHURCH	1 not High	172	4.36	1.703	.130
	2 High	210	3.35	1.622	.112
Q26 WORK ON PERSONAL CONSULTING JOB AT WORK	1 not High	172	3.27	1.622	.124
	2 High	211	2.73	1.537	.106
Q27 GET UNLICENSED SOFTWARE RATHER THAN SPENDING \$500	1 not High	171	3.61	1.796	.137
	2 High	211	3.12	1.671	.115
Q28 ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	1 not High	172	2.52	1.489	.114
	2 High	212	1.94	1.243	.085
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LET GO	1 not High	171	3.50	1.851	.142
	2 High	210	3.15	1.958	.135

When using simple comparison of means, nothing of great interest is directly apparent from the data examining the R2 value for religiosity found in Table 4.13, but

when compared to the data from R1 that segregated the groups by weekly church attendance in Table 4.11 some things stand out. The first thing is that most of the mean responses are very similar. Only seven of the mean responses using R1 versus R2 differed by more than 0.25. Six of the seven mean changes identified occurred for only one group per vignette. For example, Q21 described a situation where the comptroller of the company selected a legal method to hide embarrassing financial information from the public, yet the mean change went down by 0.41 for group one (less religious) but went up by 0.13 for group two (more religious.)

The second thing that stands out is that only one question resulted in a drop in both groups with a value more than 0.25. The question (Q25) dealing with working on Sunday fell by more than 0.25 for both groups. This considerable decline in both groups shows less acceptance of working on Sunday for both the high and the not-high religiosity groups. Furthermore, Cohen's effect size value ( $d = .62$ ) suggested a moderate to high practical significance for this vignette (Q25). Only one other vignette (Q8) suggested a moderate to high practical significance using Cohen's  $d$  and that scenario dealt with lying to clients about payments being mailed. All the other vignettes had low to moderate or even less practical significance when calculating Cohen's  $d$ .

A comparison chart for H1 and H2 is provided in Table 4.14 with the major changes highlighted. Notations are included showing each vignette's practical significance by groups.

**Table 4.14**

*Mean comparison table between H1 and H2 including Cohen's d results*

Ethical Vignettes	R1 Attend Weekly Service		R2 Religious Salience		Diff. in Mean	Cohen's d
	1—Does not	2—Does	1—not High	2--High		
	H1 Mean	H2 Mean	H1 Mean	H2 Mean		
Q1 SUPPLIER SENDS FAMILY PACKAGE	1 4.89	2 5.06	1 4.89	2 5.06	0.17	.181
	2 5.32	2 5.39			0.07	
Q2 WORKING WITH COMPANY TO SECURE FIRST ORDER	1 2.96	2 3.21	1 2.96	2 3.21	0.25	.162
	2 3.07	2 2.92			-0.15	
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3,000	1 2.65	2 2.78	1 2.65	2 2.78	0.13	.281
	2 2.52	2 2.36			-0.16	
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	1 2.14	2 2.19	1 2.14	2 2.19	0.05	.102
	2 1.81	2 1.62			-0.19	
Q5 DAUGHTER STARTING CATERING BUSINESS- YOU HIRE HER	1 5.52	2 5.60	1 5.52	2 5.60	0.08	.102
	2 5.71	2 5.73			0.02	
Q6 BUDGET CUTS ELIMINATES LOYAL EMPLOYEE'S JOB	1 2.97	2 3.26	1 2.97	2 3.26	0.29	.351
	2 2.98	2 2.75			-0.23	
Q7 SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	1 3.14	2 3.31	1 3.14	2 3.31	0.17	.215
	2 3.02	2 2.83			-0.19	
Q8 TELL CLIENT CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	1 2.47	2 2.55	1 2.47	2 2.55	0.08	.102
	2 2.02	2 1.74			-0.28	
Q9 FIRM RECOMMENDS STOCK NOT CONSIDER A GOOD INVESTMENT	1 2.09	2 2.10	1 2.09	2 2.10	0.01	.025
	2 1.85	2 1.73			-0.12	
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	1 2.17	2 1.91	1 2.17	2 1.91	-0.26	.283
	2 1.61	2 1.57			-0.04	
Q11 SPENDS HOUR A DAY SURFING AND SHOPPING	1 2.86	2 2.74	1 2.86	2 2.74	-0.12	.319
	2 2.39	2 2.27			-0.08	
Q12 SINGLE MOM SPENDS AN HOUR A DAY ON PHONE WITH KIDS	1 3.59	2 3.41	1 3.59	2 3.41	-0.18	.095
	2 3.26	2 3.25			-0.01	
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	1 3.04	2 3.17	1 3.04	2 3.17	0.13	.165
	2 2.80	2 2.59			-0.21	
Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO INFORMATION	1 3.63	2 3.60	1 3.63	2 3.60	-0.03	.233
	2 3.31	2 3.19			-0.12	

**Table 4.14 (cont.)**

Ethical Vignettes	R1 Attend Weekly Service		H1	H2	Diff. in Mean	Cohen's <i>d</i>
	1—Does not	2—Does				
	R2 Religious Salience		Mean	Mean		
	1—not High	2—High				
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	1	2.59	2.52	-0.07		
	2	2.14	2.00	-0.14		
Q16 USING COMPANY COPIER FOR PERSONAL USE	1	3.39	3.56	0.17		.108
	2	3.48	3.38	-0.10		
Q17 SENDING EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	1	3.47	3.68	0.21		.144
	2	3.58	3.46	-0.12		
Q18 DIRECTOR USES INFORMATION ABOUT STOCK SPLIT- BUYS SHARES	1	3.07	3.06	-0.01		
	2	2.75	2.62	-0.13		
Q19 EXECUTIVE PROMOTES FRIEND OVER QUALIFIED CANDIDATE	1	3.03	2.87	-0.16		.104
	2	2.72	2.70	-0.02		
Q20 ENGINEER DOES NOT REPORT FLAW	1	2.45	2.44	-0.01		
	2	2.04	1.86	-0.18		
Q21 COMPTROLLER HIDES EMBARRASSING FACTS	1	3.80	3.39	-0.41		.060
	2	3.37	3.50	0.13		
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	1	2.58	2.88	0.30		.240
	2	2.67	2.47	-0.20		
Q23 BREAK CONFIDENCE AND TELL BOSS ABOUT FRIEND'S ACTIONS	1	4.18	4.19	0.01		.148
	2	4.35	4.43	0.08		
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	1	3.49	3.42	-0.07		.165
	2	3.22	3.15	-0.07		
Q25 WORKING SATURDAY & SUNDAY AND MISSING CHURCH	1	4.69	4.36	-0.33		
	2	3.60	3.35	-0.25		
Q26 WORK ON PERSONAL CONSULTING JOB AT WORK	1	3.33	3.27	-0.06		.141
	2	2.89	2.73	-0.16		
Q27 GET UNLICENSED SOFTWARE RATHER THAN SPENDING \$500	1	3.58	3.61	0.03		.282
	2	3.28	3.12	-0.16		
Q28 IRS ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	1	2.78	2.52	-0.26		.222
	2	2.06	1.94	-0.12		
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LAID OFF	1	3.72	3.50	-0.22		.183
	2	3.21	3.15	-0.06		

This hypothesis used all 29 ethical scenarios dealing with ethical awareness. The proxy variable for religiosity, *high religious salience*, is statistically significant at the 5% level in eighteen of the scenarios using the Mann-Whitney *U* test. Eight of the vignettes found to be significant for H1 are also found significant for H2. The one vignette that is not significant using the non-parametric test in H2 is Q29 and it is barely above the cut-off level of significance at .054.

When the *t*-test was performed using the same two divisions for R2, significance was demonstrated for eighteen scenarios at the 5% level. Since both types of tests show significance for eighteen scenarios, it shows that in the sample surveyed, students with a high salience of faith are less accepting of unethical situations than those students without high salience. The number of each group is balanced in this example, yet those students with high salience of faith or religiosity were more likely to select *never acceptable* for the unethical behavior described in the scenario.

One observation is the increased number of vignettes showing significance when the measure of religiosity is better defined by using a multiple unit measurement for religiosity rather than a single unit of measurement. There were nine vignettes where the null hypothesis was rejected for H1, yet there were eighteen scenarios where the null hypothesis was rejected for H2. In addition, these same eighteen show low to higher practical significance using Cohen's *d* for effect size analysis, with two of the eighteen showing medium to high practical significance.

In an attempt to see where the significance fell by running ANOVA, R2 responses were divided into three groups instead of two. The sum for questions 39, 40 and 41 were divided into three groups with scores of 10 to 11 labeled *high salience*, 7 to 9 coded *mid-*

*salience*, and 3 to 6 as *low salience*. When this was completed, 14 of the vignettes that showed statistical significance at the 5% level from the Mann-Whitney *U* test were also significant at the 5% level using the one-way ANOVA. Of the 18 vignettes where the null hypothesis was rejected for H2, four vignettes (Q3, Q7, Q14 and Q22) were not included when the ANOVA test was completed.

The Bonferroni test, also known as the Bonferroni correction, was used as an attempt to prevent the data from incorrectly appearing to be statistically significant by lowering the alpha value. This test suggests that the “p” value for each test must be equal to the alpha divided by the number of tests.

Using the Bonferroni post-hoc test to determine the significance of differences between the means of the three religiosity levels (R2) it was confirmed that the significance was mostly between those students with high religious salience and the lowest salience group. Only four scenarios showed significance between the high salience group and the mid-salience group (Q6, Q8, Q15, and Q25). Results are shown in Appendix D.

Results of the eighteen vignettes showing significance using the Mann-Whitney *U* test, as well as the *t*-test are presented in Table 4.15. In addition, the results of Q29 are also included for evaluation since the vignette was significant in H1, but was not in H2. Based on the results of these tests, this study rejects the null hypothesis that there is no difference between the groups in regard to their ethical awareness since eighteen of the scenarios were rejected. This shows that more than half the scenarios show significance thus the null is rejected. Overall there is moderate support for this alternative measure for religiosity.

**Table 4.15***Hypothesis 2—Independent Samples Test*

Ethical Vignettes		Levene's Test Equality of Variances		t-test for Equality of Means				Mann-Whit. U Results	
		F	Sig.	t	df	Sig. (2-tailed)	Std. Mean Diff.		Std. Error Diff.
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3,000	Equal variances assumed	1.251	.264	2.582	384	.010	.424	.164	.009
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	Equal variances not assumed	19.430	.000	4.172	316.201	.000	.575	.138	.000
Q6 BUDGET CUTS ELIMINATES LOYAL EMPLOYEE'S JOB	Equal variances assumed	.002	.966	3.494	385	.001	.518	.148	.001
Q7 SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	Equal variances assumed	.166	.684	2.615	386	.009	.478	.183	.003
Q8 TELL CLIENT CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	Equal variances not assumed	41.449	.000	5.714	292.410	.000	.818	.143	.000
Q9 FIRM RECOMMENDS STOCK NOT CONSIDER A GOOD INVESTMENT	Equal variances not assumed	5.712	.017	3.142	321.832	.002	.369	.118	.014
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	Equal variances not assumed	8.015	.005	2.545	345.771	.011	.338	.133	.004
Q11 SPENDS HOUR A DAY SURFING AND SHOPPING	Equal variances assumed	3.012	.083	3.111	386	.002	.465	.149	.002
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	Equal variances assumed	1.191	.276	3.373	385	.001	.575	.170	.001



**Table 4.15 (cont.)**

Ethical Vignettes		Levene's		t-test for Equality of Means				Mann-Whit. U	
		Test Equality of Variances	Results	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.
Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO INFO.	Equal variances assumed	.047	.828	2.286	383	.023	.412	.180	.019
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	Equal variances not assumed	9.641	.002	3.790	338.724	.000	.528	.139	.000
Q18 DIRECTOR USES INFO. ABOUT STOCK SPLIT- BUYS SHARES	Equal variances assumed	.005	.943	2.576	382	.010	.440	.171	.015
Q20 ENGINEER DOES NOT REPORT FLAW	Equal variances not assumed	32.103	.000	4.008	312.296	.000	.574	.143	.001
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	Equal variances assumed	.657	.418	2.311	381	.021	.404	.175	.010
Q25 WORKING SATURDAY & SUNDAY AND MISSING CHURCH	Equal variances assumed	.455	.500	5.910	380	.000	1.008	.171	.000
Q26 WORK ON PERSONAL CONSULTING JOB AT WORK	Equal variances assumed	.524	.470	3.386	381	.001	.548	.162	.001
Q27 GET UNLICENSED SOFTWARE RATHER THAN SPENDING \$500	Equal variances assumed	2.277	.132	2.787	380	.006	.496	.178	.007
Q28 IRS ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	Equal variances not assumed	13.796	.000	4.116	332.930	.000	.585	.142	.010
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LAID OFF	Equal variances assumed	.704	.402	1.751	379	.081	.345	.197	.054

### **Hypothesis 3**

*Hypothesis 3—ethical awareness in college students is unaffected by courses in ethics, religion or theology.*

The premise of this hypothesis is that students who have completed courses in ethics, religion or theology will have a higher ethical awareness than those students that have never had such courses. The null hypothesis reads that ethical awareness in students is unaffected by courses in ethics, religion, or theology. Since the results of previous studies are mixed, the desire is to see what this study presents. Kohlberg's (1981) stage theory presents a vibrant image of the moral development process. Thus, the expectation is that students who have completed a course in ethics, religion, or theology would be more aware and less accepting of unethical situations.

Descriptive statistics for the independent variables for education are presented in Table 4.16. The data reveals that 43.7% of the students have never had a course in ethics yet only 18.3% have never taken a course in religion or theology. Since there is such a difference in the two percentages, this hypothesis will be divided into two parts.

The first part will look at ethics courses taken by students (H3a), while religion and theology courses will be addressed in the next part (H3b). This data on education was recoded (see Table 4.4) dividing the students into two groups for each subject area. The first group included students completing at least one course in the specific subject and the other group included those students who never completed a course in the specific subject area.

**Table 4.16***Frequency statistics for education data.*

Ethics Courses		Number of students	Percent	Cumulative Percent
Number of ethics courses taken	0 NONE	169	43.7	43.7
	1 ONE	133	34.4	78.0
	2 TWO	64	16.5	94.6
	3 THREE OR MORE	21	5.4	100.0
	Total	387	100.0	

Religion/Theology Courses		Number of students	Percent	Cumulative Percent
Number of religion or theology courses taken	0 NONE	71	18.3	18.3
	1 ONE	50	12.9	31.2
	2 TWO	93	24.0	55.2
	3 THREE OR MORE	174	44.8	100.0
	Total	388	100.0	

The impact of having completed a course in ethics is far weaker than the impact of religiosity found in the two previous hypotheses. This study found only one of the vignettes (Q17) to be statistically significant at the 5% level using the Mann-Whitney  $U$  test. Results of the  $t$ -test show two vignettes (Q1, Q17) to be statistically significant at the 5% level. Table 4.17 shows the resulting data for these vignettes.

Cohen's  $d$  shows only low practical significance for these two vignettes and confirms the lack of practical significance an independent course in ethics makes on the ethical awareness of college students.

Taking a course in ethics is related to a reduced level of acceptability of a company president sending expensive gifts to purchasing agents. The lack of significance in taking a course in ethics is interesting and could be due to an emphasis being given to

incorporating ethics instruction in general courses, but the data in this study is not able to identify the cause of this low results. Thus, the relationship between the lower acceptability of this situation and completing an ethics course is not clear. While vignette Q17 may deal with a violation of company policy, it is not illegal.

**Table 4.17**

*Hypothesis 3a—Independent Samples Test*

Group Statistics										
	Ethics Course	N	Mean	Std. Deviation	Std. Error Mean					
Q1 SUPPLIER SENDS	0 No course	168	5.50	1.627	.126					
FAMILY PACKAGE	1 Ethics course	218	5.06	1.935	.131					
Q17 SENDING EXPENSIVE	0 No course	167	3.84	1.470	.114					
CHRISTMAS PRESENTS TO GET BUSINESS	1 Ethics course	217	3.33	1.539	.104					
Levene's Test for Equality of Variances										
t-test for Equality of Means										
					Sig.	Std.				
					(2-	Mean	Error			
					tailed)	Diff.	Diff.			
Q1 SUPPLIER SENDS	Equal variances	7.572	.006	2.427	381	.016	.440	.181	.050	
FAMILY PACKAGE	not assumed									
Q17 SENDING EXPENSIVE	Equal variances	1.734	.189	3.289	382	.001	.511	.155	.001	
CHRISTMAS PRESENTS TO GET BUSINESS	assumed									

Based on the results of the Mann-Whitney *U* test and the *t*-test, we fail to reject the null hypothesis that ethical awareness is unaffected by the college student's completion of a course in ethics. Only two vignettes showed any significance and these were both very lot. One vignette (Q1) is right on the .05 level of significance using the

Mann-Whitney *U* test. The null hypothesis is rejected for vignettes dealing with questionable receipt of gifts. Although not illegal, both situations deal with questionable ethical situations.

Hypothesis 3b is very similar to hypothesis 3a with the only difference being the independent variable of the completion of a course in religion or theology. The impact of taking a course in religion or theology is greater in this study than the results of taking a course in ethics. Using the Mann-Whitney *U* test, four (Q10, Q18, Q28, Q29) of the vignettes were statistically significant at the 5% level. Taking a course in religion or theology is related to a reduced level of acceptance of underreporting income for taxes (Q10), insider trading (Q18), overstating deductions for taxes (Q28), and taking proprietary data from employer (Q29). Three of these vignettes deal with illegal activity and the other violates company standards.

Of interest is the low impact of education in the ethical awareness of students using non-parametric testing. It was determined to also run *t*-tests on the data to check parametric results. The data for H3b provided similar results using parametric tests as it did for non-parametric tests. The same four vignettes showing significance in the non-parametric test also show significance in the *t*-test. One additional vignette (Q15) shows significance in the parametric test. This vignette is above the .05 level of significance using the non-parametric Mann-Whitney *U* test. Results of these tests are shown in Table 4.18.

**Table 4.18**

*Hypothesis 3b—Independent Samples Test*

Group Statistics											
	Religion or Theology		N	Mean	Std. Dev.	Std. Error					
	Course						Mean	Dev.	Mean		
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	0 No Course		71	2.18	1.783					.212	
	1 At least one class		316	1.61	1.115					.063	
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	0 No Course		70	2.59	1.637					.196	
	1 At least one class		317	2.15	1.282					.072	
Q18 DIRECTOR USES INFORMATION ABOUT STOCK SPLIT- BUYS SHARES	0 No Course		69	3.39	1.751					.211	
	1 At least one class		315	2.68	1.626					.092	
Q28 ACCOUNTANT ADVISES YOU TO STRETCH DEDUCTIONS	0 No Course		70	2.60	1.573					.188	
	1 At least one class		314	2.10	1.312					.074	
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LET GO	0 No Course		69	3.77	1.872					.225	
	1 At least one class		312	3.20	1.908					.108	
					Levene's					Mann-	
					Equality of					Whitney U	
					Variances	t-test for Equality of Means				Results	
					F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	Equal variances assumed	not assumed	33.761	.000	2.607	82.686	.011	.576	.221	.037	
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	Equal variances assumed	not assumed	11.713	.001	2.113	88.590	.037	.441	.209	.066	
Q18 DIRECTOR USES INFO. ABOUT STOCK SPLIT- BUYS SHARES	Equal variances assumed		.190	.663	3.248	382	.001	.712	.219	.002	
Q28 ACCOUNTANT ADVISES TO STRETCH DEDUCTIONS	Equal variances assumed	not assumed	10.978	.001	2.496	91.582	.014	.504	.202	.016	
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LET GO	Equal variances assumed		.946	.331	2.251	379	.025	.569	.253	.025	

Each of the five vignettes that showed significance using the parametric and non-parametric analyses showed low to medium practical significance using Cohen's *d*. Each of the five resulted in *d* values between .30 (Q29) and .45 (Q10). Given the limited effect of course completion, this study found that taking a course in religion, theology or ethics does not have a significant effect on students' ethical awareness. This study rejects the null hypothesis (H3a and H3b) dealing with courses in ethics and religion or theology for only five of the 29 vignettes, thus this hypothesis has little to no support on the whole and we fail to reject this null hypothesis overall.

#### **Hypothesis 4**

*Hypothesis 4—gender does not affect the ethical awareness of college students.*

The premise of this hypothesis is that gender plays a role in the ethical awareness of students. The null hypothesis reads that gender does not affect the ethical awareness in students.

Findings in this study on gender are consistent with the literature. Female students consistently found the ethically questionable situations presented in the vignettes less acceptable. Results of the Mann-Whitney *U* test show the effect of being female positive in 19 of the 29 vignettes. The effect of being female is positive and statistically significant at the 5% level and is by far the highest percentage for all descriptive variables.

The average mean score for each question as shown in Table 4.19 confirms females are less accepting of an ethically questionable situation in all but two of the scenarios. The two vignettes (Q1 and Q23) deal with acceptance of expensive gifts from a supplier and violation of a fellow employee's confidence. These two vignettes are not

related except that these both deal with either violation of a company’s ethical policy or cultural norms. It interesting to see that, for the most part, women are less accepting of unethical behavior than men.

The question with the greatest difference between the mean averages by gender was Q22. This vignette dealt with the not hiring a female that was the best qualified for a position. The females responded at a level 1.09 less accepting of this than the response of the males.

**Table 4.19**

*Hypothesis 4—mean average by gender*

	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>	<b>Q9</b>	<b>Q10</b>
<b>Female</b>	5.25	2.83	2.40	1.63	5.63	2.82	2.72	1.83	1.76	1.45
<b>Male</b>	5.23	3.25	2.69	2.10	5.72	3.12	3.35	2.35	2.01	1.93
	<b>Q11</b>	<b>Q12</b>	<b>Q13</b>	<b>Q14</b>	<b>Q15</b>	<b>Q16</b>	<b>Q17</b>	<b>Q18</b>	<b>Q19</b>	<b>Q20</b>
<b>Female</b>	2.29	3.02	2.45	2.98	1.86	3.20	3.28	2.69	2.45	1.72
<b>Male</b>	2.66	3.62	3.22	3.73	2.56	3.71	3.83	2.93	3.09	2.52
	<b>Q21</b>	<b>Q22</b>	<b>Q23</b>	<b>Q24</b>	<b>Q25</b>	<b>Q26</b>	<b>Q27</b>	<b>Q28</b>	<b>Q29</b>	
<b>Female</b>	3.10	2.10	4.53	3.10	3.68	2.82	3.22	1.84	2.93	
<b>Male</b>	3.81	3.19	4.13	3.43	3.92	3.10	3.44	2.53	3.65	

This result is supported by the results of the *t*-test where the same 19 vignettes were also found to be statistically significant at the 5% level. In addition, three more vignettes were also statistically significant using this parametric test, bringing the total to 22. Significant results are shown for all tests for hypothesis 4 in Table 4.20. The results of the Mann-Whitney *U* test and the *t*-test were identical scores for 14 of the vignettes. This provides consistency between the types of tests and supports the findings.

These findings of this study are consistent with the literature because in each study where gender is found to be statistically significant, females are less accepting of



ethically questionable situations than are males. As a result, it is concluded that gender does affect ethical awareness for at least 19 of the scenarios.

**Table 4.20**

*Hypothesis 4—Independent Samples Test*

		Levene's Test for Equality of Variances		t-test for Equality of Means				Mann- Whitney <i>U</i> Results	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Diff.	Std. Error Diff.	
Q2 WORKING WITH COMPANY TO SECURE FIRST ORDER	Equal variances assumed	1.933	.165	-2.300	383	.022	-.415	.181	.017
Q4 PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	Equal variances not assumed	12.010	.001	-3.515	360.856	.000	-.468	.133	.000
Q6 BUDGET CUTS ELIMINATE LOYAL EMPLOYEE'S JOB	Equal variances not assumed	4.255	.040	-1.992	378.687	.047	-.297	.149	.089
Q7 SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	Equal variances not assumed	11.053	.001	-3.492	375.867	.001	-.632	.181	.001
Q8 TELL CLIENT CHECK IS GOING OUT ON FRIDAY WHEN IT ISN'T	Equal variances not assumed	30.985	.000	-3.782	350.586	.000	-.525	.139	.003
Q9 FIRM RECOMMENDS STOCK NOT CONSIDERED A GOOD INVESTMENT	Equal variances not assumed	6.667	.010	-2.231	369.801	.026	-.255	.114	.092
Q10 SMALL BUSINESS OWNER UNDER REPORTS CASH INCOME	Equal variances not assumed	32.660	.000	-3.897	315.316	.000	-.485	.124	.001
Q11 SPENDS HOUR A DAY SURFING AND SHOPPING	Equal variances assumed	3.094	.079	-2.505	384	.013	-.373	.149	.021

Q12 SINGLE MOM SPENDS AN HOUR A DAY ON PHONE WITH KIDS	Equal variances not assumed	4.222	.041	-3.572	381.678	.000	-.603	.169	.000
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	Equal variances assumed	3.189	.075	-4.568	383	.000	-.764	.167	.000
Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO INFORMATION	Equal variances assumed	1.374	.242	-4.245	381	.000	-.749	.176	.000
Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	Equal variances not assumed	42.022	.000	-5.239	332.104	.000	-.700	.134	.000
Q16 USING COMPANY COPIER FOR PERSONAL USE	Equal variances assumed	.164	.685	-3.013	384	.003	-.508	.169	.003
Q17 SENDING EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	Equal variances assumed	.061	.805	-3.548	381	.000	-.545	.154	.000
Q19 EXECUTIVE PROMOTES FRIEND OVER QUALIFIED CANDIDATE	Equal variances assumed	1.824	.178	-3.928	382	.000	-.638	.162	.000
Q20 ENGINEER DOES NOT REPORT FLAW	Equal variances not assumed	30.893	.000	-5.900	341.808	.000	-.806	.137	.000
Q21 COMPTROLLER HIDES EMBARRASSING FACTS	Equal variances assumed	.625	.430	-3.897	383	.000	-.709	.182	.000
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	Equal variances not assumed	10.883	.001	-6.564	374.844	.000	-1.092	.166	.000
Q23 BREAK CONFIDENCE AND TELL BOSS ABOUT FRIEND'S ACTIONS	Equal variances assumed	.943	.332	2.410	377	.016	.399	.166	.010

Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	Equal variances assumed	.192	.662	-1.974	376	.049	-.333	.169	.058
Q28 ACCOUNTANT ADVISES TO STRETCH DEDUCTIONS	Equal variances not assumed	34.240	.000	-5.049	340.293	.000	-.687	.136	.000
Q29 YOU TAKE CLIENT LIST WHEN YOU ARE LET GO	Equal variances assumed	1.795	.181	-3.713	377	.000	-.715	.193	.000

### Hypothesis 5

*Hypothesis 5—age does not affect the ethical awareness of college students.*

The premise of this hypothesis is that age plays a role in the ethical awareness of students. The null hypothesis reads that ethical awareness in students is unaffected by age.

Respondents were asked to select their age category from four options. The respondents were divided into two groups with students 19 and under falling into the category of younger students and students 20 and older categorized as older students. Data comparisons were done along these age divisions. The descriptive data for age are found in Table 4.21.

**Table 4.21**

*Hypothesis 5—Descriptive data for age*

		Frequency	Percent	Cumulative Percent
Age	19 & UNDER	92	23.8	23.8
	20-21	214	55.3	79.1
	22-23	64	16.5	95.6
	24 OR OLDER	17	4.4	100.0
Total		387	100.0	

The effect of age on ethical awareness is not as obvious as that of gender from these results. The impact of being older is statistically significant in only 3 of the 29 vignettes at the 5% level. In each of these vignettes, older age is associated with lower levels of acceptability of the vignettes. This is not consistent with most of the other published reports (i.e. Borkowski and Urgas, 1998; Smith and Oakley, 1997).

In addition, it contradicts the findings of Conroy and Emerson (2004) who found older age associated with lower levels of acceptability in 11 of their 25 vignettes. Additional data analyses were conducted to see if using a different age group would make a difference. Dividing the data along each age segmentation and then running the analysis made no change in the vignettes showing statistical significance.

Additional elements may act as a covariant in this matter, but further testing would need to be run to determine what these factors are. The general nature of this hypothesis may have limitations and need to be addressed if tested further. Since this study's intent was to compare data to that of an earlier study, it was determined to limit the analysis to the same factors as the earlier study of Conroy and Emerson (2004).

The three vignettes that did show significance (Q10, Q13 and Q28) had low to medium practical significance when analysis was performed using Cohen's *d*. Table 4.22 provides information on the *t*-test and Cohen's *d* results. Based on the results of this analysis it is concluded that we fail to reject the null hypothesis on age since only three of the scenarios in this study showed low significance.

**Table 4.22**

*Hypothesis 5—Independent Sample test results including Cohen's d*

<b>Group Statistics</b>								
Vignette	Age Group	N	Mean	Std. Dev.	Std. Error Mean	Cohen's d		
Q10 SMALL BUSINESS	1 Young Student	92	1.38	.626	.065			
OWNER UNDER REPORTS	2 Older Student	294	1.82	1.411	.082	.35		
CASH INCOME								
Q13 TAKE HOME OFFICE	1 Young Student	92	3.18	1.716	.179			
SUPPLIES FOR NEEDY	2 Older Student	294	2.73	1.667	.097	.27		
NEIGHBOR								
Q28 ACCOUNTANT	1 Young Student	91	1.86	1.039	.109			
ADVISES YOU TO	2 Older Student	292	2.29	1.451	.085	.32		
STRETCH DEDUCTIONS								
<b>Independent Samples Test</b>								
		Levene's Test		t-test for Equality of Means				
		Equality of						
		Variances						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff
Q10 SMALL BUSINESS	Equal	29.728	.000	-4.182	341.875	.000	-.439	.105
OWNER UNDER	variances							
REPORTS CASH INCOME	not assumed							
Q13 TAKE HOME OFFICE	Equal	.031	.859	2.278	384	.023	.457	.201
SUPPLIES FOR NEEDY	variances							
NEIGHBOR	assumed							
Q28 ACCOUNTANT	Equal	17.867	.000	-3.167	208.813	.002	-.437	.138
ADVISES YOU TO	variances							
STRETCH DEDUCTIONS	not assumed							

**Hypothesis 6**

*Hypothesis 6—religiosity of college students does not influence their ethical behavior.*

The premise of this hypothesis is that religiosity as measured by religious salience plays a role in the ethical behavior of students. The null hypothesis reads that ethical behavior in students is unaffected by religious salience. Unlike the other hypotheses in this study, this is the first hypothesis to deal directly with ethical behavior. The focus in previous studies has been with the ethical awareness of the respondents. The lack of studies dealing with behavior supports the need for this hypothesis.

Students were asked seven questions about their actual ethical behavior. Three of these questions concentrate on violation of legal standards like underage drinking of alcohol, speeding, and failing to come to a complete stop at stop signs or running red lights. The remaining four questions deal with violation of cultural norms like cheating, lying to parents or professors, and breaking campus rules.

The effect of religious salience on ethical behavior is evident from this study. Using the Mann-Whitney  $U$  test, the impact of high religious salience is statistically significant in six of the seven questions. Only the questions about speeding was unaffected by the religious salience of the students. Student  $t$ -tests on the same questions resulted in identical findings as the non-parametric tests. Parametric test results are found in Table 4.23.

Students were asked to answer these questions using the scale of 0 to 5, with zero being *never* and five being *all the time*. It is interesting to see that with speeding students seem to accept the behavior even though it is illegal and has, at the least, financial consequences. The mean score of 3.45 for the not-High religious group was slightly higher than the mean score of 3.32 for the High religious group. Mean scores for responses to the question about speeding (Q43) for both groups (not-High and High) are

above the midpoint of 2.5; this is the only question with mean scores higher than the midpoint. These mean scores show the practice of speeding to be the most prevalent of the unethical behaviors questioned in this study.

An assumption for the high score may be that students have accepted speeding as an action that although if caught has immediate consequences, the risk of getting caught is low enough to participate in the unethical behavior.

**Table 4.23**

*Hypothesis 6-Results of parametric tests on behavior including Cohen's d*

Vignette	Saliency	N	Mean	Std. Dev.	Std. Err. Mean	Cohen's d
Q30 HOW OFTEN DID YOU DRINK ALCOHOL BEFORE TURNING 18?	1 not High	175	1.40	1.505	.114	.54
	2 High	213	.69	1.128	.077	Med
Q31 HOW OFTEN HAVE YOU LIED TO PARENTS SINCE TURNING 18?	1 not High	174	2.09	1.239	.094	.49
	2 High	213	1.53	1.044	.072	low
Q33 HOW OFTEN HAVE YOU CHEATED IN COLLEGE?	1 not High	175	1.27	1.210	.091	.48
	2 High	213	.75	.951	.065	low
Q34 HOW OFTEN DO YOU SPEED?	1 not High	175	3.45	1.363	.103	.09
	2 High	213	3.32	1.388	.095	none
Q35 HOW OFTEN HAVE YOU LIED TO YOUR PROFESSOR?	1 not High	175	1.16	1.316	.100	.38
	2 High	213	.72	1.002	.069	low
Q37 HOW OFTEN DO YOU FAIL TO STOP AT SIGN OR RUN RED LIGHT?	1 not High	175	2.15	1.619	.122	.32
	2 High	213	1.69	1.317	.090	low
Q38 HOW OFTEN DO YOU BREAK CAMPUS RULES?	1 not High	175	2.33	1.613	.122	.50
	2 High	212	1.59	1.368	.094	Med

**Table 4.23 (cont.)**

Vignette		Levene's Test		t-test for Equality of Means				
		Equality Variances		t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.
		F	Sig.					
Q30 DRINKING ALCOHOL BEFORE 18?	Equal variances assumed	46.842	.000	5.307	386	.000	.710	.134
Q31 LYING TO PARENTS AFTER 18?	Equal variances assumed	6.014	.015	4.787	385	.000	.556	.116
Q33 CHEATING	Equal variances assumed	8.566	.004	4.766	386	.000	.523	.110
Q34 SPEEDING	Equal variance not assumed	.013	.910	.902	374	.368	.126	.140
Q35 LYING TO PROFESSOR?	Equal variances assumed	9.658	.002	3.711	386	.000	.437	.118
Q37 FAIL TO STOP AT SIGN OR RED LIGHT?	Equal variances assumed	17.765	.000	3.076	386	.002	.458	.149
Q38 BREAK CAMPUS RULES?	Equal variances assumed	14.326	.000	4.826	385	.000	.731	.152

Cohen's *d* results provide the effect size for the difference between the mean score of the two groups. These are provided earlier along with the parametric test results in table 4.23. Of interest is the lack of any practical significance for the difference between means of the groups for the question on speeding (Q34). This shows that both groups speed at about the same frequency and there is no significance between the groups.

In addition, two scenarios (Q30 and Q38) had medium to high practical significance according to Cohen's *d* results. This shows that the difference between the behavior of the High religiosity group and the not-High religiosity group is significant for underage drinking and breaking of campus rules. Aside from these two questions on



behavior and the question on speeding, the remaining four questions had low to medium practical significance based on the Cohen's *d* results.

Table 4.24 shows test results for the non-parametric tests for hypothesis 6.

**Table 4.24**

*Hypothesis 6—Non-parametric test on behavior*

<b>Hypothesis Test Summary</b> <b>Independent-Samples Mann-Whitney <i>U</i> Test</b>		
Null Hypothesis	Sig.	Decision
The distribution of HOW OFTEN DID YOU DRINK ALCOHOL BEFORE TURNING 18 is the same across categories of Two Groups	.000	Reject the null hypothesis.
The distribution of HOW OFTEN HAVE YOU LIED TO PARENTS SINCE TURNING 18 is the same across categories of Two Groups	.000	Reject the null hypothesis.
The distribution of HOW OFTEN HAVE YOU BEEN ACADEMICALLY DISHONEST is the same across categories of Two Groups	.000	Reject the null hypothesis.
The distribution of HOW OFTEN DO YOU SPEED is the same across categories of Two Groups	.352	Retain the null hypothesis
The distribution of HOW OFTEN HAVE YOU LIED TO YOUR PROFESSORS is the same across categories for Two Groups	.001	Reject the null hypothesis.
The distribution of HOW OFTEN DO YOU FAIL TO STOP OR RUN RED LIGHT is the same across categories for Two Groups	.010	Reject the null hypothesis.
The distribution of HOW OFTEN DO YOU BREAK CAMPUS RULES is the same across categories for Two Groups	.000	Reject the null hypothesis.
<i>Asymptotic significances are displayed</i>		<i>The significance level is .05</i>

Again, the results show that only the question on speeding (Q34) was not statistically significant, thus the null hypothesis is retained. The non-parametric test shows asymptotic significance or significance based on probable distribution. The results of this hypothesis confirm the assumption of this researcher. It was expected that students with higher religious salience would be less likely to participate in unethical behavior. Although this study used self-reported behavior, the data shows that religiosity has an impact on ethical behavior. This study finds that religiosity has an impact on ethical

behavior in each situation questioned with the exception of speeding. The null hypothesis is rejected based on this data.

### Summary of Analysis of Hypothesis Testing

This section summarizes the results of the testing on each of the hypotheses in this research project. The summary results are shown in Table 4.25. The discussion and implications of these results follow in Chapter 5.

**Table 4.25**

*Hypotheses summary*

#	Null Hypothesis	Response	Overall Support
H1	Church attendance by college students does not influence ethical awareness of these same students.	Fail to reject null	weak
H2	The salience of religion (religiosity) is not related to the ethical awareness of college students.	Reject the null	moderate
H3	Courses in ethics, religion or theology do not impact the ethical awareness of college students.	Fail to reject null	weak
H4	Gender does not affect the ethical awareness of college students.	Reject the null	moderate
H5	Age does not affect ethical awareness.	Fail to reject null	weak
H6	The religiosity of college students does not influence their ethical behavior.	Reject the null	strong

## **Chapter 5 – Discussion and Implications**

This final chapter summarizes the results of this study and discusses their implications. The discussion covers all six hypotheses with focus on weaknesses from previous research and the lack of attention given to actual ethical behavior. In order to make this summary and discussion more meaningful, the chapter will begin by restating the research problem and reviewing the major methodology that was employed in the study.

### **Review of Problem Statement, Background and Methodology**

The stated purpose of this study is to test the impact religiosity has on the ethical awareness of students and whether religiosity eventually influences the ethical behavior of students. More specifically, this study will seek to answer the following research question: *Does religiosity impact the ethical awareness of college students, and is this an influence on their actual behavior?*

Prior research in the area of religiosity and ethics has produced widely varying results, thus the impact of religious commitment on business ethics is unclear. Much of this confusion arises from the weakness in the measurement for religiosity. Most studies use a self-reported, single item like church attendance or prayer to measure religiosity. Studies are needed that use a multi-item measure of religiosity to make it more robust. In addition, most studies involving the impact of religiosity on ethics seem to deal solely with ethical intent, not behavior. This project was also conducted in an attempt to fill a gap in research that looks beyond ethical intent to actual behavior.

This study was designed as an extension of previous studies (e.g. Albaum and Peterson, 2006; Clark and Dawson, 1996; Conroy and Emerson, 2004; Epstein, 1997 and

2002; Jewe, 2008; Kennedy and Lawton, 1998; Longenecker et al. 2004; Weaver and Agle, 2002) focusing on the religious framework individuals use in decision making. While the literature reviewed shows varied results on the impact religion has on ethical decision making, simple reasoning implies a direct connection between an individual's religion and his ethical philosophy. An individual's set of beliefs, attitudes, and values provides the framework for considering ethical dilemmas. This framework of ethical decision making is called one's personal moral philosophy (Barnett, Bass and Brown, 1996) or ethical attitude (Conroy and Emerson, 2004). There are vast numbers of personal moral philosophies that individuals may adopt (Neubaum, Pagell, Drexler, McKee-Ryan, and Larson, 2009). Barnett et al. (1996) define *personal moral philosophy* as the set of beliefs, attitudes and values providing a framework for shaping and considering ethical dilemmas. Why individuals make different moral choices when faced with the same set of circumstances has long concerned researchers (e.g. Freud, 1927; Kohlberg, 1983; Longenecker, McKinney and Moore, 2004; Neubaum et al., 2009; Sharp, 1898). Scholars have suggested that individuals use their own personal moral philosophy to interpret and process the situation (Neubaum et. al., 2009). This philosophy provides the basis within which ethical decisions are made (Forsyth and Nye, 1990), yet the extent of the influence is dependent upon a number of related concerns (Kurtines, 1984).

Ethical failures that have plagued business in recent years have provided newspapers, magazines, television and other information sources with an abundance of text. At least one publication describes these unethical behaviors in business as common

occurrences (Terpstra, Rozell, and Robinson, 1993) while many portray the reason for these ethical breakdowns as poor personal moral philosophy.

In response to these failures, there has been a resurgence of interest in spirituality and religion in the workplace. In his article on religion and business, J. W. Culliton (1949) stated that "...religion has something to offer business" (p. 265). Along with the focus on ethics in the corporate setting there has been an emphasis on ethics in educational and research arenas. The primary question asked deals with the *causes* of poor ethical judgment. What influences one person to act ethically, yet another person to act unethically? One area that is receiving attention is religion. Theoretically, some have hypothesized and/or demonstrated there is a relationship between the characteristics of religion and ethical attitude or awareness (Albaum and Peterson, 2006; Conroy and Emerson, 2004; Kennedy and Lawton, 1998; Longenecker et al., 2004; Weaver and Agle, 2002).

This study explored that relationship between religion and ethical awareness in college students by examining more closely the intensity of the religious commitment, labeled religiosity, of the student. This was done to better understand the link between religion and ethical awareness and the effect religion has on the ethical behavior of college students. Of specific interest to this research is Conroy and Emerson (2004) who extended prior research on the relationship between religion and ethics and their effect on the ethical attitude of students.

This study was designed to expand the work done by Conroy and Emerson (2004). This cross-sectional study sought to eliminate issues raised in the original conclusions about the demographic profile of the sample and the single measurement for

religiosity. Conroy and Emerson (2004) stated the need for further studies to be done attempting “to broaden the demographic profile of the samples” (p. 392). Their study only surveyed students at two schools, one private with Christian foundations and one state school, located in one southern state. This research identified multiple colleges and universities, seven in total. Six of the schools either claim direct association as Christian or at minimum hold to Christian values, while one is independent but state-related. The schools exist in various geographic areas, not just one.

This study also addressed issues raised by Conroy and Emerson (2004) and other researchers regarding how religiosity is measured. One researcher states the impact of religiosity on ethical development is a pertinent variable for further assessment; a measurement tool for religiosity is needed (Burks and Sellani, 2008). This study used a previously developed instrument for measuring religiosity and avoids the concern of single religious attributes or self-reporting variables. Vitell (2009) shares a concern with the limited amount of studies that examine the impact of religiosity on ethical judgments, intentions, and/or behavior, calling this a “major gap” in the literature. A primary goal and model of this study was to further develop research that links religiosity with ethical awareness and ultimately ethical behavior through ethical decision making.

This study employed a multiphase approach. There were a total of four phases. The first three phases were preliminary in nature and were intended to provide helpful information used to improve the design of the survey. Phase one consisted of a review of the original survey tool employed by Conroy and Emerson (2004). Minor adjustments were made to aid clarity and additional questions were included to update the survey. Phases two and three were pilot studies to collect some results so preliminary testing

could be done to assure the data would be suitable for the tests planned.

The final research design utilized quantitative data acquired through a single-stage, convenience sample, pen-to-paper survey of college students. As a proven method for effectively exploring the opinions of participants, the scenarios are an essential part of this quantitative study. The participants were current students of seven different institutions. Standard statistical measures were used to conduct the analysis of the data gained from the surveys. Both non-parametric and parametric tests were conducted in this research.

### **Discussion of Results**

Based on the results from this study, this research answered the following question: *Does religiosity impact the ethical attitude and behavior of college students?* Results from the research and analysis indicate the influence religiosity has on ethics. The answer to this question is organized around several questions, as follows.

First, to what extent does the type of measurement for religiosity matter in research? The first two hypotheses examined ethical awareness and religiosity. Religiosity was measured in two ways. This first measure of religiosity (R1) used a single question about weekly attendance for religious services. This measurement is the same as that used by Conroy and Emerson (2004) and was used so direct comparisons could be made.

The second measure of religiosity (R2) looked at the salience of religiosity using the Salience of Faith scale developed by Roof and Perkins (1975). This scale has a very strict standard for high versus not-high salience. Although stringent, this standard was maintained throughout the research.

Hypothesis 1 states that college students that attend church at least once a week are more likely to have a higher ethical awareness than those students that do not attend church weekly. The participants were asked to respond to the 29 scenarios dealing with ethical situations. They were asked to evaluate the situation based on their own personal values and the ethical issues involved. Their responses ranged between *never acceptable* and *always acceptable*.

In addition, respondents were asked in the survey to identify how often they participated in religious services. The responses were divided into two groups: those not attending religious services weekly (*never, rarely, and about once a month*) and those attending services weekly (*weekly and several times a week*).

Findings from both the parametric and non-parametric tests indicate that weekly attendance of religious services is associated with a lower acceptability of the unethical situations presented in nine of the 29 vignettes. The null hypothesis, H1, that religiosity does not affect ethical attitudes, is rejected for nine of the vignettes, but falls short of the standard of 15 or more than half of the total 29 vignettes.

These results are similar to those found by Conroy and Emerson (2004). Although using parametric test to confirm their findings was interesting, to see similar results from the non-parametric tests was also exciting. This excitement arises because the results were similar using both types of tests. This current study determined that in nine of the vignettes there was an increase in one's ethical awareness if he/she attended weekly religious services. Of interest is that only Q10 and Q20 were found to be significant in both studies.



Over all the weak support for this hypothesis causes a failure to reject the null. This is consistent with the assumption that a correlation exists between religiosity and ethical perceptions, but with this measure for religiosity (weekly church attendance), there are not sufficient results to reject the null.

Hypothesis 2 states that college students with high religious salience are more likely to have higher ethical awareness than those students with non-high religious salience. This hypothesis was tested using the responses from Q1-29 and the Religious Salience Scale (Q39-41).

Eight of the vignettes found to be significant for H1 are also found significant for H2. The one vignette (Q29) that is not significant using the non-parametric test in H2 is barely above the level of significance at .054. In addition, ten more vignettes were statistically significant using the more stringent measure for religiosity in H2.

It is notable that an increased number of vignettes show significance when the measure of religiosity is better defined or uses a multiple unit measurement for religiosity rather than a single unit of measurement. There were nine vignettes where the null hypothesis was rejected for H1, yet there were eighteen scenarios where the null hypothesis was rejected for H2. This difference in the number of vignettes showing statistical significance is interesting and addressed the concerns of other researchers who identified the single item measure for religiosity as inferior.

The initial concern and the findings of H1 and H2, fundamental to the research question, indicate the need for a multi-item measure for religious salience. This study confirms the concern of previous researchers (Dittes, 1969; Parboteeah et al., 2008; Vitell, 2009; Wilkes et al., 1986) about a single item measurement for religiosity. Perhaps

in future research factor analysis could be done by each level on the salience scale to see where the significance lies. This study used the scale as prescribed by the creators of the measurement.

Second, to what degree do factors other than religious salience impact the ethical attitude of students? These next three hypotheses looked at demographic factors other than religion that might impact ethical attitude. Hypothesis three examined the impact of education on ethical attitude of students, while hypothesis four investigated gender and hypothesis five considered age. The premise of the third hypothesis is that students who have completed courses in ethics, religion or theology will have a higher ethical awareness than those students that have never had such courses. Participants were asked if they had completed a stand alone course in ethics, religion or theology. This hypothesis was analyzed in two parts, first using courses in ethics and then courses in religion or theology.

Interesting to note is that students who had completed at least one course in ethics were shown as having no difference in ethical attitude than students who had not taken a course in ethics. Conversely, taking a course in religion or theology is related to a reduced level of acceptance of underreporting income for taxes (Q10), insider trading (Q18), overstating deductions for taxes (Q28), and taking proprietary data from employer (Q29). Three of these vignettes deal with illegal activity and the other violates company standards.

Given the limited effect of course completion, the findings of this study indicate that taking a course in religion, theology or ethics does not have a significant effect on students' ethical awareness. Apparently, the impact of education on the ethical attitude

of students falls outside the completion of at least one course in ethics, religion or theology. With an emphasis in education on teaching ethics in all courses, the impact of stand alone courses may not be as significant.

The implications for faculty and curriculum need to go beyond pure academics of the subject matter to development of the ethical decision-making process. Why do students choose to accept one unethical situation and reject another? Or why will a student who reports religion to be significant choose to speed on a regular basis when it violates a law of the land and more importantly contradicts the teaching of the religion one states is significant?

Gender was addressed in hypothesis four, answering the question to what extent does gender influence the ethical awareness of students. Previous studies show mixed results, but when there was a difference between the responses of men and women; women were most often found to be more ethical in their attitude or awareness than men. Findings in this study on gender are consistent with the literature. Female students consistently found the ethically questionable situations presented in the vignettes less acceptable. The average mean score for each question confirms females are less accepting of an ethically questionable situation than are males. Thus, this study confirms the findings of previous studies that show when gender impacts an ethical decision, females are more ethical in their decision than are males.

The premise of the fifth hypothesis is that age plays a role in the ethical awareness of students. Respondents were asked to select their age category from four options. The respondents were divided into two groups with students 19 and under falling into the category of younger students and students 20 and older categorized as older students.

The effect of age is not as apparent from this study. The impact of being older is statistically significant in only 3 of the 29 vignettes, where older age is associated with lower levels of acceptability of the vignettes. This is not consistent with most of the other published reports (i.e. Borkowski and Urgas, 1998; Smith and Oakley, 1997). Additional data analyses were conducted to see if using different age segmentation would make a difference. Dividing the data along each age segmentation and then running the analysis made no change in the vignettes showing statistical significance. Apparently, age impacts ethical awareness or ethical attitude of students in a limited set of circumstances.

In addition some may argue that to study age in traditional college situations is not valid since most traditional college students are 18 to 23 for the most part. If these typical students are used, then age really is not a variable at all. Is the 23-year-old really older in thinking than the 19-year-old?

Also under investigation was a third hypothesis, to what extent does religious salience impact ethical behavior in students? The premise of this hypothesis is that religious salience plays a role in the ethical behavior of students. Unlike the other hypotheses in this study, this was the first hypothesis to deal with ethical behavior. The focus in previous studies has been with the ethical awareness of the respondents and failed to address actual behavior. The lack of studies dealing with behavior supported the need for this hypothesis.

Students were asked seven questions about ethical behavior. Three of these questions concentrate on violation of legal standards such as underage drinking of alcohol, speeding, and failing to come to a complete stop at stop signs or running red

lights. The remaining four questions deal with violation of cultural norms like cheating, lying to parents or professors, and breaking campus rules.

The effect of religious salience on actual ethical behavior is evident from this study. The impact of high religious salience is statistically significant in six of the seven questions. Only the question about speeding was unaffected by the religious salience of the students. It is interesting to see that with speeding students seem to accept the behavior even though it is illegal and has financial consequences at the least. An assumption for the high score may be that students have accepted speeding as an action that if caught has immediate consequences, but the risk of getting caught is low enough to participate in the unethical behavior. The most significant results are shown in Table 5.1.

**Table 5.1**

*Hypothesis 6-Results of parametric tests on behavior including Cohen's d results*

Vignette	Salience	N	Mean	Std. Dev.	Std. Err. Mean	Cohen's d
Q30 HOW OFTEN DID YOU DRINK ALCOHOL BEFORE TURNING 18?	1 not High	175	1.40	1.505	.114	.54
	2 High	213	.69	1.128	.077	Med
Q31 HOW OFTEN HAVE YOU LIED TO PARENTS SINCE TURNING 18?	1 not High	174	2.09	1.239	.094	.49
	2 High	213	1.53	1.044	.072	low
Q33 HOW OFTEN HAVE YOU CHEATED IN COLLEGE?	1 not High	175	1.27	1.210	.091	.48
	2 High	213	.75	.951	.065	low
Q34 HOW OFTEN DO YOU SPEED?	1 not High	175	3.45	1.363	.103	.09
	2 High	213	3.32	1.388	.095	none
Q35 HOW OFTEN HAVE YOU LIED TO YOUR PROFESSOR?	1 not High	175	1.16	1.316	.100	.38
	2 High	213	.72	1.002	.069	low
Q37 HOW OFTEN DO YOU FAIL TO STOP AT SIGN OR RUN RED LIGHT?	1 not High	175	2.15	1.619	.122	.32
	2 High	213	1.69	1.317	.090	low
Q38 HOW OFTEN DO YOU BREAK CAMPUS RULES?	1 not High	175	2.33	1.613	.122	.50
	2 High	212	1.59	1.368	.094	Med

**Table 5.1 (cont.)**

Vignette		Levene's Test		t-test for Equality of Means				
		Equality Variances		t	df	Sig. (2-tail)	Mean Diff.	Std. Error Diff.
		F	Sig.					
Q30 DRINKING ALCOHOL BEFORE 18?	Equal variances assumed	46.842	.000	5.307	386	.000	.710	.134
Q31 LYING TO PARENTS AFTER 18?	Equal variances assumed	6.014	.015	4.787	385	.000	.556	.116
Q33 CHEATING	Equal variances assumed	8.566	.004	4.766	386	.000	.523	.110
Q34 SPEEDING	Equal variance not assumed	.013	.910	.902	374	.368	.126	.140
Q35 LYING TO PROFESSOR?	Equal variances assumed	9.658	.002	3.711	386	.000	.437	.118
Q37 FAIL TO STOP AT SIGN OR RED LIGHT?	Equal variances assumed	17.765	.000	3.076	386	.002	.458	.149
Q38 BREAK CAMPUS RULES?	Equal variances assumed	14.326	.000	4.826	385	.000	.731	.152

The results of this hypothesis confirm the assumption of this researcher. It was expected that students with higher religious salience would be less likely to participate in unethical behavior. Although this study used self-reported behavior, the data shows that religiosity has an impact on ethical behavior.

These results highlight and affirm the words of James Culliton (1949) and Scott J. Vitell (2009) regarding what business can learn from religion with respect to ethics. In addition, the noticeable lack of research on actual behavior is addressed in this study. Measuring ethical behavior may be difficult but is needed to provide potentially significant information to the knowledge base. Ethical intentions are not the same as

ethical behavior. The inclusion of behavior in this study is by far the most significant element of this research.

### **Limitations of Study and Implications for Future Research**

At least five limitations in this study should be noted. First, this study is limited to the students and institutions willing to participate. Most of the schools addressed, six of seven, are religious in their affiliation if not formally, then historically. Although not intentional, using these institutions allows for an assumption that this study has a focus on responses from students at religious institutions.

Second, the use of a convenience sample purports the total population of students is not included. Although this study broadened the demographic footprint of the students researched, it is not intended to provide implication for all students. The students do come from various geographic areas of the country, but what regions of residence other than the location of the school are not known.

Third, the stringent criterion set by Roof and Perkins (1975) Scale of Religious Salience is a limitation of this study. The designers of this scale created it not to be linear but rather to produce two distinct groups—high salience and not-high salience. Using the strict score of 10 or 11 out of 11 for high salience is very narrow. If a scale with a broader range were used for greater variability then researchers might find additional insights into the data gathered. Concern was expressed regarding the strict nature of the scale, but to provide consistency with previous use of the scale, this study held to the strictness. This strictness may need to be addressed in future research.

Fourth, there are likely other independent and/or intervening variables not included in this study, such as ethnicity, cultural influences, length of religious emphasis

which could impact ethical awareness and/or behavior. Additionally, given that this study covers a different time period from previous studies, one could consider the changing environment of higher education and ethics of students in general as a potentially significant intervening variable.

Globalization of the political economy, reductions in government funding, academic capitalism, changes in national higher education policies, increases in focus on technology are a few of the trends facing students today that impact their educational environment. The circumstances for those starting college have changed due to increases in choice of institution type, flexibility of course design and delivery, and the range of institutional strategies. Other issues include changes in student motivation, easy access to technology, and the trend for students to either attend college part-time or work while attending full-time. All of these are factors that influence current students that may or may not have impacted earlier studies. Furthermore, the trends facing student today may not be factors in a few years. The educational environment is dynamic.

Finally, the fact that the behavior used in this study is self-reported and not actually observed behavior may be questioned by some. The use of self-reported behavior was the most conducive form of behavior available for this study.

This study focused on the impact of religiosity on the ethical awareness and behavior of college students. While research may answer some questions, it usually raises other questions. These questions simply open up areas to be investigated later. Based on the results of this study, several questions exist about the options and opportunities for future research.



First, what other student groups are not represented by this study? The need to survey students from a larger geographic population as well as students from non-religious affiliated schools is needed. The results of findings from future student and population groups could then be compared to the findings of this and other studies to make implications or comparisons.

Second, what is the best measurement for religious salience? As noted, the scale used to measure religious salience, the Salience in Religious Commitment Scale, developed by Roof and Perkins (1975) seemed very narrow and rigid. The scale creators cautioned using the scale in a linear way (high, medium, and low, for example) to measure religious commitment. Consequently, two groups resulted: high salience and not-high salience. The strictness of the scale used in this study opens the possibility to investigation and the possibility of development of a scale with more variability for in-depth statistical analysis.

Third, what is the best way to measure behavior in students? Is self-reported behavior acceptable? Are there some biases implied by using this form of response? What are practical ways to measure actual behavior? These questions seem to impact researchers in various areas of study. The ability to determine a practical and dependable way to measure ethical behavior might provide great expansions in studies of this type.

Fourth, would it be best to address co-variant situations in an attempt to isolate a combination that might be the strongest indicator of what impacts ethical behavior? For example, do older students who have completed a course in ethics, religion or theology judge ethical situations differently from younger students who have also completed a

class in ethics or religion? The possibilities are numerous and might be interesting to study, but fall beyond the scope of this research.

Finally, would there be benefit in having a follow-up section of qualitative questions for the sake of clarity? Although this was considered in this study, the desire for full anonymity and honesty of the students overruled the idea. Future research that would include both quantitative and qualitative responses could provide a deeper understanding into the full decision-making process.

### **General Conclusions**

James Culliton (1949) stated in his *Harvard Business Review* article “Business and Religion” that businessmen owe it to themselves to see what religion has to offer (p. 269). These remarks over half a century ago sparked an interest in religion and business that continues today. Scott J. Vitell (2009) states “religion *definitely does* have something to offer business, especially business *ethics*” (p. 155). This research project explored that premise when it asked the question: does the level of college students’ religiosity affect their ethical awareness or behavior?

This research examined the influences on ethical awareness and behavior of college students. The study extends the understanding of the ethical decision-making process through identifying variables of an individual’s life that influence his/her position on ethical matters. Furthermore, it expands this concept by looking at actual ethical behavior. To the researcher’s knowledge, no empirical research into this area has previously been done. This research incorporated both parametric and non-parametric testing, adding value to the findings. The inclusion of analysis to measure effect size enlarges the research and provides data which future research can compare.

It is encouraging to see that religious faith can be and is an influence on ethical awareness and behavior of college students. For the Christian student actively inculcating religious faith into his decision-making process, this study displays a picture of a person who supports the teachings and expectations of such faith. If there is a discouraging side to this study, it is the number of students that report cheating, lying or speeding yet fail to see the implications of these actions, whether ethical or practical. Even those in the high salient group do not see the value of incorporating their faith into their decision processes. One has to wonder if these factors (religious faith and ethical decision making/behavior) were incorporated into the decision making process whether these individuals would have more productivity and a greater sense of fulfillment. Research on this question would be interesting.

Furthermore, although the effect of religiosity on ethical awareness and behavior are statistically significant, the size of the effect is not as prominent as those in the Christian higher education arena might expect. Further study along with discussion among Christian college educators is warranted. The use of Cohen's *d* shows that most of the situations that show statistical significance have low to medium practical significance. Only a few situations revealed medium to high practical significance and there was not one situation with high practical significance. This project provides the groundwork for future studies in this area.

According to its purpose, this research project addresses the connection between religiosity and ethical decision making to actual behavior. As presented in the introduction of this study, prior research in this area has resulted in mixed conclusions. In addition, the lack of focus on actual behavior and not intent was missing. To fill this gap

in research, this study reviewed the areas of previous research but extended the investigation to actual behavior. Intent is not actual behavior; now both have been addressed.

## Appendix A

Vignette Descriptions--Italics denote vignettes included in Conroy and Emerson (2004)

Vignette	Description
1.	<b>One of your suppliers sends your family a package of expensive gourmet cheeses for the holidays. The card enclosed wishes you and your family a happy holiday.</b>
2.	<b>You have been working with a large company trying to secure their first order with your company. During your latest conversation with the purchasing manager you discuss giving a large gift to his son's Boy Scout Troop.</b>
3.	<i>An executive earning \$100,000 a year padded (inflated) his expense account by about \$3,000 a year.</i>
4.	<i>In order to increase profits, a general manager used a production process which exceeded legal limits for environmental pollution.</i>
5.	<b>As plant manager, you are hosting an informal celebration in the office. The food budget is \$200. Your daughter has just started her own catering business and asks to supply the food. Since she is just starting out, she'll do it at cost and provide extra items at no charge.</b>
6.	<b>John has worked for your company for over 25 years. He has been a good employee and can retire in 5 years. Budget cuts need to be made so a decision is made to eliminate John's position and create two part-time positions so younger workers can be hired for less.</b>
7.	<b>You decide to take your spouse along on a business trip. You pay their airline ticket but put basic meals on the company's expense card. It amounts to less than \$50 for the trip.</b>
8.	<b>Cash flow is tight and one of your best clients is calling about an account that is over 30 days due. You know the check might be sent on Friday, but you aren't sure. To appease the caller you tell them the check is going out today.</b>
9.	<i>Because of pressure from his brokerage firm, a stockbroker recommended a type of bond which he did not consider to be a good investment.</i>
10.	<i>A small business received one-fourth of its gross revenue in the form of cash. The owner reported only one-half of the cash receipts for income tax purposes.</i>
11.	<b>An administrative assistance surfs the internet shopping for personal items during company time. She spends less than an hour each day doing this.</b>
12.	<b>A single mom spends several hours per week on work time talking to her kids and their caregivers before and after school.</b>

13. **Your company has a huge room stocked with office supplies like paper, pens, markers, note pads, etc. You take home some of the supplies to share with a neighbor family that needs these for school. Your neighbor lost his job three months ago and has not been able to find anything.**
14. *A company president found that a competitor had made an important scientific discovery which would sharply reduce the profits of his own company. He then hired a key employee of the competitor in an attempt to learn the details of the discovery.*
15. **Your company has very high standards for their products. Products that fail to meet all quality standards are destroyed. You have some product available but it fails one quality standard set by your company but this defect does not impact the functionality of the product. You decide to send the product to the customer without telling them because the next batch of product will not be available until next week. The customer may not even notice the defect or care.**
16. **You frequently use the office copier after work for personal business. But you are sure that the cost of the printing is less than what you pay for supplies in which you don't ask for reimbursement.**
17. *A company president recognized that sending expensive Christmas gifts to purchasing agents might compromise their positions. However, he continued the policy since it was common practice and changing it might result in loss of business.*
18. *A corporate director learned that his company intended to announce a stock split and increase its dividend. On the basis of this information, he bought additional shares and sold them at a gain following the announcement.*
19. *A corporate executive promoted a loyal friend and competent manager to the position of divisional vice president in preference to a better-qualified manager with whom he had no close ties.*
20. *An engineer discovered what he perceived to be a product design flaw which constituted a safety hazard. His company declined to correct the flaw. The engineer decided to keep quiet, rather than taking his complaint outside the company.*
21. *A comptroller selected a legal method of financial reporting which concealed some embarrassing financial facts which would otherwise have become public knowledge.*
22. *An employer received applications for a supervisor's position from two equally qualified applicants but hired the male applicant because he thought that some employees might resent being supervised by a female.*
23. **A fellow employee confides in you about a personal problem. You agree to keep it confidential. Later you find out that the situation involves breaking a company policy. You decide to break the confidence and report it to the boss.**

24. *As part of the marketing strategy for a product, the producer changed its color and marketed it as "new and improved," even though its other characteristics were unchanged.*
25. **You have a project that your team has to get out. This means working both Saturday and Sunday and missing church if you are to get it done. Your boss indicates he doesn't think too much of those who use their religion as a crutch.**
26. **Your company has a policy that states you cannot do any personal business on company time. On the side you run a consulting company and occasionally spend 2-3 hours a week taking calls at work when your door is closed. You are on salary, but many weeks have to work 55 or more hours just to get your job done.**
27. *An owner of a small business firm obtained a free copy of a copyrighted computer software program from a business friend rather than spending \$500 to obtain his own program from the software dealer.*
28. **Your accountant has a good track record winning with the IRS. He advises you to stretch your deductions a bit, to lower your taxes. He says you'll probably never get audited. And if you do, he will back you up that it was just a misunderstanding.**
29. **Through no fault of your own you are being let go after 15 years of service as successful salesperson. You have a data file with an impressive list of clients on it. You take a copy of the client list with you.**

## Appendix B

### **Salience in Religious Commitment Scale-Measure of Religiosity**

Below are the scale items. (Point value for each response is shown in parentheses)

1. My religious faith is:

\_\_\_\_ Important for my life, but no more important than certain other aspects of my life (2).

\_\_\_\_ Only of minor importance for my life, compared to certain other aspects of my life (1).

\_\_\_\_ Of central importance for my life, and would, if necessary come before all other aspects of my life (3).

2. Everyone must make many important life decisions, such as which occupation to pursue, what goals to strive for, whom to vote for, what to teach one's children, etc. When you have made, or do make, decisions such as these, to what extent do you make the decisions on the basis of your religious faith?

\_\_\_\_ I seldom if ever base such decisions on religious faith (1).

\_\_\_\_ I sometimes base such decision on my religious faith but definitely not most of the time(2).

\_\_\_\_ I feel that most of my important decisions are based on my religious faith, but usually in a general, unconscious way (3).

\_\_\_\_ I feel that most of my important decisions are based on my religious faith, and I usually consciously attempt to make them so (4).

3. Without my religious faith, the rest of my life would not have much meaning to it.

Strongly disagree (1) disagree (2) agree (3) strongly agree (4)

Note: Numbers in parentheses indicate values for scoring purposes



## Appendix C

### Complete Survey

#### Introduction

This survey is part of a doctoral dissertation research project that is looking at the way college students make decisions on variety of issues and dilemmas that they have faced or will face in their careers and life in general. It also asks some information about how you have acted in certain situations in the past 2-4 years. Let us assure you all answer are strictly confidential and this project has been approved by Anderson University's Internal Review Board. Dr. Don Daake of Olivet Nazarene University is the supervising dissertation chair. If you have any concerns he may be reached at 815-939-5137. No use of individual information will be made; only group totals are of concern.

#### PART I—Situational Vignettes

Please evaluate each situation on the basis of your own personal values and the ethical issues involved in the following situations. Your response will range from never acceptable to always acceptable. Answers are not necessarily right or wrong. Each situation is a matter of judgment so please give us your candid and honest answers. Circle the ONE number for each situation that bests reflects your evaluation of the situation. All answers are completely anonymous. Thank you for taking the time to participate in this survey.

1. One of your suppliers sends your family a package of expensive gourmet cheeses for the holidays. The card enclosed wishes you and your family a happy holiday.  
1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable
2. You have been working with a large company trying to secure their first order with your company. During your latest conversation with the purchasing manager you discuss giving a large gift to his son's Boy Scout Troop.  
1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable
3. An executive earning \$100,000 a year inflated his expense account by about \$3,000 a year.  
1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable
4. In order to increase profits, a general manager used a production process which exceeded legal limits for environmental pollution.  
1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

5. As plant manager, you are hosting an informal celebration in the office. The food budget is \$200. Your daughter has just started her own catering business. She'll cater the dinner for \$200 and provide extras at no additional charge. You let her do it.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

6. John has worked for your company for over 25 years. He has been a good employee and can retire in 5 years. Budget cuts need to be made so a decision is made to eliminate his position and create two part-time positions so younger workers can be hired for less.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

7. You decide to take your spouse along on a business trip. You pay his/her airline ticket but put basic meals on the company's expense card. It amounts to less than \$50 for the trip.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

8. Cash flow is tight and one of your best clients is calling about an account that is 30 days over due. You know the check might be sent next week, but you aren't sure. You tell him the check is going out today.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

9. Because of pressure from his brokerage firm, a stockbroker recommended a type of bond which he did not consider to be a good investment.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

10. A small business received one-fourth of its gross revenue in the form of cash. The owner reported only one-half of the cash receipts for income tax purposes.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

11. An administrative assistance spends less than an hour each day surfing internet shopping for personal items during company time.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

12. A single mom spends several hours per week at work talking to her kids and their caregivers before and after school.

1-----2-----3-----4-----5-----6-----7  
Never Acceptable Always acceptable

13. Your company has a huge room stocked with office supplies like paper, pens, markers, note pads, etc. You take home some of the supplies to share with a neighbor. Your neighbor has been out of work for three months and needs the supplies for his kids.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
14. A company president found that a competitor made an important scientific discovery which would sharply reduce the profits of his own company. He then hired a key employee of the competitor in an attempt to learn the details of the discovery.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
15. Your company has very high standards for its products. Products that fail to meet all quality standards should be destroyed. You have some product available but it fails one quality standard set by your company. However this defect does not impact the functionality of the product. You decide to send the product to the customer without telling them because the next batch of product will not be available until next week. The customer may not even notice the defect.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
16. You frequently use the office copier for personal business. But you are sure that the cost of the printing is less than what you pay for supplies in which you don't ask for reimbursement.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
17. A company president recognized that sending expensive Christmas gifts to purchasing agents might compromise their positions. However, he continued the policy since it was common practice and changing it might result in loss of business.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
18. A corporate director learned that his company intended to announce a stock split (each stock is now worth two) and increase its dividend. On the basis of this information, he bought additional shares and sold them at a gain following the announcement.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
19. A corporate executive promoted a loyal friend and competent manager to the position of divisional vice president in preference to a better-qualified manager with whom he had no close ties.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable

20. An engineer discovered what he perceived to be a product design flaw which constituted a safety hazard. His company declined to correct the flaw. The engineer decided to keep quiet, rather than taking his complaint outside the company.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
21. A comptroller selected a legal method of financial reporting which concealed some embarrassing financial facts which would otherwise have become public knowledge.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
22. An employer received applications for a supervisor's position from two equally qualified applicants but hired the male applicant because he thought that some employees might resent being supervised by a female.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
23. A fellow employee confides in you about a personal problem. You agree to keep it confidential. Later you find out that the situation involves breaking a company policy. You decide to break the confidence and report it to the boss.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
24. As part of the marketing strategy for a product, the producer changed its color and marketed it as "new and improved," even though its other characteristics were unchanged.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
25. You have a project that your team has to get out. This means working both Saturday and Sunday and missing church if you are to get it done. You feel strongly that you should not miss church. Your boss indicates he doesn't think too much of those who use their religion as a crutch.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable
26. Your company has a policy that states you cannot do any personal business on company time. On the side you run a consulting company and occasionally spend 2-3 hours a week taking calls at work when your door is closed. You are on salary, but many weeks you have to work 55 or more hours just to get your job done.
- 1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable

27. An owner of a small business firm obtained a free copy of a copyrighted computer software program from a business friend rather than spending \$500 to obtain his own program from the software dealer.

1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable

28. Your accountant has a good track record winning with the IRS. He advises you to stretch your deductions a bit, to lower your taxes. He says you'll probably never get audited. And if you do, he will back you up that it was just a misunderstanding.

1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable

29. Through no fault of your own you are being laid off after 15 years of service as successful salesperson. You have a data file with an impressive list of clients on it. You take a copy of the data file with you.

1-----2-----3-----4-----5-----6-----7  
 Never Acceptable Always acceptable

## PART II—ACTUAL BEHAVIOR SITUATIONS

Below are a series of behaviors in which individuals may or may not engage. Understanding that these surveys are totally anonymous, we would like for you to indicate whether you do or have engaged in these behaviors. Use the guidelines below to help you determine the proper rating on the scales

- 0= never have
- 1= on rare occasions
- 2=occasionally, but not too often
- 3= quite frequently
- 4=most of the time
- 5= Virtually all of the time

Please circle the number from 0 to 5 that best reflects your actual behavior in these situations. Again we appreciate your honesty and your answers are confidential.

30. How often did you drink alcohol before turning 18 years of age?

0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME

31. How often did you lie to your parents since turning 18 years of age?

0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME

32. How often do you under-report tips or wages from work?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
33. How often have you cheated (plagiarism, copying or using crib notes on a test, or turning in work not your own) during your college experience?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
34. How often do you speed (driving in excess of posted speed)?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
35. How often have you lie to a professor about missing class, completing an assignment or requesting an extension during your college experience?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
36. How often have you shoplifted (taken something from a store without paying for it) since turning 18 years of age?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
37. How often do you call in sick for work when you really were not sick?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
38. How often do you fail to come to a complete stop at a stop sign or run a red light?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
39. How often have you used illegal drugs or prescription drugs that were not prescribed to you while in college?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME
40. How often do you break campus rules that you agreed to abide by when you enrolled?  
 0-----1-----2-----3-----4-----5  
 NEVER ALL THE TIME

### Part III—FAITH AND RELIGIOUS PRACTICE IN YOUR LIFE

Please answer the following questions about yourself. All answers are completely anonymous.

41. My religious faith is:  
 Important for my life, but no more important than certain other aspects of my life.  
 Only of minor importance for my life, compared to certain other aspects of my life.  
 Of central importance for my life, and would if necessary come before all other aspects of my life.
42. Everyone must make many important life decisions, such as which occupation to pursue, what goals to strive for, whom to vote for, what to teach one's children, etc. When you have made, or do make decisions such as these, to what extent do you make the decisions on the basis of your religious faith?  
 I seldom if ever base such decisions on religious faith.  
 I sometimes base such decisions on my religious faith but definitely not most of the time.  
 I feel that most of my important decisions are based on my religious faith, but usually in a general, unconscious way.  
 I feel that most of my important decisions are based on my religious faith, and I usually consciously attempt to make them so.
43. Without my religious faith, the rest of my life would not have much meaning to it.  
 strongly disagree     disagree     agree     strongly agree
44. How often do you participate in religious services, whether in a church, temple, mosque or in another setting?  
 Never     rarely     about once a month     weekly     several times a week
45. How often do you participate in daily reading of sacred writings, whether the Bible, the Quran, Torah or other writing?  
 Never     rarely     sometimes     often     always
46. How often do you participate in daily prayer?  
 Never     rarely     sometimes     often     always
47. How often do you participate in service projects, whether in a church, a temple, a mosque or in another setting?  
 never     rarely     sometimes     montly     weekly
48. Do you have formal membership in a church, denomination, synagogue, mosque or other religious affiliation?  
 yes     no

#### PART IV—INFORMATION ABOUT YOU

Again this information will be used only for statistical analysis

49. What is your current academic status?  
 Freshman       Sophomore       Junior       Senior
50. Gender       female       male
51. Age       0-19       20-21       22-23       24 or older
52. How many courses in Ethics have you taken while in college?  
 none       one       two       three or more
53. How many courses in religion or theology have you taken while in college?  
 none       one       two       three or more
54. How many times have you been caught cheating during your college experience?  
 never       once       twice       three or more
55. How many speeding tickets have you received in the past three years?  
 none       one       two       three or more
56. MAJOR\_\_\_\_\_

Again, thank you for taking the time to participate in this survey. Your participation is greatly appreciated.



## Appendix D

### *Bonferroni results for R2*

Dependent Variable	(I) Three Levels of Religiosity	(J) Three Levels of Religiosity	Mean Diff (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q1 ONE OF YOUR SUPPLIERS SENDS FAMILY PACKAGE	1 Not High	2 Not High	-.242	.278	1.000	-.91	.43
		3 High	-.426	.220	.159	-.95	.10
	2 Not High	1 Not High	.242	.278	1.000	-.43	.91
		3 High	-.184	.245	1.000	-.77	.41
	3 High	1 Not High	.426	.220	.159	-.10	.95
		2 Not High	.184	.245	1.000	-.41	.77
Q2 WORKING WITH COMPANY TO SECURE FIRST ORDER	1 Not High	2 Not High	.041	.273	1.000	-.62	.70
		3 High	.310	.216	.457	-.21	.83
	2 Not High	1 Not High	-.041	.273	1.000	-.70	.62
		3 High	.269	.240	.792	-.31	.85
	3 High	1 Not High	-.310	.216	.457	-.83	.21
		2 Not High	-.269	.240	.792	-.85	.31
Q3 EXECUTIVE PADS EXPENSE ACCOUNT BY \$3,000	1 Not High	2 Not High	-.072	.247	1.000	-.67	.52
		3 High	.393	.195	.132	-.07	.86
	2 Not High	1 Not High	.072	.247	1.000	-.52	.67
		3 High	.465	.218	.100	-.06	.99
	3 High	1 Not High	-.393	.195	.132	-.86	.07
		2 Not High	-.465	.218	.100	-.99	.06
Q4 TO INCREASE PROFITS EXCEED LEGAL ENVIRONMENTAL LIMITS	1 Not High	2 Not High	.290	.201	.448	-.19	.77
		3 High	.697*	.158	.000	.32	1.08
	2 Not High	1 Not High	-.290	.201	.448	-.77	.19
		3 High	.407	.177	.066	-.02	.83
	3 High	1 Not High	-.697*	.158	.000	-1.08	-.32
		2 Not High	-.407	.177	.066	-.83	.02

Q5 DAUGHTER STARTING CATERING BUSINESS- YOU HIRE HER	1 Not High	2 Not High	-.136	.195	1.000	-.60	.33
		3 High	-.188	.154	.673	-.56	.18
	2 Not High	1 Not High	.136	.195	1.000	-.33	.60
		3 High	-.052	.172	1.000	-.46	.36
	3 High	1 Not High	.188	.154	.673	-.18	.56
		2 Not High	.052	.172	1.000	-.36	.46
Q6 BUDGET CUTS ELIMINATES JOHN'S JOB	1 Not High	2 Not High	-.128	.223	1.000	-.66	.41
		3 High	.464*	.176	.026	.04	.89
	2 Not High	1 Not High	.128	.223	1.000	-.41	.66
		3 High	.591*	.196	.008	.12	1.06
	3 High	1 Not High	-.464*	.176	.026	-.89	-.04
		2 Not High	-.591*	.196	.008	-1.06	-.12
Q7 TAKE SPOUSE ON TRIP SPEND \$50 OF COMPANY MONEY ON HER MEALS	1 Not High	2 Not High	-.004	.274	1.000	-.66	.66
		3 High	.476	.217	.086	-.04	1.00
	2 Not High	1 Not High	.004	.274	1.000	-.66	.66
		3 High	.480	.242	.144	-.10	1.06
	3 High	1 Not High	-.476	.217	.086	-1.00	.04
		2 Not High	-.480	.242	.144	-1.06	.10
Q8 APPEASE CLIENTS TELL THEM CHECK IS GOING OUT ON FRIDAY	1 Not High	2 Not High	.615*	.205	.008	.12	1.11
		3 High	1.081*	.162	.000	.69	1.47
	2 Not High	1 Not High	-.615*	.205	.008	-1.11	-.12
		3 High	.466*	.180	.030	.03	.90
	3 High	1 Not High	-1.081*	.162	.000	-1.47	-.69
		2 Not High	-.466*	.180	.030	-.90	-.03
Q9 PRESSURE FROM FIRM RECOMMENDS STOCK NOT CONSIDERED A GOOD INVESTMENT	1 Not High	2 Not High	.121	.172	1.000	-.29	.54
		3 High	.421*	.136	.006	.09	.75
	2 Not High	1 Not High	-.121	.172	1.000	-.54	.29
		3 High	.299	.152	.148	-.07	.66
	3 High	1 Not High	-.421*	.136	.006	-.75	-.09
		2 Not High	-.299	.152	.148	-.66	.07

Q10 SMALL BUSINESS OWNER UNDER	1 Not High	2 Not High	.427	.195	.088	-.04	.90
		3 High	.518 <sup>*</sup>	.154	.003	.15	.89
REPORTS CASH INCOME	2 Not High	1 Not High	-.427	.195	.088	-.90	.04
		3 High	.091	.172	1.000	-.32	.51
	3 High	1 Not High	-.518 <sup>*</sup>	.154	.003	-.89	-.15
		2 Not High	-.091	.172	1.000	-.51	.32
Q11 INTERN SPENDS HOUR A DAY SURFING AND SHOPPING	1 Not High	2 Not High	.458	.223	.123	-.08	.99
		3 High	.658 <sup>*</sup>	.176	.001	.23	1.08
	2 Not High	1 Not High	-.458	.223	.123	-.99	.08
		3 High	.201	.197	.926	-.27	.67
	3 High	1 Not High	-.658 <sup>*</sup>	.176	.001	-1.08	-.23
		2 Not High	-.201	.197	.926	-.67	.27
Q12 SINGLE MOM SPENDS AN HOUR A DAY ON PHONE WITH KIDS	1 Not High	2 Not High	.315	.257	.666	-.30	.93
		3 High	.291	.203	.458	-.20	.78
	2 Not High	1 Not High	-.315	.257	.666	-.93	.30
		3 High	-.024	.227	1.000	-.57	.52
	3 High	1 Not High	-.291	.203	.458	-.78	.20
		2 Not High	.024	.227	1.000	-.52	.57
Q13 TAKE HOME OFFICE SUPPLIES FOR NEEDY NEIGHBOR	1 Not High	2 Not High	.572	.254	.075	-.04	1.18
		3 High	.818 <sup>*</sup>	.201	.000	.33	1.30
	2 Not High	1 Not High	-.572	.254	.075	-1.18	.04
		3 High	.246	.224	.816	-.29	.78
	3 High	1 Not High	-.818 <sup>*</sup>	.201	.000	-1.30	-.33
		2 Not High	-.246	.224	.816	-.78	.29
Q14 HIRES KEY EMPLOYEE TO GET ACCESS TO DISCOVERY	1 Not High	2 Not High	.116	.271	1.000	-.54	.77
		3 High	.461	.214	.095	-.05	.98
	2 Not High	1 Not High	-.116	.271	1.000	-.77	.54
		3 High	.346	.239	.448	-.23	.92
	3 High	1 Not High	-.461	.214	.095	-.98	.05
		2 Not High	-.346	.239	.448	-.92	.23

Q15 SELL DEFECTIVE PRODUCTS THAT WON'T IMPACT PERFORMANCE	1 Not High	2 Not High	.500 <sup>*</sup>	.204	.045	.01	.99
		3 High	.737 <sup>*</sup>	.161	.000	.35	1.12
	2 Not High	1 Not High	-.500 <sup>*</sup>	.204	.045	-.99	-.01
		3 High	.238	.180	.566	-.20	.67
	3 High	1 Not High	-.737 <sup>*</sup>	.161	.000	-1.12	-.35
		2 Not High	-.238	.180	.566	-.67	.20
Q16 USING COMPANY COPIER FOR PERSONAL USE	1 Not High	2 Not High	.104	.255	1.000	-.51	.72
		3 High	.219	.202	.835	-.27	.70
	2 Not High	1 Not High	-.104	.255	1.000	-.72	.51
		3 High	.115	.225	1.000	-.43	.66
	3 High	1 Not High	-.219	.202	.835	-.70	.27
		2 Not High	-.115	.225	1.000	-.66	.43
Q17 SENDING EXPENSIVE CHRISTMAS PRESENTS TO GET BUSINESS	1 Not High	2 Not High	.177	.234	1.000	-.39	.74
		3 High	.293	.185	.341	-.15	.74
	2 Not High	1 Not High	-.177	.234	1.000	-.74	.39
		3 High	.116	.207	1.000	-.38	.61
	3 High	1 Not High	-.293	.185	.341	-.74	.15
		2 Not High	-.116	.207	1.000	-.61	.38
Q18 DIRECTOR LEARNS COMPANY INTENDED TO ANNOUCE STOCK SPLIT- BUYS SHARES	1 Not High	2 Not High	.363	.258	.479	-.26	.98
		3 High	.590 <sup>*</sup>	.201	.011	.11	1.07
	2 Not High	1 Not High	-.363	.258	.479	-.98	.26
		3 High	.227	.228	.960	-.32	.78
	3 High	1 Not High	-.590 <sup>*</sup>	.201	.011	-1.07	-.11
		2 Not High	-.227	.228	.960	-.78	.32
Q19 EXECUTIVE PROMOTES FRIEND RATHER THAN BETTER QUALIFIED CANDIDATE	1 Not High	2 Not High	.062	.250	1.000	-.54	.66
		3 High	.202	.198	.922	-.27	.68
	2 Not High	1 Not High	-.062	.250	1.000	-.66	.54
		3 High	.140	.220	1.000	-.39	.67
	3 High	1 Not High	-.202	.198	.922	-.68	.27
		2 Not High	-.140	.220	1.000	-.67	.39

Q20 ENGINEER DOES NOT TAKE UNCORRECTED FLAW NEWS OUTSIDE THE COMPANY	1 Not High	2 Not High	.243	.208	.735	-.26	.74
		3 High	.677 <sup>*</sup>	.165	.000	.28	1.07
Q21 COMPROLLER SELECTED LEGAL METHOD TO CONCEAL EMBARRASSING FACTS	2 Not High	1 Not High	-.243	.208	.735	-.74	.26
		3 High	.434	.183	.055	-.01	.88
	3 High	1 Not High	-.677 <sup>*</sup>	.165	.000	-1.07	-.28
		2 Not High	-.434	.183	.055	-.88	.01
Q22 HIRE MALE BECAUSE SOME EMPLOYEES RESENT FEMALE BOSS	1 Not High	2 Not High	.285	.277	.914	-.38	.95
		3 High	.015	.219	1.000	-.51	.54
	2 Not High	1 Not High	-.285	.277	.914	-.95	.38
		3 High	-.270	.245	.810	-.86	.32
	3 High	1 Not High	-.015	.219	1.000	-.54	.51
		2 Not High	.270	.245	.810	-.32	.86
Q23 EMPLOYEE CONFIDES BUT YOU REPORT TO BOSS WHEN IT BECOMES APPARENT BREAKS COMPANY POLICY	1 Not High	2 Not High	-.138	.263	1.000	-.77	.49
		3 High	.346	.207	.285	-.15	.84
	2 Not High	1 Not High	.138	.263	1.000	-.49	.77
		3 High	.484	.232	.114	-.07	1.04
	3 High	1 Not High	-.346	.207	.285	-.84	.15
		2 Not High	-.484	.232	.114	-1.04	.07
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	1 Not High	2 Not High	.131	.250	1.000	-.47	.73
		3 High	-.186	.197	1.000	-.66	.29
	2 Not High	1 Not High	-.131	.250	1.000	-.73	.47
		3 High	-.317	.220	.452	-.85	.21
	3 High	1 Not High	.186	.197	1.000	-.29	.66
		2 Not High	.317	.220	.452	-.21	.85
Q24 PRODUCER CHANGES COLOR AND CLAIMS NEW AND IMPROVED	1 Not High	2 Not High	.146	.255	1.000	-.47	.76
		3 High	.331	.201	.302	-.15	.82
	2 Not High	1 Not High	-.146	.255	1.000	-.76	.47
		3 High	.185	.225	1.000	-.36	.73
	3 High	1 Not High	-.331	.201	.302	-.82	.15
		2 Not High	-.185	.225	1.000	-.73	.36

Q25 WORKING	1 Not High	2 Not High	.572	.255	.076	-.04	1.19
SATURDAY & SUNDAY		3 High	1.248*	.200	.000	.77	1.73
AND MISSING CHURCH	2 Not High	1 Not High	-.572	.255	.076	-1.19	.04
		3 High	.675*	.225	.009	.13	1.22
	3 High	1 Not High	-1.248*	.200	.000	-1.73	-.77
		2 Not High	-.675*	.225	.009	-1.22	-.13
Q26 WORK ON	1 Not High	2 Not High	.303	.243	.643	-.28	.89
PERSONAL CONSULTING		3 High	.675*	.191	.001	.22	1.13
BUT WORK 55 HOURS OR	2 Not High	1 Not High	-.303	.243	.643	-.89	.28
MORE		3 High	.372	.215	.253	-.14	.89
	3 High	1 Not High	-.675*	.191	.001	-1.13	-.22
		2 Not High	-.372	.215	.253	-.89	.14
Q27 GET FREE	1 Not High	2 Not High	.245	.268	1.000	-.40	.89
SOFTWARE RATHER		3 High	.599*	.211	.014	.09	1.10
THAN SPENDING \$500	2 Not High	1 Not High	-.245	.268	1.000	-.89	.40
		3 High	.354	.236	.404	-.21	.92
	3 High	1 Not High	-.599*	.211	.014	-1.10	-.09
		2 Not High	-.354	.236	.404	-.92	.21
Q28 ACCOUNTANT	1 Not High	2 Not High	.374	.209	.224	-.13	.88
ADVISES YOU TO		3 High	.741*	.164	.000	.35	1.14
STRETCH DEDUCTIONS	2 Not High	1 Not High	-.374	.209	.224	-.88	.13
		3 High	.367	.185	.143	-.08	.81
	3 High	1 Not High	-.741*	.164	.000	-1.14	-.35
		2 Not High	-.367	.185	.143	-.81	.08
Q29 LET GO - YOU TAKE	1 Not High	2 Not High	-.065	.297	1.000	-.78	.65
CLIENT LIST		3 High	.318	.232	.518	-.24	.88
	2 Not High	1 Not High	.065	.297	1.000	-.65	.78
		3 High	.383	.263	.437	-.25	1.01
	3 High	1 Not High	-.318	.232	.518	-.88	.24
		2 Not High	-.383	.263	.437	-1.01	.25

\*. The mean difference is significant at the 0.05 level.

## Appendix E

### *Descriptive Data by Study Major*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 NONE GIVEN	15	3.9	3.9	3.9
	1 BUSINESS ADMINISTRATION	122	31.4	31.4	35.2
	2 ACCOUNTING	68	17.5	17.5	52.7
	3 ACCOUNTING/FINANCE	7	1.8	1.8	54.5
	4 FINANCE/ECON	28	7.2	7.2	61.7
	5 ECONOMICS	6	1.5	1.5	63.2
	6 MARKETING	37	9.5	9.5	72.8
	7 SCIENCE	12	3.1	3.1	75.8
	8 ENGLISH AND COMMUNICATION	15	3.9	3.9	79.7
	9 SOCIAL WORK	3	.8	.8	80.5
	10 MATHEMATICS	4	1.0	1.0	81.5
	11 MUSIC	12	3.1	3.1	84.6
	12 PSYCHOLOGY	17	4.4	4.4	88.9
	13 THEOLOGY/BIBLE	23	5.9	5.9	94.9
	14 EDUCATION	16	4.1	4.1	99.0
	15 HISTORY	4	1.0	1.0	100.0
	<b>Total</b>	<b>389</b>	<b>100.0</b>	<b>100.0</b>	

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## V I T A

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### Education:

B.S., Welch College (formerly FWBBC, 1982 (Music and Cross Cultural Studies);

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Dissertation: The Relationship of Religiosity on the Ethical Awareness  
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### **Professional Experience**

2011-present Chief Financial Officer, Clearly Consulting, LLC. Primary accounts include: Robert J. Morgan Books and Evangelical Training Association.

2002-2010 Business Department Chair and Professor, FWBBC, Nashville, Tennessee

2007-2012 Supervisor (part-time), Towne Park Inc., Downtown Hilton, Nashville, TN

1998-2002 Adjunct Professor, Trevecca Nazarene University, Nashville, Tennessee

2000-2002 Marketing Manager, First Data Corporation (FDC), Nashville, Tennessee

1996-2000 Manager, Account Management Department, FDC, Nashville, Tennessee

1996 Children's Department Manager, Sears, Hickory Hollow Mall, Nashville

1994-1996 Office Manager, Better Home Maintenance, Nashville, Tennessee

1992-1994 Account Manager, Envoy Corporation, Nashville, Tennessee

1990-1992 Teacher, Pleasant View Christian School, Pleasant View, Tennessee

1987-1990 Assistant to Comptroller, Auto Rental Systems, Inc., Nashville, Tennessee

1982-1987 Teacher, Pleasant View Christian School, Pleasant View, Tennessee

### **Teaching Experience**

Department Chair/Professor, Business Department, Free Will Baptist Bible College,  
(Fall 2001– Fall 2010) As Department Chair, supervise other faculty members in  
this department, prepare the budget and reports, program and staff all course

offerings, and serve under the Provost. A faculty member responsible in this position for advising students, serving on administrative committees, and preparing and teaching the following classes: *Principles of Management, Business Ethics, Marketplace Management, Business Finance, Production and Operations Systems, Small Business Management, Strategic Planning, Business Seminar, Business Internship, Decision Making for Managers, Capstone Experience.*

Course syllabi are available upon request.

Adjunct Professor of Management, Trevecca Nazarene University, Fall 1999-Spring 2001. Prepared and taught Principles of Management on the undergraduate level.

Classroom Teacher, Pleasant View Christian School, Pleasant View, TN 1982-1987, 1990-1992. Taught in several areas where needed using a para-professional certificate. These areas included: Private Piano; Choir; 5<sup>th</sup> and 6<sup>th</sup> Grades, various subjects; and Bible.

Other Collegiate Assignments at FWBBC

Student Development Committee

Planning and Assessment Committee

**Professional Organizations:**

Christian Business Faculty Association

Academy of Management

**Honors:**

Advisor of the Year, FWBBC, 2003 & 2009

Six Sigma Green Belt, 2000

Mission Trip Leader:

Houston, TX 2003    Ogden, UT 2003, 2010    Panama, 2004

Kazakhstan, 2005, 2006, 2007, 2008    Tajikistan, 2006, 2008

Mission Team Member:

Kazakhstan, 2004, 2011    Tajikistan, 2004, 2009

Supporting Role in "Two From Galilee" 2001, 2002, 2004, 2012

Leader of the Pack, First Data Corporation, 2000 & 2001

Viper Award for Productivity, First Data Corporation, 2001

**Civic/Religious Involvement:**

Civic:            Cub Scout Den Leader 2003-2007

Angel Food Ministries Volunteer 2007-present

Boy Scout Troop Committee Member 2010-present

Religious:      Member, The Donelson Fellowship (TDF), 1992-present

Financial Advisor, Youth Activities, TDF, 1997-2003

Handbell Choir Member (TDF) 1995-present

Adult Choir Member (TDF) 1992-present

LifeGroup Leader (TDF) 1997-present

Deacon, Harper Road FWB 1987-1992

The Donelson Fellowship, 2002-present

Hobbies:        Gardening, travel, family history, reading and family.