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Students' Moral Judgment, Cultural Ideologies, and Moral Thinking at Evangelical Christian Liberal Arts Colleges

Michael Alan Hayes
University of Tennessee, Knoxville

To the Graduate Council:

I am submitting herewith a dissertation written by Michael Alan Hayes entitled "Students' Moral Judgment, Cultural Ideologies, and Moral Thinking at Evangelical Christian Liberal Arts Colleges." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration.

Norma T. Mertz, Major Professor

We have read this dissertation and recommend its acceptance:

Kathleen A. Lawler, P. Gary Klukken, Vince A. Anfara

Accepted for the Council:
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Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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STUDENTS' MORAL JUDGMENT, CULTURAL IDEOLOGIES, AND MORAL THINKING AT EVANGELICAL CHRISTIAN LIBERAL ARTS COLLEGES

A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville

Michael Alan Hayes
May 2004

DEDICATION

This dissertation is dedicated to my wife, Angela, and to my children, Nicole and Aaron, for making this a family journey.

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Soli Deo Gloria!

ABSTRACT

A model using moral judgment and cultural ideology (political and religious ideology) for predicting moral thinking, developed by Narvaez, Getz, Rest, and Thoma (1999), was assessed for utility with students at Christian, evangelical, liberal arts colleges. This study also extended the Narvaez et al. study by including gender as a predictor, assessing the model's goodness of fit, and determining whether the model had comparable predictive power for new and advanced students.

Freshmen (N = 199) and seniors (N = 230) from 2 colleges participated. The colleges were selected according to their accreditation status, membership in the Council for Christian Colleges and Universities, total student enrollment, and Christian holiness tradition. To sample freshmen, one mandatory lower-level general core course was identified at each college. Course sections then were selected randomly. Senior courses were systematically sampled to include one course from each department. The classes were randomly sampled until the requisite sample size was reached. Then, students in the classes for which permission was received completed the Defining Issues Test 2, Inventory of Religious Belief, and Attitudes Toward Human Rights Inventory.

The regression model predicted a significant amount of variance for the students in this study; however, the R^2 value (.22) was much smaller than in Narvaez et al. (.67). The model's predictive power was similar for freshmen and seniors, with roughly 4% more variance in moral thinking explained for freshmen.

The R^2 value did not increase when gender was entered as a predictor variable. Three models, including the original model from Narvaez et al., did not have good fit.

The conclusions drawn from this study were:

1. The model can be used to predict moral thinking on major social issues for students at Christian, evangelical, liberal arts colleges.

2. The model's predictive validity is similar for new and advanced students.

3. Differences in moral thinking are not dependent on gender.

4. The model does not have good fit for students at Christian, evangelical, liberal arts colleges.

5. The model does not account for as much variance in moral thinking in conservative samples as in heterogeneous samples.

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CHAPTER I

INTRODUCTION TO THE STUDY

Background of the Study

The early American colleges and universities were founded to prepare young men for the ministry (Brubacher & Rudy, 1997). One of the missions of these institutions was to impact these young men morally (McNeel, 1994), to groom them to be worthy members of the cloth. As higher education institutions evolved through the late 1800s, especially with the advent of land grant institutions as provided for through the Morrill Acts (Brubacher & Rudy, 1997), the religious focus of colleges waned (Holmes, 1991). Whereas the previous pathway to truth was through revelation, the focus shifted to uncovering truth through research. Although the basic philosophical approach of the university changed, institutions still focused on the development of character in their students. In the 1900s, higher education changed drastically with greater access for women, minorities, and older students, increased competition for financial support from outside sources to fund research, and growing specialization in the disciplines. Moreover, the late 1900s ushered in postmodern thinking in higher education. Whereas previous approaches held that truth was revealed or discovered, postmodern thinking proffered that truth could be created. As higher education institutions experienced a post-World War II entrance boom, student

unrest of the 1960s, increased accountability, and the focus on assessment, colleges were still advocating the moral and character development of students. Therefore, although the mission and philosophy of American higher education and its approach to student character development have shifted throughout its history, the development of morality has remained a distinct objective (Evans, Forney, & Guido-DiBrito, 1998; Nucci & Pascarella, 1987).

Indeed, American colleges and universities have a "clearly defined role in developing individuals who can both think and act morally" (Pascarella, 1997, p. 47). Some hold that it is such an ingrained aspect of the higher education system in this country that many educators believe that moral development is addressed automatically (Evans, 1987). Though this may be a dubious assumption, college campuses serve "as an excellent laboratory for moral development" (Evans et al., 1998, p. 172).

This objective of facilitating students' ethical and moral development is at the core of the mission of evangelical Christian liberal arts colleges. While some charge secular universities with having abandoned their role in shaping students morally (Willimon & Naylor, 1995), these Christ-centered institutions readily espouse their intentional role in developing students' values (Holmes, 1991). As Holmes (1987) writes, "In a Christian college one must come to see the distinctive ingredients and bases of Christian values and will, one hopes, make those values one's own" (p. 32). Moreover, a hallmark of these institutions is their goal of integrating faith, living, and learning (Council for Christian Colleges and

Universities, 2000; Holmes, 1987; Peterson's, 1998), to help students weave together their beliefs and their behaviors (Garber, 1996). Oftentimes, this claim of developing students morally becomes a selling point for these institutions (Beller, Stoll, Burwell, & Cole, 1996; Dobson, 1998). According to Holmes (1991), the Christian college's role in moral development goes beyond indoctrination to helping students learn how to think about issues. This goal is embedded in the broader liberal arts tradition. It is paramount for students to learn to analyze their environments, to think critically about issues, and to make informed decisions based on principles related to their faith, "to be Christian through and through" (Holmes, 1991, p. 8). The focus is on educating students to make decisions about their values rather than making them for them.

As these schools strive to develop students academically and morally, they face a multifaceted challenge in the process. The single best predictor of a person's moral judgment is the amount of formal education completed (Rest, Narvaez, Bebeau, & Thoma, 1999). Therefore, as students progress through their undergraduate experiences, their moral judgment should be developing. However, this process is influenced strongly by the religious orientation of the students, especially on the more politically and theologically conservative campuses. This conservatism is often reflected in the campus milieu through behavioral standards set forth and enforced by the institution leading to a potential conflict between encouraging students to critically evaluate issues and behavioral options to reach their own decisions, while concomitantly attempting

to shape students' character from a perspective that may lean towards an *in loco parentis* approach by limiting and perhaps dictating their choices. In fact, some posit that students living on such campuses might sacrifice themselves academically while attempting to achieve some sense of moral superiority (McNeel, 1994). Christian higher education institutions face a challenge in terms of educating students to think for themselves and encouraging them to critically reflect on their experiences (Dirks, 1988; Holmes, 1991), while providing this education within a conservative Christian milieu. Rest, Narvaez, Bebeau, et al. (1999) identified this conundrum.

> If orthodox religious teachings emphasize the moral authority that is transcendent, supernatural, and beyond attempts at human understanding—and that it is improper and sinful to question, critique, and scrutinize its authority—then orthodoxy may reinforce itself, making difficult movement out of orthodoxy. (p. 121)

The essential question is: Can students in these settings advance in their moral judgment while holding to conservative religious and political ideologies?

Previous research on how religious education influences students' moral judgment is mixed (Beller et al., 1996; Getz, 1984). Getz (1984) reviewed the findings of the literature on moral judgment and attendance at church-affiliated educational institutions. She identified five studies in this area and found that in three of the studies the students scored higher than their counterparts in moral judgment, in one study students scored lower, and in the final study there were

no significant differences. Although the findings in terms of religious education were mixed, Getz' review (1984) of eight studies that focused on the relationship between moral judgment and religious ideology or belief showed a more consistent relationship. Seven of the eight studies found that religiously liberal people scored higher in moral judgment, while the eighth study found no significant relationship. Based on these results, she recommended continued research on how dogmatic political and religious ideology relate to moral judgment and on what types of religious education might foster or hinder growth in moral judgment.

In light of these issues, the Council for Christian Colleges and Universities (CCCU), a consortium of 100 Christ-centered liberal arts colleges and universities in the United States (CCCU, 2000), initiated a six-year (1994-2000) research project entitled, "Taking Values Seriously: Assessing the Mission of Church-Related Higher Education," to determine the extent to which member schools were influencing student values. The project, funded by a grant from the Fund for the Improvement of Postsecondary Education, utilized both cross-sectional and longitudinal designs to measure student characteristics and change. The results of the project indicated that students at the CCCU institutions rated themselves as political conservatives more often than their counterparts at Protestant and general four-year colleges on the Cooperative Institutional Research Program (CIRP) survey as freshmen (Baylis, 1997) and on the College Student Survey (CSS) as seniors (Burwell, 1997). However, both

CCCU freshmen and seniors tended to score similar to the Protestant and general four-year college groups on the actual political and social issues items indicating that they may be more politically and socially liberal than had been thought, at least when measured by their stances on specific issues of current social importance. These findings would seem to suggest that Christian liberal arts schools are not fulfilling their missions of influencing their students' values in the direction or to the extent that they had purposed.

Meanwhile, building on a previous study by Getz (1985) in which she developed a measure of attitudes toward human rights, Narvaez, Getz, Rest, and Thoma (1999) studied the relationships among moral judgment (using the original Defining Issues Test [DIT]), religious ideology, political ideology, religious orientation, and attitudes toward human rights. They found that political and religious ideology combined into a factor that they called cultural ideology. This, in conjunction with moral judgment, combined to form a variable they called orthodoxy/progressivism, which in turn yielded strong regression coefficients in predicting the participants' moral thinking (i.e., attitudes toward human rights) in a sample drawn from two Protestant churches ($R = .79$; $N = 96$) and in another sample consisting of students from a local state university ($R = .77$; $N = 62$). Individuals who were more progressive tended to score more liberally on their attitudes on human rights, while more orthodox people tended to score more conservatively. Therefore, orthodoxy/progressivism predicted a significant amount of variance in moral thinking on significant social issues.

Rest, Narvaez, Thoma, and Bebeau (1999) replicated the previous study (Narvaez et al., 1999) in an attempt to establish the validity of the new DIT2. To do so, 200 respondents from four levels of education (ninth-grade students, senior high graduates, college seniors, and graduate school and professional school students) completed both the DIT and DIT2 and the same measures of religiosity, political ideology, and attitudes toward human rights as used by Narvaez et al. (1999). They found that the multiple regression model with the original DIT as the measure of moral judgment produced a multiple *R* of .56 (*df* = 151), while the model with the DIT2 produced a multiple *R* of .58 (*df* = 191). The authors found that their sample scored more conservatively on moral judgment, religious ideology, and attitudes toward human rights as compared to the Narvaez et al. (1999) study. In addition, the participants rated themselves as more politically conservative. Since the *R* values were somewhat lower in this study with a more conservative sample as compared to the more liberal sample in the Narvaez et al. (1999) study, Rest, Narvaez, Thoma, et al. (1999) recommended additional research to determine whether the strength of the regression model would remain stable between liberal and conservative samples. This current project was undertaken in response to this recommendation, replicating the study with a more conservative population.

In their studies, Narvaez et al. (1999) and Rest, Narvaez, Thoma, et al. (1999) used samples consisting of major university students and local church congregants. Neither of the samples were representative of students at

evangelical Christian liberal arts colleges. As a result, the generalizability of the findings was limited to these students in two key ways. First, the student samples used in these studies differ significantly from Christian college students in political and religious ideology and attitudes toward human rights issues. Second, the congregants from the church sample have a lower level of formal education than Christian college students. Since religious conservatism and formal education are two of the variables with the strongest relationships with moral judgment, replicating the study on a sample consisting of advanced students from evangelical Christian liberal arts colleges would provide evidence about the ability of the model to predict to this population.

In addition, although the Narvaez et al. (1999) and Rest, Narvaez, Thoma, et al. (1999) studies collected information on the gender of the respondents, neither study included gender as a predictor variable. Although it has been well established that there are no gender differences on the DIT (Rest, Narvaez, Bebeau, et al., 1999; Thoma, 1986), it has not been established whether gender predicts a significant amount of variance in moral thinking, particularly in very conservative populations.

Likewise, the studies by Narvaez et al. (1999) and Rest, Narvaez, Thoma, et al. (1999) asserted that moral judgment and cultural ideology, an unobserved variable comprised of political and religious ideology, combine to "produce moral thinking" (p. 478), thereby claiming causal processes among the variables. Structural equation modeling is used to confirm proposed theories implying

causation, particularly with unobserved variables, those which cannot be observed directly. If a model has good statistical fit, "the model argues for the plausibility of postulated relations among variables; if it is inadequate, the tenability of such relations is rejected" (Byrne, 2001, p. 3). Although the model proposed in the Narvaez et al. and Rest, Narvaez, Thoma, et al. studies. proffered a causal theory, neither study used structural equation modeling to assess the fit of the model.

Furthermore, since moral development appears to be a goal of college, and particularly Christian colleges, it is important to ascertain if, in fact, students' moral thinking changes during their time at college. Although a considerable number of cross-sectional and longitudinal studies on colleges' effects on *moral judgment* have been completed (Pascarella & Terenzini, 1991), no study has attempted to determine whether the amount of variance in moral thinking predicted by orthodoxy/progressivism differs for students at the beginning of their college experiences and those near the end of their studies at the same institution. Therefore, comparing these two sets of students should contribute to the literature in a meaningful way and help colleges, especially Christian colleges, assess whether they are fulfilling their stated mission.

Problem Statement

Although recent research (Narvaez et al., 1999; Rest, Narvaez, Thoma, et al., 1999) has found that people's moral thinking on significant social and political

issues can be predicted by assessing their orthodoxy/progressivism (i.e., moral judgment, political ideology, and religious ideology), these studies used samples that were not representative of advanced students at evangelical Christian liberal arts colleges. In addition, no previous research has compared cross-sections of new and advanced students to see if there are significant changes in moral thinking between the two groups and in the amount of variance that orthodoxy/progressivism accounts for in moral thinking. Likewise, there is no information on whether gender accounts for additional variance in moral thinking beyond the current model. Finally, the model set forth in the Narvaez et al. and Rest, Narvaez, Thoma, et al. was not tested for goodness-of-fit.

Therefore, this study was designed to replicate the Narvaez et al. (1999) and Rest, Narvaez, Thoma, et al. (1999) studies to determine whether the model of predicting attitudes toward human rights from orthodoxy/progressivism can be generalized to a population of students from evangelical Christian liberal arts colleges, whether orthodoxy/progressivism predicts similar amounts of variability in moral thinking for both new and advanced students, whether gender accounts for additional variance in moral thinking beyond orthodoxy/progressivism, and whether the model has good statistical fit.

Statement of Purpose and Research Questions

The purpose of this study was to assess the utility of a model used to predict moral thinking on major social issues (Narvaez et al., 1999) in Christian,

evangelical, liberal arts institutions. The model used moral judgment and cultural ideology, which was comprised of political ideology and religious ideology, to predict to moral thinking. In addition, this study sought to extend the model by including gender as a predictor and by assessing the fit of the model. The research questions that framed this study were:

1. Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?

2. Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?

3. Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?

4. Does the model predicting moral thinking from moral judgment and cultural ideology for students at evangelical Christian colleges have adequate statistical fit?

Significance of the Study

This study will add to the existing literature in important ways. First, it will provide evidence of whether the model used in Narvaez et al. (1999) is

generalizable to a very conservative population. Rest, Narvaez, Thoma, et al. (1999) recommended assessing whether the orthodoxy/progressivism accounted for as much variance in moral thinking in liberal and conservative populations. In addition, since Christian higher education institutions accent student moral development, they need to develop ways by which to assess whether their students do indeed acquire enhanced moral thinking. If the Narvaez et al. (1999) model proves to be generalizable to the evangelical Christian college students, it will provide a relevant assessment tool in helping these colleges assess whether they have accomplished their stated missions. This is particularly important to the accreditation process in which institutions must provide evidence that they are fulfilling their missions. Further, if the orthodoxy/progressivism and moral thinking regression model accounts for a considerable amount of variance in predicting moral thinking, as in the original study (Narvaez et al., 1999), it will provide these institutions with better assessment strategies to use to improve the overall educational experience for students and to assist students in integrating faith, living, and learning. By using structural equation modeling, this study will confirm or challenge the goodness-of-fit of the hypothesized model. If the model reflects good fit, Christian colleges and other schools can use it, knowing that it adequately explains the processes producing moral thinking.

Moreover, incorporating gender as a predictor variable should help answer questions related to whether it can explain any considerable variance in moral thinking above orthodoxy/progressivism. Finally, no other studies have

considered whether this regression model yields similar results for new and advanced students at the same institution. This will allow institutions to understand whether religious ideology, political ideology, and moral judgment change in terms of their predictive power for moral thinking.

Assumptions of the Study

Several assumptions underlie this study. These include that:

1. respondents were honest in their responses;

2. the colleges in the sample are Christian evangelical in their traditions, institutional ethos, and theology, and comprise a relatively homogeneous sample;

3. the new students who participated in the study are classified as freshmen or first-year students at their respective institutions and have not completed a significant amount of their general education core;

4. the seniors who participated in the study have completed most, if not all, of their general education core and that the general education cores at these colleges are relatively similar;

5. the scale used to measure students' attitudes toward human rights issues contains items that represent a wide range of social, political, and religious issues that are relevant to students at Christian evangelical institutions;

6. moral judgment, religious ideology, and political ideology are distinct yet parallel processes (Narvaez et al., 1999; Rest, Narvaez, Bebeau, et al.,

1999); and

7. "a person's moral judgments reflect an underlying organization of thinking that these organizations develop through a definite succession of transformations" (Rest, 1979).

Limitations of the Study

Since sampling all students at Christian colleges would be impractical and likely impossible, tradeoffs had to be made in terms of selecting a representative sample of schools and of students from within these schools. Further, for this study, students were selected according to their enrollment in certain lower- and upper-division courses. Given these decisions, generalizability to the population of all students at Christian colleges may be limited.

Further limitations to potential generalizability are attributable to several additional factors. First, the schools sampled are in the Southeastern United States, while the vast majority of CCCU member institutions are outside of this region. In addition, each school is associated with a different denomination or faith tradition which, in turn, influences the schools and their students in different ways (e.g., how religion and ethics are taught, how students are exposed to particular social and political commitments, etc.). The research design for this study does not account for these differences which may influence student responses. Therefore, generalizing to all CCCU members or Christian colleges may be questionable. Finally, as discussed by Pascarella and Terenzini (1991),

the cross-sectional observational method used in this study will not allow for definitively answering the question of whether any of the results can be attributed to a specific college effect or maturation. Specific to this study would be the difficulty in substantiating claims that Christian colleges "caused" certain effects.

Delimitations of the Study

This study is delimited to three evangelical Christian colleges with a holiness tradition in the Southeast who are full members in the CCCU and accredited by the Southern Association of Colleges and Schools (SACS). An additional delimitation of this study is that only freshmen and seniors at these institutions were sampled. Theoretically, freshmen have completed only a small portion of their general education core, while seniors have completed most, if not all, of their general education coursework.

These delimitations threaten the external validity of the results to all Christian colleges due to the conservative nature of the schools, their geographic location, and their accrediting agency. In addition, the range of responses on the instruments used in this study may be restricted due to the homogeneity of the sample. This would result in attenuated coefficients in correlational and regression analyses. Moreover, it may decrease the reliability estimates of the instruments. Furthermore, since only freshmen and seniors are used, generalizations to sophomores, juniors, and graduate students cannot be made with confidence.

Definition of Terms

Several terms in this study warrant definitions. They are moral judgment, cultural ideology, political ideology, religious ideology, moral thinking, and evangelical Christian. Since this study was a replication of the Narvaez et al. (1999) study, most of the definitions are based on their work.

Moral Judgment

Moral judgment provides "basic guidelines for determining how conflicts in human interests are to be settled and for optimizing mutual benefit of people living together in groups" (Rest, 1986, p. 1). Individuals determine what is morally right and wrong (Rest, 1994) according to individual conceptions of justice and the respect for others' rights based on concerns of equality and reciprocity. A critical assumption is that individuals progress through a sequence of moral judgment development stages. Each stage represents a more sophisticated conceptualization of how to organize cooperation (Rest, 1979). A table of Kohlberg's six stages and levels of morality is in Appendix A.

Moral Thinking

Narvaez et al. (1999) defined moral thinking as "people's judgments about right and wrong and the rationale behind such thinking" (p. 478). It is intended to be more expansive than moral judgment "in that the moral judgment construct refers more narrowly to the cognitive construction of basic epistemological categories (e.g., justice, duty, legitimate authorities, and rights). In contrast, moral thinking—as we use the term—refers to a person's views on such issues

as abortion, rights of homosexual individuals, religion in public schools, women's roles, and euthanasia" (p. 478).

Cultural Ideology

Cultural ideology and moral judgment are seen as contributing significantly and uniquely to moral thinking. Narvaez et al. (1999) defined cultural ideology as "another basic process in the formation of moral thinking and refers to values, norms, and standards that exist independently of a single person and that are shared by a group as part of its mutual culture" (p. 478). Cultural ideology is comprised of political ideology and religious ideology.

Political Ideology

Political ideology is defined as how participants identify themselves along a liberal-conservative continuum.

Religious Ideology

Religious ideology is conceptualized along a continuum from religious fundamentalism to liberalism. Fundamentalism is characterized by the endorsement of beliefs dealing with the literalness of Christian dogma like the verbal inspiration of the Bible, life after death, and, Jesus' virgin birth (Bassett, 1999). Liberalism is defined as disagreeing with the literalness of Christian doctrine.

Evangelical Christian

As Tilley (1996) defines it, "evangelicalism is a Christian movement" (p. 12) that encourages belief and adherence to basic Christian doctrine (Elwell,

1991). These beliefs include, but are not limited to, the virgin birth of Christ, his deity, the trinity of God: Father, Son, and Holy Spirit, the divine inspiration of the Bible as the Word of God, the death and resurrection of Christ, and eternal life after death. This faith tradition is centered on the belief that a person can have a personal relationship with Jesus Christ. Once people have developed this relationship, they are commissioned to share this faith with others. The schools that were selected in this study publicly affirm beliefs consistent with the evangelical Christian tradition.

Organization of the Study

This study contains five chapters that are followed by references and appendices.

Chapter I is the introductory chapter and includes the background of the study, statement of purpose and research questions, significance of the study, assumptions of the study, limitations and delimitations of the study, definitions of terms, and the organization of the study.

Chapter II contains the review of pertinent literature to the research questions. There are six general areas of literature reviewed: overviews of Kohlberg's and Rest's theories of moral judgment, moral judgment development in college, the relationship between moral judgment and political ideology, the relationship between moral judgment and religious ideology, Christian college students' views on political and social issues, and the moral thinking regression

model.

Chapter III describes the methods used in the study. It includes an introduction and sections on participants, instruments, procedures, and data analysis.

Chapter IV presents the results of the analyses of the data. Sections in this chapter include an introduction, descriptive results from the various instruments and demographic items, multiple regression results on the relationships among the variables, and structural equation modeling results.

Chapter V contains the study's summary, a review of the findings, a discussion of the findings, conclusions, implications of the study, and recommendations for further research.

CHAPTER II

REVIEW OF THE LITERATURE

This study focused on assessing the utility of a model of predicting moral thinking on major social issues (Narvaez et al., 1999) in Christian, evangelical, liberal arts institutions. The model used moral judgment and cultural ideology, which was comprised of political ideology and religious ideology, to predict to moral thinking. In addition, this study sought to extend the model by including gender as a predictor and by assessing the fit of the model.

This chapter provides a review of the pertinent literature on the key areas of interest in this study. The review is presented in six sections. The first section provides an overview of Kohlberg's and Rest's theories of moral judgment. The second section focuses on student moral development in college. The literature concerning the relationship between moral judgment and political ideology comprises the third section. The review of the literature on the relationship between moral judgment and religious ideology is included in the fourth section. The fifth section reviews the recent research on Christian college students' views on political and social issues. The literature on the moral thinking regression model is in the final section.

Overview of Moral Development Theories

Kohlberg's Theory of Moral Development

Morality functions to provide basic guidelines for resolving conflicts among people and for maximizing the mutual benefit of individuals living together (Rest, 1986). The core of moral reasoning in the Kohlbergian tradition was the concept of fairness or justice, the respect for others' rights based on concerns of equality and reciprocity. To some extent, justice involved the value of benevolence, concerns for others' welfare (Kohlberg, 1972, 1981). According to Kohlberg (1972), using justice as the cornerstone of a theory of morality assured people's freedom of belief, was based on psychological research in human development, and provided a justifiable philosophical approach to morality. Kohlberg's use of justice as the core element of his theory was influenced heavily by the philosophy of John Rawls (1971). In addition, Kohlberg based his approach on the work of Jean Piaget, especially his hard stage model of cognitive development, work in the morality of children, and interview data gathering (Piaget, 1965). Essentially, Kohlberg's theory was an amalgamation of Rawls' theory of justice and Piaget's theory of moral development (Rest, Narvaez, Bebeau, et al., 1999).

Kohlberg focused almost entirely on moral judgment rather than other processes that Rest included in his model. Instead of society deciding what is right and wrong, Kohlberg posited that the individual determines right and wrong. People interpret situations, attaching psychological and moral meaning to them, and make moral judgments. The study of morality should focus on how

individuals make moral judgments.

Perhaps the most widely known of Kohlberg's contributions was his six stages of moral judgment. A detailed table of the stages is in Appendix A. These stages indicate a progression of how individuals naturally develop morally over time. Higher stages reflect superior moral development. These stages were briefly defined by Kohlberg (1981) as follows.

- Stage 1. Punishment and obedience
- Stage 2. Instrumental exchange
- Stage 3. Interpersonal conformity
- Stage 4. Social system and conscience maintenance
- Stage 5. Prior rights and social contract
- Stage 6. Universal ethical principles

Rest (1994) conceptualized that these stages reflected the individual's understanding of how to organize cooperation in society when moral issues were at stake.

Two stages were included in each level of moral reasoning. The most basic level was Level I, called preconventional. As reflected in stages 1 and 2 above, individuals in this level of moral reasoning do not yet understand society's rules and expectations of their behavior. Their perspective is egocentric, focused on themselves, and concrete. The conventional level of morality, or Level II (Stages 3 and 4), was referred to as the member-of-society perspective. Thinking on this level involves a focus on societal rules and others' expectations.

Individuals at this level may adhere a great deal to views of those in positions of authority. The most advanced level, Level III–postconventional reasoning–was often called the prior-to-society perspective, containing Stages 5 and 6. This level was marked by thinking beyond society's rules and expectations and basing decisions on principles that the individual has chosen (Evans et al., 1998). At Level III moral judgment was based on universalizable principles of justice (Nucci & Pascarella, 1987).

Kohlberg added substages (called A and B) within each stage; these substages were included in the last revision of his theory before his death (Colby, Kohlberg, Speicher, et al., 1987). Substage A indicated what Kohlberg and his colleagues called a heteronomous orientation, which was marked by the individual's focus on obedience to authority. Substage B, on the other hand, signified an autonomous orientation, characterized by a focus on rights and welfare (Evans et al., 1998). People who were scored as using Substage A reasoning were less likely to show a consistency between moral thought and moral action, whereas those scored at Substage B did show a congruence between moral thinking and their behavior (Kohlberg & Candee, 1984).

The measurement instrument used with Kohlberg's theory is the Moral Judgment Interview (MJI) (Colby, Kohlberg, Speicher, et al., 1987; Colby & Kohlberg, 1987). The MJI, a semistructured interview, has undergone three major revisions. There are now three parallel versions of the interview. Each of the forms consists of three hypothetical dilemmas like the well known Heinz-and-

the-drug dilemma. Each dilemma pits two moral issues that are in conflict. For instance, Heinz must decide whether he should steal a drug, which he cannot afford, to preserve his wife's life or obey the laws of the land and allow her to die. There are nine to twelve standardized probe questions to be asked for each dilemma. These are used to allow the respondent to elaborate, justify, or clarify moral judgments. The scoring system, called Standard Issue Scoring, is contained in a manual of over 800 pages. The interviews are transcribed to allow the scorer to rate the interviewee based on standard information in the scoring manual. The scorer seeks to match the interviewee's responses with the stage criteria listed in the manual. Based on the matches of the responses and criteria and examples in the manual, the scorer assigns the interviewee a stage score. The scoring system seeks to purge the content of the interview and isolate the structure of the interviewee's moral reasoning.

Rest's Theory of Moral Development

Rest and his colleagues adopted Kohlberg's framework for their research, borrowing heavily from it during the 1970s. However, they began deviating considerably from his theory and methods during that time. In 1999, they published their current model, describing it as neo-Kohlbergian (Rest, Narvaez, Bebeau, et al., 1999). In terms of differences in the two models, Rest (1986) emphasized the social cooperation component of justice reasoning, while Kohlberg firmly held that the conceptualization of justice was individually based. Rest (1994) reconceptualized the six stages of moral development in the context

of cooperation.

- Stage 1 – The morality of obedience: Do what you're told.
- Stage 2 – The morality of instrumental egoism and simple exchange: Let's make a deal.
- Stage 3 – The morality of interpersonal concordance: Be considerate, nice, and kind; you'll make friends.
- Stage 4 – The morality of law and duty to the social order: Everyone in society is obligated to and protected by the law.
- Stage 5 – The morality of consensus-building procedures: You are obligated by the arrangements that are agreed to by due process procedures.
- Stage 6 – The morality of nonarbitrary social cooperation: Morality is defined by how rational and impartial people would ideally organize cooperation (p. 5).

Therefore, Rest's definition of the six stages, incorporating cooperation with justice, is slightly different from Kohlberg's approach. As people move up through the stages, their social experiences help them in developing more efficient ways of organizing cooperation (Rest, 1986). Rest and his colleagues (Rest, Narvaez, Bebeau, et al., 1999) have departed even more markedly from Kohlberg's focus on the individual in the past few years in considering the role of social context and cultural ideologies in moral judgment. While Kohlberg held that moral judgment was determined by each person, Rest has begun to account for the

value of the community in developing moral judgment.

Another modification made by Rest of Kohlberg's approach involved shifting from the hard stage model based on Piaget's research to a more fluid model. Given that the six stages are like a staircase, Kohlberg's Piagetian-based model holds that individuals must be on one step at a time or shifting from one step to the next during transitional periods. In the staircase analogy, they are shifting from one step to the next. Rest and his colleagues believe, instead, that moral judgment gradually shifts in its distributions. Therefore, the person may primarily use and prefer the thinking of one stage, but the person's thinking may have elements of a number of other stages from time to time. Change does not come step-by-step. Rather, it occurs gradually as the individual flows from lower to higher levels (Rest, Narvaez, Bebeau, et al., 1999).

A third point of departure involves Kohlberg's sole focus on moral judgment (Rest, Narvaez, Bebeau, et al., 1999). Rest (1983) found this focus too narrow. He argued that moral judgment was one component in a very complex process called the Four-Component Model of Moral Development. The model consists of:

- Moral sensitivity – ascertaining whether an moral issue is at stake
- Moral judgment – deciding which course to take to resolve the dilemma
- Moral motivation – considering what other motives may influence the implementation of the judgment chosen
- Moral action – staying the course and possessing adequate ego strength

during implementation

Further, Rest and his colleagues (Rest, Narvaez, Bebeau, et al., 1999) recently have begun to speculate that the levels and stages of moral development, as originally proposed by Kohlberg, may need realignment. Based on their analyses of large databases of DIT results and their consideration of recent social cognition research into schema theory about how people organize material cognitively, they made the following significant modifications.

- Stages 2 and 3 were combined into the Personal Interests schema. The schema is called presociocentric, meaning that people at this level do not base their moral judgments on the presumption of an organized society.
- Stage 4 was replaced by the schema called Maintaining Norms. Thinking on the level of this schema requires norms, has a society-wide scope, applies rules uniformly and orderly, assumes others perspectives on a limited basis, and is oriented to duty.
- Stages 5 and 6 were combined to form the Postconventional schema, which embodies full reciprocity, or the ability to see others' perspectives fully. It also entails that the individual can transcend law and duty for higher principles.

Rest and his colleagues paid little attention to what has been referred to as Stage 1. They did so since their primary means of data collection, the DIT, requires at least a 12-year-old reading level, and Stage 1 usually corresponds with a lower age.

The most significant difference between the Kohlberg and Rest approaches to moral judgment is the means of data collection. As mentioned earlier, Kohlberg used the MJI, a semistructured interview and production task, while Rest developed the DIT, a recognition and rating task. Rest, Narvaez, Bebeau, et al. (1999) contended, contrary to Kohlberg's notions, that interview data did not necessarily yield an accurate representation of cognitive structure, that interviewees might not be aware of their inner processes or might not have the ability to describe them, and that the interviewing method was prone to interviewer and scorer bias. Moreover, the MJI is time consuming (Rest, Cooper, Coder, Masanz, & Anderson, 1974). In addition, DIT researchers (Rest, Narvaez, Bebeau, et al., 1999) questioned the assumption that content cannot be separated from structure.

The DIT, first developed in 1974, is a paper-and-pencil instrument with six moral dilemmas, three of which are from Kohlberg's dissertation interview format. (A short form of the DIT is available, containing only three dilemmas.) Each dilemma is followed by 12 items that contain possible solutions to the dilemma. These possible solutions reflect thinking on Stages 2 through 6. Respondents rate the 12 items in order of preference and then indicate the importance of each statement in terms of making the moral decision on a five-point scale. Several scores are then calculated. The P score (for principled or postconventional), a weighted sum of the ranks of postconventional items, is the most widely used. The P score is reported in percentages ranging from 0 to 95 (Nucci & Pascarella,

1987; Rest, Narvaez, Bebeau, et al., 1999). Higher P scores indicate more advanced moral judgment.

Rest and his colleagues (Rest, Narvaez, Bebeau, et al., 1999) identified five distinct potential advantages of using a recognition task, like the DIT, over a production task, like the MJI.

1. In productions tasks, respondents benefit only from what they express, not necessarily what may be tacit knowledge or reasoning. Therefore, a production task would most likely result in a lower score. This could be a reason that Stage 6 is rarely obtained in Kohlberg's system.
2. In interviews, several variables (e.g., respondent, interviewer, and scorer interpretations) may influence the findings, whereas in recognition tasks only the respondents' responses vary.
3. Recognition tasks provide for more control in the testing environment and situation. On the contrary, interviewees may not comprehend what the interviewer is asking. This may prevent that part of the interview from being scored.
4. Using short rating and ranking items written on a 12-year-old reading level facilitates the task for the respondent and allows for comparability across interviewees.
5. The DIT is more convenient, because it does not require a judge trained in the scoring system to score free-response data from an interview. The DIT, an objective test, allows for computerized scoring.

While defending the use of a recognition task, they did acknowledge potential problems with it as well, including random responding and ambiguous test items. In addition, the DIT uses short and cryptic items which may prevent the instrument from discriminating among all six stages efficiently, and it does not allow for assessing A and B substages. Furthermore, the DIT does not seek to assign a specific stage of moral judgment for the respondent which may be a drawback for some researchers. One other potential problem with recognition tasks is worth noting. These tasks may overestimate a person's moral development. This occurs due to the nature of the test items. Respondents are provided with stimuli to rate and rank instead of having to verbalize their moral thoughts to an interviewer as in the MJI. Interviews, as a result, may underestimate moral judgment (Rest, Thoma, & Edwards, 1997).

In terms of scoring differences on the DIT due to gender, Thoma (1986) and Rest, Narvaez, Bebeau, et al. (1999) reported that there was no significant difference between males and females. In a meta-analysis of 56 DIT studies with a composite sample size of over 6,000 respondents, Thoma (1986) found that differences attributable to gender accounted for .002 of the variance in DIT scores. To put the differences due to gender in context, Rest and Thoma (1985) found that formal education was a 250 times more powerful correlate with moral judgment than gender.

College Student Moral Development

This section reviews the literature on college student moral development. There are two major sections. The first deals with Pascarella and Terenzini's (1991) review of the literature in this area. This section is further divided into five subsections that focus on a review of their general findings, institutional effects, college experiences effects, an explanation of their findings, and key findings for the current study. The second section provides an overview of studies conducted since Pascarella and Terenzini's review. There are five subsections that deal with general findings, college experiences effects, college major effects, the proposed relationship between college attendance and moral judgment growth, and key findings that informed this study.

Review of Pascarella and Terenzini (1991)

Perhaps the most ambitious work on college's effect on the moral development of students has been *How College Affects Students*. In the book, Pascarella and Terenzini (1991) reviewed and synthesized twenty years of research on how college attendance affected moral reasoning.

Summary of General Findings

Pascarella and Terenzini (1991) identified more than 50 cross-sectional and longitudinal studies that dealt with college attendance and moral judgment. They found, first and foremost, that the research on college student moral development had been dominated by the approaches of Kohlberg and Rest. Moreover, the MJI and the DIT had clearly been the most important instruments

in this line of research (Pascarella, 1997; Pascarella & Terenzini, 1991).

From reviewing the studies on college student moral development, Pascarella and Terenzini (1991) concluded that most college age-people would be placed in the conventional level of moral reasoning. Therefore, if college facilitates moral development, college students should show an upward swing in moral development as they advance in their studies, and the amount of those reasoning at a postconventional level should be greater among those graduating from college than those who are entering college or their peers at the same developmental level who did not attend college. Moreover, since college has been found to enhance cognitive development and students' values, a realistic expectation should be that students' moral judgment would be enhanced as well (Nucci & Pascarella, 1987; Pascarella & Terenzini, 1991).

Pascarella and Terenzini concluded from their review of the literature that cross-sectional studies that used the P score (i.e., the percentage of a person's moral reasoning taking place at the postconventional level) from the DIT consistently showed trends of upward shifting in moral development for both age and formal education even with samples from various nations and cultures. Likewise, longitudinal studies using the DIT P score, although less abundant, indicated that students' moral development was higher at various points (e.g., end of the freshman year, during upperclassmen years, etc.) than when they entered college. Moreover, these same students tended to experience considerable growth in postconventional thinking after graduating (Pascarella &

Terenzini, 1991).

According to Pascarella and Terenzini's review, both cross-sectional and longitudinal research with the MJI have identified similar trends. Specifically, in what Pascarella and Terenzini (1991) call probably the "most ambitious longitudinal study of moral development to date" (p. 343), Colby, Kohlberg, Gibbs, and Lieberman (1983) tracked a sample of men for 20 years. This study yielded statistically significant correlations from .54 to .77 for moral judgment and level of formal education at all four points of assessment in the study, which occurred every three to four years of the study.

Regardless of the measurement instrument used, the findings were convincing. College students' postconventional moral reasoning appeared to increase significantly during their college years. Although it is difficult to ascertain the extent of these advances due to the lack of necessary information from some of the studies, Pascarella and Terenzini (1991) surmised that one of the most significant changes in college was the shift from conventional to postconventional thinking. Another tentative conclusion was that the greatest growth seemed to occur during the first one or two years of attending college. Although the findings were consistent and overwhelming, researchers should stay mindful that these results do not attribute causation to college's effect on moral development; there may be lurking variables in the process. For example, a possible confound in cross-sectional studies is age. Another would be student self-selection into college. It is quite possible that differences in students' academic abilities and

socioeconomic status could influence how students score on measures of moral judgment. Moreover, longitudinal studies are vulnerable to threats as well. A primary threat is attrition of members in the sample. Furthermore, tracking one group in college without tracking a control group of the same developmental level with members who did not go to college may simply yield findings that are due to maturation effects.

Institutional Effects

Few studies had been conducted that sought to determine how different types of institutions (e.g., two-year college, church-affiliated colleges, etc.) impact students. Since little evidence existed in this area, Pascarella and Terenzini (1991) reanalyzed an existing database from Rest (1979), classifying students by type of institution: public research universities; public comprehensive universities (not in the top 100 research universities); private universities; private liberal arts colleges; church-affiliated liberal arts colleges; and two-year colleges. Then, they conducted a six-group analysis of covariance using the DIT P scores as the dependent measure. They used the year of enrollment of each sample (i.e., freshman, sophomore, junior, or senior) as the statistically controlled covariate and considered each institutional sample as a single data point.

The findings indicated that year of enrollment did account for a significant portion of the variance (22.0%, $p < .001$) in P scores, signifying that as students advanced in their studies that their P scores climbed as well. When Pascarella and Terenzini (1991) controlled for year of enrollment, the type of institution did

account for a significant amount of variance (R^2 increase = 31.26%, $p < .001$) in the P score as well. The adjusted P scores for type of institution were categorized into three clusters. Each institution type is listed by category with its P score.

1) Lowest-scoring
    a) Public comprehensive universities (P score = 38.97)
    b) Private universities (P score = 40.16)
    c) Private liberal arts college (P score = 40.48)
2) Middle-scoring
    a) Two-year colleges (P score = 43.16)
    b) Public research universities (P score = 43.46)
3) Highest-scoring
    a) Church-affiliated liberal arts colleges (P score = 50.49)

The study identified some institutions in the subsample and performed additional analysis on them to determine the relationship between institutional selectivity as measured by the average entrance test scores of the freshman class and the P score. The relationship was significant ($r = .37$; no p level was given), highlighting the possibility that institutional selectivity may have a confounding influence on the relationship between institution type and moral development. Therefore, although this reanalysis found significant differences according to institution type, generalizing confidently to all of American higher education is untenable.

College Experiences

According to Pascarella and Terenzini's (1991) review of numerous studies, moral reasoning appeared to be related to involvement in certain types of college experiences. Social, political, cultural, and academic activities seemed to enhance moral judgment, whereas traditional extracurricular activities (e.g., Greeks, athletics, etc.) and religious activities appeared to have a negative effect on moral judgment. These findings, again, do not establish causation. Perhaps students self-select into activities that serve to facilitate moral development. In fact, students who enter college with higher levels of moral reasoning were more likely to have been in precollege environments that offered a wealth of these types of activities. Therefore, these students may already have been predisposed to participating in these activities.

Exposing students to different perspectives was a critical element of the experiences that seemed to facilitate moral judgment development (Pascarella & Terenzini, 1991). Examples of such experiences were living in a residence hall and discussing important issues with other students, particularly if the student were being exposed to a higher level of moral thinking. Particular experiences such as living in residence halls may have had an indirect influence on moral judgment by keeping the student on campus where the enriching experiences occurred. Additionally, if a student encountered a moral conflict, these experiences tended to aid moral judgment development. Perhaps the most important variable was students' choices to take advantage of these campus

experiences. Colleges could have offered a rich array of activities that could have influenced moral development; however, student involvement in the experiences and an adequate effort were critical.

In terms of curricular influences, college major may have been related to moral judgment; however, the number of studies reviewed by Pascarella and Terenzini (1991) did not warrant a sure generalization. In terms of educational interventions, Schlaefli, Rest, and Thoma (1985) showed that moral education intervention could significantly enhance moral judgment; however, they did not analyze their data by intervention type. Pascarella and Terenzini (1991) disaggregated the results by type and found that certain academic experiences and interventions tended to enhance moral reasoning more than others. The more salient findings indicated that dilemma discussion and personality development programs were more effective than academic courses and short-term experiences. These findings were consistent regardless of the study's methodological rigor. In addition, longer interventions (i.e., those that last longer than three weeks) were more effective than shorter interventions, and programs for older students, as defined as 24-years-old and older, were more effective than those for younger subjects. Furthermore, although little research had focused on what elements of an instructional intervention were most effective for students at higher levels, the key aspect seemed to be exposure to arguments and discussions concerning moral issues.

Pascarella and Terenzini (1991) reported that the paucity of research on

whether college has a differential impact for students from different backgrounds in terms of ethnicity and race prevented them from drawing conclusions about the issues. However, they did note that a considerable number of studies had attempted to assess the differences in how males and females change during college. They surmised that college did not seem to affect moral development in males and females differently.

Some studies have focused on the long-term impact of college on moral development, according to Pascarella and Terenzini (1991). The findings seemed to indicate that college enhanced moral development even beyond students' undergraduate years on campus. However, an alternative explanation could include the self-selection of students into college. Perhaps students who self-selected into college self-select into occupations or experience life-styles that are distinguished by intellectual stimulation, whereas those who did not attend college may choose occupations that do not encourage moral development.

Explanation of Findings

In explaining the results of their analysis of the literature on college student moral development, Pascarella and Terenzini (1991) suggested that morality develops in concert with other cognitive and affective changes. Rather than suggesting that development in moral reasoning resulted from any single experience, they posited that it is a crucial component of an "interconnected and often mutually reinforcing network of development trends that characterize changes that tend to occur in college students" (p. 338).

Although people cannot be randomly assigned to college and no-college groups as in a true experiment, the evidence summarized by Pascarella and Terenzini (1991) seemed to consistently and authoritatively attest to college's enhancement of students' enhanced moral development.

Key Findings for Current Study

In terms of this current study, there are several findings that directly inform how church-related liberal arts colleges seem to affect students' moral judgments. First, it appears that the major amount of change in moral judgment occurs in the first two years of college (Pascarella & Terenzini, 1991). Is it possible that this may be partly attributable to most students completing their general education core studies in these first two years? Second, when Pascarella and Terenzini (1991) re-analyzed the large database from Rest (1979) and controlled for year of enrollment, they found that the highest scoring type of institution was the church-affiliated liberal arts college. However, institutional selectivity may have a confounding effect on this finding. Third, attending religious activities at college tends to have a negative effect on moral reasoning.

Review of Recent Findings

Pascarella and Terenzini (1991) focused their review on the research in the 1970s and 1980s. Since there has been no comprehensive update to their review of college's effect on moral judgment, the research in this area from over the past ten years needed to be reviewed for this study. Although there have been no literature reviews conducted specifically on college students and moral

development, Rest, Narvaez, Bebeau, et al. (1999) summarized a considerable amount of the research on moral judgment from the past thirty years for their book *Postconventional Moral Thinking: A Neo-Kohlbergian Approach.* Therefore, their review was used to identify studies from the past decade. In addition, the DIT-2 testing guide (Rest & Narvaez, 1998b) provided a comprehensive list of studies conducted with the scale. Finally, computer searches were conducted on PsycINFO and ERIC for pertinent studies.

This section is divided into five subsections. They focus on general findings of the research, the effects of college experiences, the effects of college major, the proposed relationship between college attendance and moral judgment growth, and key findings that informed this study.

General Findings

Rest, Narvaez, Bebeau, et al. (1999), in their comprehensive review of studies using the DIT, reported that the research over the past decade confirmed the association between college education and development in moral judgment as identified by Pascarella and Terenzini (1991). Among all demographic variables, level of formal education was found to be the strongest correlate of moral judgment. Studies by McNeel (1991) on the student growth in moral judgment in Christian liberal arts college settings and Pascarella (1997) on college's general role in enhancing principled moral reasoning provided evidence indicating that one of most significant changes in college occurred in students' shifts from conventional to postconventional moral reasoning, corroborating one

of the key points of Pascarella and Terenzini's review of the literature. In the DIT2 test guide, Rest and Narvaez (1998b) reported that cross-sectional data indicated that there were clear developmental trends associated with education. Generally, the following groups' DIT P score means increased according to education level: (a) Junior High – 20s, (b) Senior High – 30s, (c) College – 40s, (d) Graduates from Professional School Programs – 50s, and (e) Moral Philosophy/Political Science Doctoral Students – 60s. Again, P scores indicated the percentage of thinking that occurred on the postconventional level.

Rest and Narvaez (1998b) reported that the level of formal education was found to account for 30% to 50% of the variance in DIT scores in heterogeneous samples. In addition, DIT P scores tended to rise during years in formal education and then to level off after formal education ceased (Rest, Narvaez, Bebeau, et al., 1999). However, the process by which colleges affect the development of moral reasoning is still unclear (Derryberry & Thoma, 2000).

McNeel (1992) conducted a meta-analysis of 22 cross-sectional and longitudinal studies of student moral development at twelve institutions. These included seven liberal arts colleges, three universities, and two Bible colleges. His results confirmed the idea that there is a strong increase in moral judgment during the undergraduate years. He found the effect sizes in terms of change in moral development from the freshman to senior year to be moderate to large for liberal arts college and universities and to have no effect or a moderate effect size for Bible schools. Pascarella (1997) reanalyzed McNeel's data and

discovered that moral development, indeed, made one of the most significant gains of any variables in terms of how colleges affect students. Moreover, since the data were from different types of institutions, Pascarella reanalyzed them for institution-type effects and found results similar to McNeel's. The largest moral judgment gains occurred at liberal arts colleges with an average weighted effect size across the studies of .87 of a standard deviation, followed by large universities (.62), and Bible colleges (.13). Therefore, institution type may have an impact on student moral development.

College Experiences

Most of the findings from the past ten years corroborated the summary of Pascarella and Terenzini (1991) in terms of the influence of specific college experiences. For instance, their findings that students who participated in traditional co-curricular experiences had lower moral reasoning scores were reflected in a number of studies. Baldizan and Frey (1995), in a quasi-experimental study, found that student athletes had lower DIT P scores than non-athletes. In a longitudinal study comparing students who participated in Greek organizations and those that did not, Kilgannon and Erwin (1992) discovered that the level of moral development of students affiliated with Greek organizations may have been hindered.

McNeel (1994) conducted a longitudinal study with Bethel College students as part of an action research project that involved several variables that were not reviewed by Pascarella and Terenzini (1991).He found that students

who had some out-of-class contact with professors had higher DIT P scores than those who reported no contact. He also found that participating in out-of-state programs induced a very sharp growth profile in DIT P scores in principled moral reasoning scores. In the same vein, students who took part in a nonrequired off-campus learning activity that demanded a large time investment showed very strong growth. On the other hand, students who did not engage in the learning activity showed only moderate moral judgment growth. Finally, those who participated in required off-campus learning activities did not experience an upward shift in their moral development scores.

Mullane (1999) conducted another study of note that looked at the level of moral development of students involved in the campus disciplinary process and their perceptions of the educational value of the process. She sampled students who had been charged with minor disciplinary violations and administered the DIT and a questionnaire that assessed the students' perceptions of the disciplinary process. The key finding here was that students who scored below average on the DIT were less likely to experience the disciplinary process as educational even when they saw it as fair. Therefore, she concluded that the specific experience of being involved in the discipline process did not necessarily in itself affect students morally; however, she suggested that it could be used to this end with training for the student involved in the discipline process.

One final noteworthy article summarized findings on research conducted by Thoma and Ladewig on the relationship between moral judgment and

friendships on campus (Derryberry & Thoma, 2000). Students who felt that they had supportive friends scored higher in moral judgment than those who did not see their friends as supportive. The authors speculated that scores from one campus to the next might show a sensitivity to the social environment.

These findings tend to support the explanation of the relationship between college and moral reasoning proffered by Pascarella and Terenzini (1991) that moral development is part of an interconnected network of experiences and that no one specific experience nor intervention appeared to have created the shift in moral reasoning.

College Major

Pascarella and Terenzini (1991) suggested that college major did not appear to have differential effects on college student moral development. However, McNeel (1992), in a longitudinal study on how students at Bethel College, a Christian liberal arts school, grew morally, found that the greatest magnitude of growth occurred in majors that concentrated on the understanding of people, particularly in their diversity, and in majors that incorporated the study of ethics as part of their professional course of study. The aggregated effect size for these majors was 1.10, a strong effect size. On the other hand, students majoring in education and business had moderate effect sizes with an aggregated effect size of .58. McNeel noted that students perceived these majors as being vocationally oriented. Therefore, this initial evidence suggests that college major may have some influence on student moral development.

Relationship Between College and Moral Development

Since college appears to have such a profound affect on moral judgment, how can the relationship best be explained? Rest (1994) reasserted his contention that individuals who go to college were more inclined to take their own development more seriously than those who do not. He argued that once these students begin to experience various college experiences (e.g., guest lectures, student leadership positions, etc.) and the general milieu, the activities perpetuate their development. However, as Evans et al. (1998) have noted, colleges can offer these critical experiences, but students must take advantage of them to facilitate their moral development.

Key Findings for Current Study

The studies since Pascarella and Terenzini's (1991) review corroborate most of their findings. Among all demographic variables, the level of formal education was the strongest correlate with moral judgment scores (Rest, Narvaez, Bebeau, et al., 1999). Students tend to shift from conventional to postconventional levels of moral judgment as they progress through college (McNeel, 1991, 1992; Pascarella, 1997; Rest & Narvaez, 1998b).

McNeel's (1992) meta-analysis of 22 cross-sectional and longitudinal studies on student moral judgment from twelve institutions and Pascarella's (1997) re-analysis of McNeel's data found that students at liberal arts colleges gained in moral judgment scores at a much higher rate than students at large universities and Bible colleges. These results indicate that institution-type may

have some bearing on moral judgment changes. Since liberal arts schools scored very differently from Bible schools, there may be an offsetting effect between the liberal arts approach and the religious nature of schools. Unfortunately, there has been little research on student moral judgment done in liberal arts colleges which are religiously conservative.

McNeel's (1992) study in which he performed the meta-analysis also included findings from a study conducted on his campus, Bethel College, to determine the effect of major on moral judgment. The findings contradicted Pascarella and Terenzini's assertion that major had no impact on moral judgment. McNeel found that students majoring in fields that focused on understanding people, particularly in their diversity, and in fields that incorporated the study of ethics as part of their professional course of study, had much greater gains in moral judgment than students majoring in education and business, which may be more vocationally oriented.

Moral Judgment and Religious Ideology

To some, faith and morality go hand-in-hand (Spilka, Hood, & Gorsuch, 1985). To others faith and morality are a bad mix (Hood, Spilka, Hunsberger, & Gorsuch, 1996). For the most part, studies on morality have not considered religion to be a particularly important variable (Hood et al., 1996). Regardless, the two do seem to be related, at least in terms of moral judgment and an evangelical Christian religious ideology.

In 1984, Getz reviewed the literature to determine the relationship between moral judgment and several different operationalizations of religion. She defined religion broadly and discussed the difficulty in defining religion for studies. Her review found a number or studies between the two topics into which she classified them into seven general categories, which are:

1. affiliation or membership in congregations or religious groups;
2. religious behavior such as attending worship services, reading religious literature, praying, and contributing money or resources;
3. religious knowledge like the ability to recall information on religious topics;
4. religious ideology;
5. religious experiences such as conversions, visions, and near-death experiences;
6. intrinsic-extrinsic motivation, which tries to determine whether people's motives for religious participation are status and self-justification (extrinsic), or a source of value and direction (intrinsic); and
7. religious education; attendance at church-affiliated educational institutions (p. 96).

Getz noted that some studies measured several of the areas in the same study.

In terms of literature to inform the current study, Getz found seven studies that dealt with religious ideology or belief. Of these seven, six found that higher P scores on the DIT correlated with liberal religious ideology, meaning that more

conservative individuals tended to engage in less postconventional thinking. The correlation between religious ideology and moral judgment was nonsignificant in the seventh study. Table 1, as displayed in Getz' article, summarizes the seven studies.

Getz (1985) explored the relationships among moral reasoning, cultural ideology (i.e., religious ideology and political ideology), and attitudes toward human rights. She randomly sampled 100 adults from each of two neighboring Christian churches, one of which was liberal, the other conservative. Of those sampled, 105 participated, with 53 from the liberal church and 52 from the conservative church. In addition, she sampled 67 undergraduates from the University of Minnesota College of Education. To assess religious ideology, she used the Inventory of Religious Belief (Brown & Lowe, 1951), which is in Appendix B. The DIT was administered to assess moral reasoning. The one political identity item on the DIT was used to assess political ideology. She used the Attitudes Toward Human Rights Inventory (ATHRI), which she developed, to gauge attitudes toward human rights. A copy of the ATHRI is in Appendix C. The conservative church group scored higher than the liberal group and the student sample on the religious ideology scale and lower on the P scores on the DIT. The Pearson product-moment correlation between P scores and religious ideology scores was -.47 ($p < .001$), indicating that higher levels of conservative religious ideology were associated with lower levels of postconventional thinking. These results confirmed the fairly consistent finding from Getz' (1984) earlier

Table 1. Studies on moral judgment and religious ideology from Getz (1984)

Study	Sample	What was assessed?	Results between Moral Judgment & Religious Beliefs
Ernsberger (1977); Ernsberger & Manaster (1981)	169 adult church members	Assessment of four churches as conventional or principled, and of moral judgment of members and leaders. Relation of moral judgment to religious orientation.	Members of conservative churches preferred stage 4 thinking (conventional); leaders showed even greater preference. Members of liberal churches preferred principled reasoning; leaders showed even greater preference.
Lawrence (1979)	29 9th graders, 30 philosophy doctoral students, 16 fundamentalist seminarians	Assessment of moral judgment of three divergent groups, assessment of thinking based on the church's beliefs by seminarians.	P scores for 9th graders and doctoral students were similar to others with same educational levels, but low for seminarians who chose responses compatible with their church's stance.
Sanderson (1974)	481 college students	Relation of moral judgment to religious and political belief systems.	Moral judgment strongly and negatively related to conservative religious and political belief systems. Students with high moral judgment scores rejected conservatism.
Brown & Annis (1978)	80 college students	Relation of moral judgment to religious behavior and belief (also intrinsic-extrinsic orientation).	Significant relationship between high P scores and low literal belief in the Bible. Non-significant relation or P scores and religious behavior.
Clouse (1979)	371 college students	Relation of moral judgment to religious belief and political ideology.	Significant relationship between high P scores and liberal religious and political thinking.

Table 1. Continued.

Study	Sample	What was assessed?	Results between Moral Judgment & Religious Beliefs
Cady (1982)	57 clergy	Relation of moral judgment to liberal and conservative affiliation and belief.	Significant differences in P scores between conservative and liberal clergy; higher P scores for liberal clergy and clergy with a flexible interpretation of the Bible.
Harris (1981)	438 11th graders	Relation of moral judgment to belief; knowledge, and practice.	Nonsignificant relation of moral judgment to belief and practice, significant relation of moral judgment to knowledge.

Adapted from Getz, 1984, pp. 109-110.
Note. All studies used the DIT except for Sanderson which used the Kohlberg Interview.

literature review. People who score more conservatively on religious ideology scores tend to use less postconventional thinking.

Narvaez et al. (1999) built on the Getz (1985) study with two studies of their own. Study 1 sampled participants from one liberal and one conservative church in the same neighborhood in the same city. They utilized the same measures as Getz. Of the 100 sampled per congregation, 50 batteries from the conservative church were returned, while 46 from the liberal were. The P scores (thinking on Stages 5 and 6) for the liberal church members were higher than those for the conservative members, while the conservative members had a higher Stage 4 mean which indicated that the they engaged in more law-and-order thinking and were bound more by a sense of duty rather than individually-determined justice principles. The conservative church members scored significantly higher in religious ideology than the liberal members. The correlation between the religious ideology scale and the DIT P scores was -.38 ($p < .01$), once again confirming the finding that religiously conservative people engage in less postconventional thinking.

Study 2 sampled 82 undergraduate volunteers from a public university. The same tests were used as with Study 1 (i.e., DIT, Inventory of Religious belief, and other scales on religious orientation, political ideology, and attitudes toward human rights). Of these 82 sampled, 62 returned completed batteries with only six of them specifying that they were not Christians. The correlation between religious ideology and P score was -.44. Although no *p* level was provided, this

researcher consulted a table of critical values for Pearson's *r* (Toothaker & Miller, 1996). The sample size was 62; therefore, *df* = 60. The critical value for these degrees of freedom for a one-tailed test with α = .005 is .325. Therefore, the finding was significant, again confirming the relationship between higher P scores and more religious conservatism.

Rest, Narvaez, Thoma et al. (1999) replicated the study once more with the second version of the DIT as a means of establishing its validity and superiority over the original DIT. The authors sampled 47 ninth graders, 35 recent high school graduates who were new college freshmen, 65 college seniors, 37 dentistry program students, 13 students at a moderately conservative seminary, and 3 students in a moral philosophy doctoral program. They completed the DIT, DIT2, and the Inventory of Religious Beliefs among other scales. Only 20 participants indicated that they were non-Christians in the sample. Since the DIT2 calculates a new, apparently more powerful scale score called the N2, the religious ideology scores were correlated with those scores instead of the P scores. The relationship between religious ideology and the DIT2 N2 score for the entire sample was -.13. The direction of the relationship was in the expected direction; however, no information on significance was provided. To determine statistical significance, this researcher consulted a table of critical values for Pearson *r* (Toothaker & Miller, 1996). The overall sample size for the study was 200; therefore, *df* = 198. The closest value in the table is *df* = 200. The table value for the one-tailed test with α = .05 is .116. Therefore, although the

strength of the correlations was quite low, the relationship between the Inventory of Religious Beliefs and the DIT2's N2 score was statistically significant. This corroborated other findings that religiously conservative individuals tend to use less postconventional thinking.

Clouse (1985) conducted a study to determine the relationship between moral judgment and religious ideology among college students. Clouse administered the Clouse Politics-Religion Attitude Scale and the short form of the DIT to 322 undergraduate students. The data were analyzed with a 2 x 2 x 2 factorial design. The factors were religion (conservative or liberal), politics (conservative or liberal), and gender (male or female). An analysis of variance found that religiously conservative respondents chose significantly fewer statements at the postconventional level than did religious liberals (F [1,314] = 5.13, p = .023). These findings added to the evidence that religiously conservative people use lower levels of moral reasoning than religiously liberals.

Clouse (1991) continued with additional research in this area to determine which of five predictor variables, gender, year in college, grade point average, religious experience, and religious belief, were related to scores on the DIT. Clouse sampled 393 undergraduate students in the School of Education at a major university in the Midwest. The instrument used for identifying religious ideology belief was Clouse's Religious Attitude Scale, which is the set of 10 religion-related items from the Clouse Political-Religious Attitude Scale used in the previous study. On Clouse's Religious Attitude Scale, conservative religious

beliefs are scored low, and liberal beliefs are scored high. Correlation analyses were conducted among all of the variables in the study. A coefficient of -.12 (p = .017) was found between DIT P scores and religious ideology. Other significant correlations with the P score were gender (r = .10, p = .032) and grade point average, (r = .26, p = .001). The correlations between P score and year in college (r = .07, p = .107) and religious experience (r = .05, p = .163) were not significant. Since conservative beliefs score at the low end of the religious ideology score, this means that as religious conservatism becomes stronger the P score is likely to increase. This finding is in the opposite direction to what has come to be expected between the two variables. The correlation between gender and P score was significant; however, the strength of association (r^2 = .01) was quite low and is consistent with the amount of variance in the P score accounted for by gender. The other correlation that has bearing on the current study was between P score and year in college. The coefficient did not reach significance. This is not consistent with the finding that years of formal education can account for between 30% to 50% of the variance in P scores.

Sapp and Gladding's (1989) study had two purposes. First, they assessed the relationship between three religious orientations and level of moral judgment. Then, they measured the relationship between degree of religiosity, the level of moral judgment, and the three religious orientations. Sixty-four university graduate students in education at a Southeastern university completed the Gladding, Lewis, and Adkins Scale of Religiosity (GLASR) (Gladding, Lewis, &

Adkins, 1981), which is a scale to assess religious belief, Batson's Religious Life Inventory, which measures religious orientation, and the DIT. There was a significant positive relationship found between the P score and the Quest orientation, a response to faith that is open and focused on existential questions, and a significant negative relationship between the P score and End, a score relating to an intrinsically oriented faith. The P score was not significantly correlated with Means, a score reflecting an extrinsic orientation to faith. The DIT P scores were correlated with the religious ideology scores. A correlation coefficient of -.26 ($p < .05$) was obtained. This study indicated that the people who saw their faith as an open-ended dialogue with a focus on existential questions were more likely to use postconventional thinking, while those who held their faith more intrinsically were less likely to use postconventional thinking. In addition, the study confirmed the relationship between postconventional thinking and religious ideology in that the P score rose as the religious ideology scores reflected greater conservatism.

Holley (1991) assessed whether conservative religious respondents scored higher on the DIT when religious content was mixed with actual test items. In all, six DIT versions were used to test the hypothesis that religiously conservative people would score higher if the DIT had religious items. Holley administered the DITs and the Clouse Religious Attitude Scale along with several other instruments to 163 Introduction to Psychology students at a conservative Midwestern university. Holley ran correlations among the variables. The

coefficients of -.11 between the standard DIT P scores and the religious ideology measure and -.12 between the religiously-worded DIT P score and religious ideology were very similar. Both findings were non-significant as well. Therefore, Holley found that the religiously oriented DIT and the standard DIT related the same with religious beliefs which indicated that the working of the items on the scale has little to do with how religiously conservative people score on the instrument. Although the correlation coefficient between the P score on the original DIT and the religious ideology scale were not significant, the direction of the coefficients between the two variables confirmed that more conservative individuals tended to use less postconventional reasoning.

The final study for this review was conducted by Glover (1997) in which she explored the relationships among moral reasoning, religiosity, religious orientation, age, and level of education among individuals classified as members of conservative, moderate, and liberal religious groups. Glover sampled 210 people from among various churches in northwest and central Arkansas. She sampled 68 people from conservative, 57 from moderate, and 85 from liberal churches. She administered the DIT, the GLASR, and measures of religious orientation at church gatherings. For the entire sample, the correlations between DIT P scores and the religious beliefs scores from the GLASR (-.20), Quest (.29), and years of education (.30) were all significant ($p < .001$). These findings reflected the prevailing literature that higher postconventional reasoning scores are related to more religious conservatism, a Quest orientation to faith, and years

of formal education. The relationship between P score and age (-.02) did not reach significance and supported the finding that gender has very little relationship to postconventional thinking. Glover also compared the P scores among the three religious groups. She found that the conservative group scored significantly lower than the moderate and liberal groups. This, too, confirmed that more religiously conservative people score lower on postconventional thinking.

Of the nine recent studies reviewed, seven produced a significant finding indicating that religiously conservative people use postconventional thinking less often than religiously liberal respondents (Clouse, 1985; Getz, 1985; Glover, 1997; Narvaez et al. 1999; Rest, Narvaez, Thoma, et al., 1999; Sapp & Gladding, 1989). Of the studies that used the Pearson product-moment correlation, the coefficients were -.47, -.38, -.44, -.13, .12 (sign changed for consistency of comparison), -.26, -.11, and -.20. The largest amount of variance explained in postconventional thinking by religious ideology, then, was 22.1%, while it ranged as low as 1.2%. Even at 22.1% of the variance explained, the strength of association was not strong, indicating that a large amount of the variance in moral judgment is accounted for by something other than religious ideology. In addition, these results seem to corroborate Getz' (1984) earlier review that religiously conservative individuals tend to use less postconventional thinking. Eight of the nine studies found higher scores on religious conservativism were correlated with less postconventional thinking. According to Rest, Narvaez, Bebeau, et al. (1999), this is the most salient finding in this area of research.

Although the evidence in this area confirms that religious conservatives use postconventional thinking less often than their liberal counterparts, one study by Lawrence (1979), which was included in Getz' (1984) review, found that religiously conservative seminarians used alternative approaches in making moral judgments instead of individually-developed conceptualizations of justice. She completed a dissertation in which she sampled 16 fundamentalist seminarians, 30 doctoral students in philosophy at a major state university, and 29 ninth-graders from a liberal, middle-class suburb. She administered the DIT to the entire sample and found that the seminarians had very low P scores and very high Stage 4 scores. She then administered an independent test to the seminarians that was designed to assess whether or not they had the capacity to understand moral concepts. She found that they did understand the concepts. Then, she interviewed the seminarians and found that they were using faith-based principles to make moral decisions rather than an individualistic justice approach. They referred to an external authority to make decisions about morality. This finding ran contrary to one of the critical assumptions in the field that the processes are universal in nature. Specifically, the idea of conceptual adequacy, i.e., that people will use justice principles at the highest stage that is available to them, was not supported. This study showed that while the ability to think at higher moral judgment stages was available, the religiously conservative participants chose a different set of beliefs to inform their judgments.

In light of these findings, Rest (1986) suggested that justice concepts,

although available to all people, may not have a universal utility due to cultural differences. In consequence, his most recent theoretical formulations are more open to social and cultural influences on decision-making, stressing that morality may be embedded in the context of community experiences and expectations (Rest, Narvaez, Bebeau, et al., 1999).

There are a few major findings in the literature concerning the relationship between religious ideology and moral judgment that informed this study. It is clear that more religiously conservative individuals tended to use postconventional reasoning less often than their liberal counterparts. Also, conservatives tended to have higher Stage 4 scores, indicating a law-and-order approach to moral judgment. However, as Lawrence (1979) identified, these individuals may not use justice to make moral judgments. Instead, they may defer to a religious authority. This is of particular importance in light of Rest, Narvaez, Bebeau, et al.'s (1999) assertion that morality may be embedded in cultural differences. As Holmes (1987) posited about moral development and life on a Christian campus, "The instructional process cannot ensure it. Yet the climate of a community helps create attitudes and impart values" (p. 82).

Moral Judgment and Political Ideology

Getz (1985) reviewed the pertinent studies dealing with moral judgment and political ideology from 1968 to 1985. She reported that it was fairly clear from the literature that principled moral judgment was positively associated with

political liberalism and negatively associated with political conservatism, while conventional reasoning was positively related with conservatism. However, it is noteworthy that when studies focused less on the liberalism-conservatism continuum and more on the content of the issues themselves, the relationships were stronger. Moreover, this phenomenon appeared to be more likely when the content of political items focused on issues related to human rights and justice.

In her own study exploring the relationships among moral reasoning, religious ideology, political ideology, and attitudes toward human right, Getz (1985) randomly sampled 100 adults from a liberal church and 100 from a conservative church. After invalid batteries were excluded, 53 remained from the liberal church, while 52 were included from the conservative church. She also sampled 67 students from the University of Minnesota College of Education. She found that respondents' political self-ratings were significantly positively correlated with their P scores ($r = .52$, $p < .05$), indicating that higher levels of principled moral judgment were positively related to a more liberal political ideology. This coefficient was similar to the one resulting from the Narvaez et al. (1999) study ($r = -.47$, $p < .01$). The political ideology item was reverse-scored in the Narvaez et al. (1999) study; therefore, both r values can be squared to determine the strength of association, resulting in 27.0% for Getz' (1985) study and 22.1% for the Narvaez et al. (1999) study.

Rest, Narvaez, Bebeau, et al. (1999), in presenting their claims of validity for the DIT2, reviewed the findings of 21 studies from the 1970s through the

1990s on the relationship between political ideology and moral judgment. Their review confirmed Getz' conclusions. That is, the "DIT's P score is strongly and consistently associated with measures of political attitude and choice over the years" (p. 86). In fact, they reported that moral judgment often accounted for over 40% of the variance in political attitudes and political choices. However, none of the studies addressed the relationships among political ideology, human rights attitudes, moral judgment, and religious ideology other than those conducted by Getz (1985) and Narvaez et al. (1999).

Rest, Narvaez, Thoma, et al. (1999) sought to replicate the Narvaez et al. (1999) study to show that the DIT2 was preferable to the DIT. They found that the new scale did have a significant advantage over the previous version of the test when combined with scores on the religious and political ideology measures in predicting attitudes toward human rights. Respondents in this study completed both the DIT and DIT2 and the same measures of religiosity, political ideology, and attitudes toward human rights as used by Narvaez et al. (1999). Rest, Narvaez, Thoma, et al. also found that the multiple regression model with the original DIT as the measure of moral judgment produced a multiple *R* of .56 (*df* = 151), while the model with the DIT2 produced a multiple *R* of .58 (*df* = 191), providing evidence that the new scale performed as well as the old scale as part of this model. Although these findings approximated those generated in the Narvaez et al. study in terms of the prediction of attitudes toward human rights, the report of the research did not provide separate correlations between moral

judgment and political ideology scores. However, the direction of the β values for political ideology and moral judgment in the multiple regression results indicate that the study found, once again, that political liberalism related positively with higher levels of moral judgment.

Rest and his colleagues undertook various validation studies to ensure that the DIT2 test revision produced a superior instrument to the DIT. These DIT2 validation studies themselves provided some evidence of the relationship between moral judgment and political ideology. One series of studies used to substantiate the test's construct validity dealt with how well the test predicted political attitudes and choices (Rest, Narvaez, Bebeau, et al., 1999; Rest, Narvaez, Thoma, et al., 1999; Rest, Thoma, & Edwards, 1997; Rest, Thoma, Narvaez, & Bebeau, 1997; Thoma, Barnett, Rest, & Narvaez, 1999; Thoma, Narvaez, Rest, & Derryberry, 1999). Each of these studies resulted in significant correlations between political ideology and moral judgment, confirming the relationship between the two variables. Two of the studies (Rest, Thoma, & Edwards, 1997; Rest, Thoma, Narvaez, et al., 1997) used data from Rest et al.'s 1974 study and Rest's 1986 study and found that higher P values correlated positively with political awareness and toleration and negatively with law-and-order attitudes, demonstrating that the relationship transcended political climate changes in the decade or so between the two data collection times.

However, some researchers have suggested that moral judgment scores are simply masqueraded political persuasions (Emler, Palmer-Canton, & St.

James, 1998; Emler, Renwick, & Malone, 1983). Emler et al. (1983) asked 73 students from Dundee University in Scotland to complete the DIT as themselves and to complete it again as a person with liberal political leanings. They found that both moderate and right-wing students significantly elevated their P scores by completing the test as liberals.

Barnett, Evens, and Rest (1995) responded to the Emler et al. (1983) study by having 109 respondents from University of Minnesota psychology classes and community and university organizations complete the DIT with 16 anti-establishment items as themselves and then again from a liberal/radical perspective. They hypothesized that the presence of the anti-establishment items would not deflate the participants' P scores when they responded as themselves. However, when they responded from a liberal perspective, their endorsement of anti-establishment items would increase and their P score would stay the same or decrease. They found that when the participants completed the test from a liberal perspective that they endorsed the anti-establishment items strongly and that their P scores dropped. As a result, they concluded that when participants were asked to take the test from a liberal perspective they simply responded to items that sounded liberal to them. This directly contradicted the Emler et al. (1983) findings. Barnett et al. argued that the findings from the Emler et al. (1983) study occurred due to altering the directions on the DIT while limiting the item pool only to the items that were already on the DIT. Therefore, they concluded that self-presentation strategies did not explain differences in moral

judgment.

Emler et al. (1998) responded to Barnett et al. (1995) by asserting that they had changed the DIT themselves to refute the original findings from the Emler et al. (1983) study. Emler et al. (1998) speculated that P scores may be nothing more than verbal intelligence or a form of self-presentation. Therefore, to counter the suppositions made by Emler et al. (1998), Thoma, Narvaez, et al. (1999) reviewed 22 studies and found that the DIT accounted for a unique amount of variance in moral thinking beyond political attitudes and identity even after partialling out or controlling for other potential validity threats.

In terms of the current study, one primary point is noteworthy. Politically conservative individuals tend to score lower in moral judgment. This is particularly important given results from recent assessments of Council for Christian Colleges and Universities (CCCU) seniors. In 1996 (Burwell, 1997), 4,593 seniors at 20 CCCU schools completed the College Student Survey (CSS). One item asked the students to identify their political orientation. The results indicated that 59.0% rated themselves as politically conservative and 2.6% as far right on a scale with options of far left, liberal, middle of the road, conservative, and far right. In contrast, 45.6% of the Protestant sample and 34.4% of the private college sample marked conservative. Therefore, if students identify themselves as politically conservative, it is quite likely that they will score lower in moral judgment.

Christian College Seniors' Views on Political and Social Issues

As mentioned previously, 4,593 CCCU seniors completed the CSS in 1996 as part of the project called "Taking Values Seriously: Assessing the Mission of Church-Related Higher Education." Of these seniors, 59.0% rated themselves as politically conservative, while 2.6% labeled themselves as far right. This issue is of special interest in light of how evangelicals have become increasingly involved in the political process in recent years. As Noll (1994) states, "The character of American evangelical thinking is especially well illustrated in politics ..." (p. 149). Commenting directly on the results of the CCCU study, Burwell (1997) reported,

> CCCU seniors are more conservative with regard to social and political issues. The students tend to identify themselves as politically conservative, but they espouse fairly moderate middle of the road views not widely different from their colleagues at other schools. They part ways, however, with the wider college population when it comes to issues such as abortion, homosexuality and pre-marital sexuality. (p. 129)

Table 2 compares the percentage of seniors from CCCU, Protestant, and liberal arts colleges who strongly agreed or agreed somewhat with the issue in the corresponding row.

Some of the responses highlighted the phenomenon of how CCCU students did not score as conservatively as some would expect. For instance, the item dealing with federal government control of the sale of handguns indicated

Table 2. CSS results for CCCU, Protestant, and private school seniors

Item	CCCU	Protestant	Private
Abortion should be legal	16.6%	35.3%	50.9%
Abolish the death penalty	24.7	24.1	29.2
Sex is OK if people like each other	6.8	17.4	31.2
It is best for married women to be at home	20.3	19.2	15.2
Marijuana should be legalized	11.0	17.7	27.9
Laws should prohibit homosexual relationships	52.5	42.1	28.4
A man is not entitled to sex on a date	95.1	93.1	94.0
Federal government should control the sale of handguns	74.9	78.2	82.3
National health care plan is needed	52.4	59.9	66.6
Racial discrimination is no longer a problem	8.8	9.3	8.3
Individuals can do little to change society	21.4	23.7	25.3
Officials should clear all student publications	46.0	41.7	32.4
Grading is too easy in college	33.1	29.7	28.6

that 74.9% agreed that the government should control their sale, while the conventional conservative approach is that handgun ownership is a fundamental right of all citizens. In addition, some items indicated that CCCU students did not differ a great deal from the other two comparison groups. For example, the item concerning abolishing the death penalty showed little difference between the CCCU and Protestant groups, and only a minor difference appeared to exist between these two groups and the private schools group. Baylis (1997) raised questions as to why CCCU students labeled themselves conservative when their views were not necessarily so. He posited that it might be a result of family or church pressure or a misperception of the difference between liberal and conservative policies.

This point is particularly meaningful to this study in that the CCCU study reviewed here used only one self-report political ideology item, as was the case in the Narvaez et al. (1999), the study being replicated. Since political ideology combines with moral judgment and religious ideology to predict moral thinking in the regression model in Narvaez et al. (1999), it may decrease the predictive power of regression of the model for CCCU students since it appears that they would tend to identify themselves as more conservative yet score more liberal on the items of the criterion measure (i.e., the ATHRI).

The Moral Thinking Regression Model

Since this study was designed to replicate the Narvaez et al. (1999) study with a different population, this section provides a focused review of studies that have used the moral thinking regression model, even though the studies have been referenced in several previous sections.

Narvaez et al. (1999) conducted the first two studies in this area. Study 1 involved randomly sampling 100 members apiece from two churches that were selected for their political, religious, and moral judgment differences. The participants were mailed a set of questionnaires and received $5 for their involvement in the project. Of the 87 Baptist church members and 80 United Church of Christ (UCC) members who returned the questionnaires, 50 and 46 from the respective congregations returned complete and valid protocols. The materials included Brown and Lowe's (1951) Inventory of Religious Beliefs to measure religious ideology, Hoge's (1972) Intrinsic Religious Motivation Scale to determine "whether religion was a primary source of direction and value in the lives of the participants" (p. 480), the original DIT to assess moral judgment, and the ATHRI to gauge thinking on political and social issues. Political ideology was measured by one item on the DIT that asked respondents to label themselves along a five-point continuum of liberalism and conservatism. Demographic data were collected on education, gender, and occupation. This sampling strategy was used to control for education as a possible confound since years of formal education are strongly correlated with moral judgment and civil liberty political

attitudes. The average level of education for the Baptist group was slightly above a high school graduate, while the average UCC member was just under that level. In addition, the study sought to match participants on gender. The numbers of females and males were similar between the two churches.

The study found that the correlations among religious ideology, political ideology, and moral judgment were all statistically significant and in the expected directions. Religiously conservative individuals tended to identify themselves as politically conservative and to have lower P scores and higher Stage 4 scores on the DIT, while religiously liberal respondents scored more politically liberal and had higher P scores and lower Stage 4 scores on the DIT. In addition, the more liberal political scores correlated with higher DIT P scores. All of these relationships confirmed the trends discussed earlier in this chapter. Beyond the intercorrelations of the predictor variables, higher scores on attitudes toward human rights (i.e., more supportive of human rights) correlated significantly with higher DIT P scores, more religiously liberal scores, and more politically liberal scores. Therefore, more religiously conservative people tended to be politically conservative, have lower principled moral reasoning scores, and advocate less for human rights. In addition, orthodoxy/progressivism, the combined variable of moral judgment, political ideology, and religious ideology, predicted a significant amount of the variance on attitudes toward human rights ($R = .79$; $N = 96$). The religious motivation measure did not account for any additional variance in moral thinking beyond the other predictor variables.

In Study 2, Narvaez et al. (1999) sought to test the generalizability of the model to a secular sample of university students not known for its differences on the predictor variables. This university sample included participants who were younger than those in Study 1 and at the onset of their careers as compared to respondents in Study 1 who were older and more established in their careers. Additionally, the students were in an environment that encouraged critical thinking. As in Study 1, only undergraduate students were selected to control for the possible confounding effect of education. However, the researchers did not seek to control gender as a possible confounding variable.

For Study 2, 62 undergraduates from the public university returned complete and valid protocols. The materials included the same scales as Study 1 except for Hoge's Intrinsic Religious Motivation Scale, since it had not contributed to the prediction of attitudes toward human rights. As in Study 1, orthodoxy/progressivism predicted a significant amount of the variance in attitudes toward human rights (R = .82; N = 62). Therefore, the study confirmed that the model was generalizable to groups that were not selected solely for their moral and social and political differences.

The findings from both studies were quite similar. Both concurred that moral thinking could be predicted from the combined variable of orthodoxy/progressivism that was comprised of moral judgment, political ideology, and religious ideology. In fact, the multiple regression results indicated that over 62% of the variance in moral thinking could be accounted for by

orthodoxy/progressivism. This indicated that participants who were more orthodox were less likely to advocate for human rights.

Rest, Narvaez, Thoma, and et al. (1999) replicated the study by Narvaez et al. (1999) to assess the validity of the DIT2. They selected 200 participants from four levels of education (ninth-grade students, senior high graduates, college seniors, and graduate school and professional school students) who completed the DIT, DIT2, Brown and Lowe's Inventory of Religious Beliefs, the one-item political ideology measure, and ATHRI. They collapsed all of the participants' results into their analyses since there were no significant differences on the DIT scores based on gender. However, they did not report on any gender differences on ATHRI scores.

Their results were consistent with the findings from Narvaez et al. (1999). Higher scores on religious ideology, which indicated religious conservatism, were correlated with higher politically conservative scores, lower principled reasoning scores, and lower scores on the ATHRI, which indicated a lower endorsement of human rights issues. No information was provided to determine whether the correlation coefficients were significant or not. In addition, they found that the moral thinking regression model that used the original DIT's P score as the measure of moral judgment produced a multiple *R* of .56 (*df* = 151), while the model that utilized the DIT2's N2 score, a new way of analyzing the responses on the DIT2, produced a multiple *R* of .58 (*df* = 191). These results were consistent with the findings of Narvaez et al., confirming that the regression

model accounted for a significant amount of variance in moral thinking with the newer DIT2 with this new sample.

Although the results from Rest, Narvaez, Thoma, and et al. (1999) corroborated the findings from Narvaez et al. (1999), the *R* values were weaker. They speculated that this was due to their sample's scoring more conservatively on moral judgment, political ideology, religious ideology, and attitudes toward human rights than the sample from the Narvaez et al. study.

Several findings from these studies informed the current study. First, the moral thinking prediction model itself was developed and confirmed in these studies. In each of the three studies in which divergent samples were used, the findings consistently supported the model. However, although the findings from Rest, Narvaez, Thoma, and et al. (1999) were consistent with the findings from Narvaez et al. (1999), the amount of variance in moral thinking accounted for by orthodoxy/progressivism in their study was smaller due to the more conservative nature of their sample. Therefore, Rest, Narvaez, Thoma, and et al. (1999) recommended further research to determine the strength of the model in both liberal and conservative samples. Furthermore, the two studies by Narvaez et al. used samples that controlled for education since it is the most powerful correlate with measures of morality and attitudes toward human rights. In Study 1, which included politically and religiously conservative participants from two local churches, the number of years of formal education completed was right around the high school graduate level. In Study 2, in which students were selected from

a secular university, the sample scored more politically and religiously liberal. Therefore, even though the two studies' results were similar, neither of the studies utilized participants who were conservative *and* had a high level of formal education. The ensuing study by Rest, Narvaez, Thoma, and et al. did not include participants with conservative beliefs who had completed a high level of formal education either. Therefore, the model may not be generalizable to advanced students at evangelical Christian liberal arts students who tend to hold to conservative religious and political ideology and are in settings that encourage critical thinking. In addition, none of the studies incorporated gender as a predictor variable nor did they seek to determine whether the results of the regression model would be similar for new and advanced students at the same college. Finally, although the regression model accounted for a significant amount of variability in moral thinking in the studies, the model was never tested for goodness-of-fit. Therefore, this study sought to answer the following research questions.

1. Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?

2. Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?

3. Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?

4. Does the model predicting moral thinking from moral judgment and cultural ideology for students at evangelical Christian colleges have adequate statistical fit?

CHAPTER III

RESEARCH DESIGN, METHODS, AND PROCEDURES

The purpose of this study was to assess the utility of a model used to predict moral thinking on major social issues (Narvaez et al., 1999) in Christian, evangelical, liberal arts institutions. The model used moral judgment and cultural ideology, which was comprised of political ideology and religious ideology, to predict to moral thinking. In addition, this study sought to extend the model by including gender as a predictor and by assessing the fit of the model. The research questions that framed this study were:

1. Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?

2. Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?

3. Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?

4. Does the model predicting moral thinking from moral judgment and

cultural ideology for students at evangelical Christian colleges have adequate statistical fit?

Design of the Study

Since this study was a replication of the Narvaez et al. (1999) study with a different population to see if moral judgment and cultural ideology explained a significant amount of variance in human rights issues with a more conservative sample, the same research design was used. The design was appropriate since the purpose of the study was to determine how much variability on the ATHRI, the criterion variable, could be accounted for by the predictor variables (i.e., moral judgment, political ideology, and religious ideology) (Pedhazur, 1997). However, since the study's purpose included determining whether gender was an additional significant predictor of moral thinking, it was added to the set of independent variables. In addition, since the study sought to determine whether the amount of variance in moral thinking predicted by orthodoxy/progressivism was similar between new and advanced students, separate regression analyses were run on the data according to classification.

Although the Narvaez et al. (1999) and Rest, Narvaez, Thoma, et al. (1999) studies reported correlations among the variables and their beta weights, they did not utilize path analysis or structural equation modeling to describe the direct and indirect effects of political ideology, religious ideology, and moral judgment on moral thinking. Since structural equation modeling enables the

researcher to present a causal model and to display the direct and indirect effects among the variables (Pedhazur, 1997), this technique was used.

In the Getz (1985) study, in which the ATHRI was developed, and the first study by Narvaez et al. (1999), religious motivation (i.e., assessing respondents' motives for religious participation) was studied as well. However, in both studies, this variable did not predict a considerable amount of variability in moral thinking beyond the other variables. Therefore, it was dropped as a possible predictor variable in the second study by Narvaez et al. (1999) and in the Rest, Narvaez, Thoma, et al. (1999) study.

In all three projects, religious ideology, political ideology, moral judgment, and attitudes toward human rights were measured. However, Getz (1985) did not attempt to combine religious ideology, political ideology, and moral judgment to predict attitudes toward human rights, while the other two studies did. To predict scores on the ATHRI, participants' scores on the political ideology, religious ideology, and moral judgment measures were combined to predict attitudes toward human rights. Based on the results of their multiple regression analyses, Narvaez et al. (1999) developed the moral thinking prediction model that combined political and religious ideology to create a cultural ideology variable. This, in turn, was combined with moral judgment to create the orthodoxy/progressivism variable. This variable, then, was used to predict attitudes toward human rights. Multiple regression was used to determine how much variability each variable in the model contributed to the predictive

relationship. Figure 1 displays the model. These analyses were done to counter arguments that moral judgment simply masquerades as political and religious ideology, to test whether these variables predict separate and meaningful proportions of the variability on the ATHRI.

Methods

Participants

A multistage sampling procedure was be used to select students for this project (Babbie, 1990; Fowler, 1993; Henry, 1990). The first stage involved selecting schools that met specified criteria. The schools had to be:

1. evangelical Christian colleges
2. fully accredited by SACS
3. full members of the CCCU

By the very nature of CCCU membership, each institution met additional criteria. The CCCU (2000) is a consortium of 100 "Christ-centered four-year colleges and universities rooted in the liberal arts and offering professional programs" (p. 6). These schools have a primary orientation as a four-year college or university in North America with curricula rooted in the arts and sciences. In addition, they possess a public, board approved institutional mission, or purpose statement, based upon the centrality of Jesus Christ and evidence of how faith is integrated with the institution's academic and student life programs.

In selecting the schools, attention was given to using a homogeneous

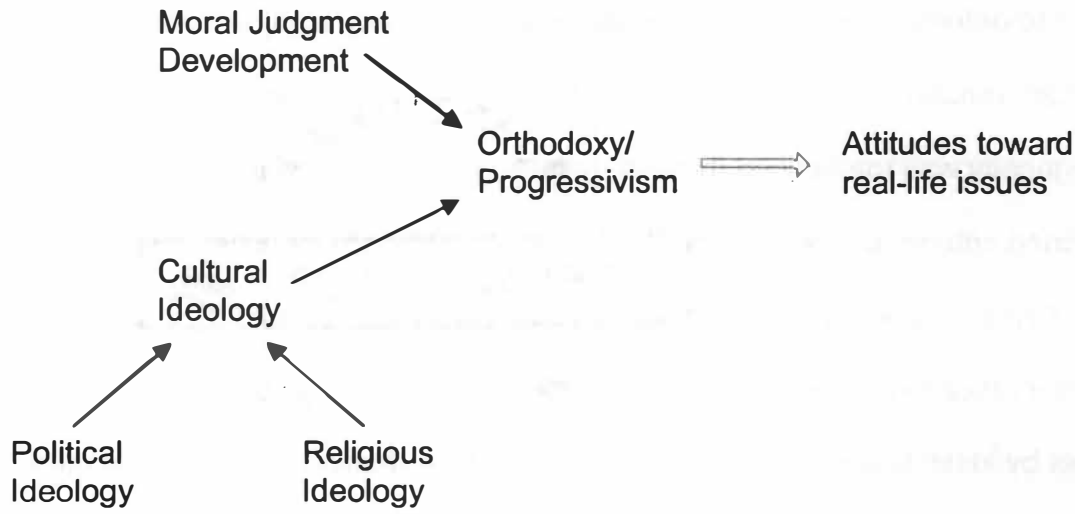

Figure 1. Model for predicting attitudes toward human rights issues (Narvaez et al., 1999)

sample to determine whether the predictive variables would still account for a significant amount of variability in moral thinking with this group of students. Homogeneity was maintained through delimiting the sample with the previously mentioned criteria. In addition, the three schools that were identified all came from a Christian holiness tradition, in that they would tend to hold their students to conservative behavioral standards. Moreover, the study sought to delimit the schools by instituting undergraduate enrollment size requirements of more than 1,000 to ensure the availability of enough new and advanced students to participate in the project.

Of the 29 CCCU schools accredited by SACS, three schools were evangelical, came from holiness traditions, and had undergraduate enrollments of at least 1,000. Therefore, these three schools were invited to participate. In the fall of 2000, the three schools selected had undergraduate enrollments of 1,021, 1,290, and 3,236. The number of freshmen per school was 197, 306, and 796 respectively, while the number of seniors per school was 101, 305, and 786. Although all three schools initially agreed to participate, only two actually did. The school that withdrew stated that their participation would require too much time.

The second stage of sampling involved selecting students at these schools. Since the study sought to compare how new and advanced students performed on the model, both freshmen and seniors were sampled from each school. Since college students tend to have low response rates to mail surveys, a convenience sampling strategy was utilized by administering the questionnaires

to students in classes primarily consisting of freshmen or seniors at the two schools (Henry, 1990). Institutional research personnel at each school generated a list of courses from all departments that were identified as freshman- or senior-focused or were clearly scheduled for students to complete early in the general education core or nearer to the end of their programs of study. Once these lists were generated, course enrollment numbers were examined to ensure adequate sampling. Then, the necessary numbers of courses were selected to ensure a sufficient sample. Research personnel at the schools sought permission from the course instructors and scheduled dates for data collection.

For purposes of determining sample sizes, each school's groups of freshmen and seniors were used as single cases as discussed by Hinkle, Oliver, and Hinkle (1985). The sample sizes to be drawn from each of these schools were calculated by using tables and formulas from Cohen's (1988) work on power analysis for multiple regression. Since this study was designed to determine the amount of variability explained by this model, the formula of $N = \lambda / f^2$ was used to determine the sample size.

Several variables were set or calculated to determine the value for λ. First, $\alpha = .05$ was used as the significance criterion. In addition, power was set at .80, which was used since this study was exploratory in nature and no other basis could be developed due to the limited literature on the model (Cohen, 1988). Moreover, since the project studied the relationship between four predictor variables and the criterion variable, the sample size table for the appropriate

significance level was read for four predictor variables, a power of .80, and for a trial value of *v*, which is an approximation of the sample size. Cohen suggested using 120 as the trial value for *v*, so it was used for this calculation. The λ value in the table for this significance level, power level, and *v* was 12.3.

The other variable in the equation for determining the appropriate sample size is f^2, which symbolizes the effect size of the multiple regression analysis and is based on calculations of the amount of variance explained in regression models. Cohen (1988) reported that the sizes could be small, medium, and large. The f^2 values are .02, .15, and .35 respectively. The large effect size translates into accounting for .26 of the variance in the criterion variable. Therefore, since the two key studies (Narvaez et al., 1999; Rest, Narvaez, Thoma, et al., 1999) which have operationalized this model found that the R^2 values ranged from .31 to .69, it was expected that the effect size in this study would be large as well, since both R^2 values exceeded .26. Therefore, the f^2 value of .35 was entered into the equation above. The equation was solved as follows.

$$N = \lambda / f^2 = 12.3/.35 = 35.1$$

The result was rounded to 35. Therefore, samples of at least 35 freshmen and seniors apiece were required. The desired sample size was increased to ensure that a sufficient number of students completed valid protocols, to include an adequate number of students of each gender to make meaningful comparisons, and to make adjustments for the sample not being random. In addition, since structural equation modeling was used on the entire sample, additional students

were sought due to need for large samples for this statistical procedure. Moreover, since the sample was likely to have been skewed on some of the measures, the sample size was further increased (Garson, 2003). Therefore, at least 100 students between the two schools were desired for each of the following categories: (a) freshman females, (b) freshman males, (c) senior females, and (d) senior males.

To sample the requisite numbers of students, the researcher visited numerous courses at each campus. At Epsilon College, the researcher visited five introductory psychology courses to administer the battery of instruments to their first-year students and gathered data from eleven upper division courses from a variety of disciplines to collect senior data. In addition, the researcher visited four introductory Bible courses at Theta College to collect data from their freshmen and administered the battery in five upper division courses from five different departments.

The requisite number of classes was selected until the sample size per campus was reached or exceeded. At Epsilon College, 137 students in the psychology courses consented to complete the inventories in early fall of 2002, while 138 did in the variety of upper division courses in the spring of 2003. Seventy-six students' results were excluded from the analyses due to incomplete batteries and invalid results (n = 28), while others did not identify themselves as freshmen (n = 24) or seniors (n = 24). As a result of the purges of these students' results, 94 freshmen were included in the analyses along with 105 seniors. At

Theta College, 157 students in the introductory Bible courses and 139 in the upper division courses consented to complete the instruments in the spring of 2002. After the students were purged for not completing valid batteries (n = 48) or for not meeting the criteria of the study (21 were not freshmen; 7 were not seniors), 111 freshmen and 119 seniors remained in the sample. Therefore, the total numbers in the sample from Epsilon College and Theta College were 199 and 230 respectively, yielding a total sample size of 429. In all, 76 students (15.0%) who otherwise would have met the criteria for the study did not complete valid protocols. This compared with 24.4% in the Narvaez et al. (1999) study with university students.

Materials

As in the second study in Narvaez et al. (1999), each participant was asked to complete three instruments. These included the DIT2 (Rest & Narvaez, 1998a), the Inventory of Religious Beliefs (Brown & Lowe, 1951), and the ATHRI (Getz, 1985). The political ideology item was asked on the DIT2 as part of the standard data collected on that test. The respondents provided other demographic data on that scale as well, specifically educational level, gender, and age. A description of each of the three instruments follows.

Moral Judgment

The DIT2, a paper-and-pencil test, was used to measure moral judgment for this study. According to Rest and Narvaez (1998b), the DIT2 is based on Lawrence Kohlberg's theory (Kohlberg, 1986). While Kohlberg utilized an

interview format, the DIT2 consists of five ethical dilemmas with twelve issues following each dilemma. Respondents rate and rank the issues in order of importance. These responses are analyzed to determine several scores. The primary score of interest for this study, the P score, reflects the percentage of principled moral reasoning preferred by participants.

Seven criteria are generally used to support the validity claims of the DIT2 (Narvaez & Rest, 1998; Rest, Narvaez, Bebeau, et al., 1999; Rest, Narvaez, Thoma, et al., 1999). These include:

1. differentiation of various age and education groups (e.g., considerable variance explained by education level)
2. longitudinal gains (e.g., freshman-to-senior gains in college are dramatic.)
3. significant relationship to other morality measures
4. sensitivity to moral education interventions
5. linkage to prosocial behaviors
6. significant relationships with political attitudes and choices and significant prediction of human rights attitudes when coupled with cultural ideology (i.e., political ideology and religious ideology)
7. adequate reliability

In terms of reliability, α falls between the upper .70s and lower .80s; test-retest reliability is comparable. In the Narvaez et al (1999) study, α was .71 for the entire sample for both studies. In this study, Cronbach's α reached only .54. This was due to a more homogeneous sample in terms of the DIT2 P scores. In

addition, the reliability estimate was lower since the years of formal education were restricted in this sample (Rest & Narvaez, 1998b).

The DIT has been shown to have discriminant validity from general intelligence and from political attitudes. As stated by Rest and Narvaez (1998b), "The information in a DIT score predicts to the seven validity criteria above and beyond that accounted for by verbal ability or political attitude" (p. 27). Although the DIT2 does not have the research record of the original DIT, in the initial studies with the DIT2 this version of the test "does not sacrifice validity" (p. 27). The DIT2 takes 40 to 45 minutes to complete. A copy of the DIT2 is not included in the appendices due to copyright restrictions.

Political ideology

As aforementioned, political ideology was measured by one self-report item that is embedded in the DIT2. This item reads, "In terms of your political views, how would you characterize yourself" (Rest & Narvaez, 1998a)? Respondents selected one of the following responses: Very Liberal, Somewhat Liberal, Neither Liberal nor Conservative, Somewhat Conservative, or Very Conservative. Narvaez et al. (1999) reported that this approach was used instead of one that would ask respondents to respond to political issues since the ATHRI, which is comprised of politically-related items, was being used to measure the criterion variable. In addition, they reported that other researchers had used the same approach. No psychometric data have been published for this item.

Religious Ideology

This study used Brown and Lowe's (1951) Inventory of Religious Belief to measure religious ideology. The 15-item inventory, found in Appendix B, seeks to measure the level of agreement with beliefs that reflect conservative Christianity. Items deal with issues like life after death, beliefs about Scripture, Jesus' virgin birth, salvation, and evolution using a five-point Likert-type scale. Bassett (1999) reported that the split-half reliability was .77 and that the Spearman-Brown formula yielded a coefficient of .87. In the Narvaez et al. (1999) study, Cronbach's alpha was .95. In this study, Cronbach's alpha reached .76, which may be due to the religious homogeneity of the sample.

Content validity was established by review by a dean of a Bible college, students at a conservative Bible college, and students at a liberal theological seminary. In addition, it correlates well with church attendance, prayer, Bible reading, and other religious behavioral messages. The range of possible scores is from 15, which indicates low agreement with Christian beliefs, to 75, which reflects agreement with these issues of Christian dogma. The items are measured on a Likert-type scale from 1 (strongly agree) to 5 (strongly disagree). To maintain consistency with the study being replicated, the scores were reversed so religious conservatism was indicated by higher scores. The scale takes between 5 and 10 minutes to complete and is available in the public domain.

Moral Thinking

The ATHRI (Getz, 1985), a copy of which is in Appendix C, was used to measure students' moral thinking by assessing their views on public policy issues. The copy of the ATHRI provided by the test's publisher included 48 items, while the version used in the Narvaez et al. (1999) study consisted of the original 40 items (Getz, 1985). To accurately replicate the Narvaez et al. study, only the 40 original items were used in this study. Each of the 40 items is scored on a five-point Likert-type scale. Item content includes questions on abortion, free speech, women's roles, euthanasia, homosexuality, religious freedom, and the role of government and limits on its authority. Getz established that 10 of the items were "apple pie" statements that everyone tended to agree with and that 30 of the items contained controversial material. Through her validation study, she compared the results from a civil libertarian group and a more conservative one. The final version of the questionnaire contained the 10 "apple pie" items and the 30 items that exhibited the strongest disagreement in the pilot study. Scores range from 40 to 200, with higher scores indicating a leaning toward advocacy for human rights issues. On the original scale lower scores corresponded with the advocacy of civil rights; however, to maintain consistency with the Narvaez et al. (1999) study, the scores were reversed. In terms of reliability, the ATHRI had strong reliability in the Narvaez et al. (1999) study (α = .93). In this study, Cronbach's alpha was .80. Again, this was likely due to the lack of considerable variance in the sample. Finally, since the ATHRI is a copyrighted instrument and

is controlled by the Center for the Study of Ethical Development at the University of Minnesota, permission was sought to use the scale for this study. Permission was granted by Muriel Bebeau, who is the Center's Executive Director. A copy of her permission letter is in Appendix D.

Human Subjects Process

Approval to conduct the study was sought from the University of Tennessee, Knoxville's Institutional Review Board. A copy of the Form B application is in Appendix E. Once the study received approval, permission to conduct the research on the respective campuses was sought. The investigator requested an authorized administrator from each school to send a Permission to Conduct Research letter. Copies of the letters are in Appendix F. Once the study received approval from each school's designated officer, the investigator arranged to visit each campus to administer the materials.

Protecting the schools' and respondents' confidentiality was essential to this study. No individual or school was identified, and pseudonyms were used to refer to each school (i.e., Epsilon and Theta). To ensure confidentiality for the participants, no names were requested, and they received instruments with code numbers on them. Participants were informed that they could choose whether or not to participate in the study, refuse to answer any question, and withdraw from the study without penalty at any time. Participants consented to the study by reviewing and signing a form that provided a brief description of the study and identified the minimal foreseeable risks. A copy of the form is in Appendix G.

All DIT2s were mailed to the Center for the Study of Ethical Development for scoring. All completed ATHRIs and Inventories of Religious Belief were scored by the researcher. All instruments and inventories will be maintained in a locked file cabinet in the researcher's office at Lee University, 1120 North Ocoee Street, Cleveland, Tennessee. These documents will be destroyed after three years.

Procedure

Initial permission to conduct the research was provided verbally by the chief student development officers (CSDOs) at the respective colleges. Letters were written to appropriate officials as designated by the CSDOs at the sampled schools to secure permission to conduct the study with their students and to request a list of classes with primarily freshmen or seniors in them. Once the lists of classes were received, a systematic sampling of courses based on a distribution by disciplines and departments was conducted. Once this stage of sampling was completed, classes were randomly sampled until roughly 125 students at each school for each classification (i.e., freshman or senior) were identified. Then, the official at each school was contacted to request permission to complete the administration of the questionnaires in the identified classes. In turn, the officials contacted the instructors of the classes to seek permission. Classes were selected until at least 125 students per school per classification completed the batteries.

The researcher traveled to each campus to visit the classes. After explaining the nature of the study, the researcher provided students who agreed to participate with the informed consent form, requesting that they sign and return it, and with the three instruments to complete. The instruments were coded to ensure confidentiality and matched for each respondent. The three instruments were presented in random order to attempt to control for order effects. Once the informed consent forms and questionnaires were completed, they were returned to the researcher. No inducements were used.

Data Analysis

The data were analyzed using several techniques. First, frequencies were calculated for demographic items. Next, histograms were constructed according to classification (i.e., freshmen and seniors) to provide graphic representations of the continuous variables in the study. Then, descriptive statistics (i.e., means and standard deviations) were reported for the DIT2 P score, the ATHRI total score, the overall score on the Inventory of Religious Belief, and the political ideology item for the entire sample and for each school. Pearson product-moment correlations were run between each of the variables to determine the relationships between them.

In addition, multiple regression analyses were run for the entire sample and each school, using the DIT P score, political ideology scores, religious ideology scores, and gender as the predictor variables to explain the variance in

ATHRI scores, the criterion variable. This allowed for answering the first research question of whether the Narvaez et al. (1999) model accounts for a significant amount of variance in moral thinking at very conservative Christian colleges. By conducting these analyses the R^2 values and β weights from this study could be compared to the findings in Narvaez et al. to determine the strength of the predictor variables. Conducting the analyses for each school provided some evidence on whether there were any considerable differences according to campus. If there were, an institutional variable could have been used in structural equation modeling.

Additional multiple regression analyses using the same variables to predict moral thinking were conducted for each school's freshman and senior samples. These analyses provided evidence for answering the research question dealing with whether the model accounted for similar amounts of variance in moral thinking for new and advanced students.

One final multiple regression analysis was run on the entire sample removing gender as a predictor variable. The results from the analysis were compared to the regression analysis on the entire sample that did include gender as a predictor variable to answer the research question that dealt with whether gender contributed additional variance in moral thinking beyond moral judgment, political ideology, and religious ideology.

Finally, to determine the direct and indirect effects of the variables predicting moral thinking, to provide diagrammatic representations of the model,

to assess the goodness-of-fit of the predictive model, and to explore additional factors, structural equation modeling was used and path diagrams generated. Using structural equation modeling was critical since the model's goodness-of-fit was not assessed in any of the previous studies that utilized it. Since the regression model is based on the theory that orthodoxy/progressivism causes moral thinking, structural equation modeling tested the goodness of fit with the hypothesized model and the sample data (Byrne, 2001). The results of the structural equation modeling analysis then were used to determine whether or not the measurement model was valid for this set of data (Garson, 2003). Another pivotal reason for using structural equation modeling was because the cultural ideology variable, the variable comprised of the political ideology item and the Inventory of Religious Beliefs, could not be measured directly as an unobserved or latent variable (Arbuckle & Wothke, 1999; Byrne, 2001).

All of the descriptive and multiple regression analyses were conducted using SPSS 10.0 for Windows, while AMOS 5.0 was used for the structural equation modeling.

CHAPTER IV

RESULTS OF THE STUDY

The purpose of this study was to assess the utility of a model used to predict moral thinking on major social issues (Narvaez et al., 1999) in Christian, evangelical, liberal arts institutions. The model used moral judgment and cultural ideology, which was comprised of political ideology and religious ideology, to predict to moral thinking. In addition, this study sought to extend the model by including gender as a predictor and by assessing the fit of the model. The research questions that framed this study were:

1. Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?

2. Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?

3. Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?

4. Does the model predicting moral thinking from moral judgment and

cultural ideology for students at evangelical Christian colleges have adequate statistical fit?

To answer these questions, frequency distributions were conducted on the categorical variables, and descriptive statistics (i.e., mean and standard deviations) were calculated for the predictor variables, except for gender, and the criterion variable. These are reported by campus. Also, histograms were constructed to provide graphic representations of the continuous variables. Pearson product-moment correlations were run on all of the variables to determine the degree of relationship among them. Multiple regression analyses were run using the DIT2 P score, the religious ideology score, the political ideology score, and gender as predictor variables, while the score on the ATHRI was the criterion variable. Finally, structural equation modeling was used to determine the model with the best fit for predicting moral thinking, and path diagram were drawn to display the relationships among the variables.

This chapter is divided into five sections. First, the frequencies for the categorical items are provided. Then, descriptive statistics for the predictor variables and the criterion variable are presented along with the histograms. The third section describes the results of the numerous multiple regression analyses. The following section contains the structural equation modeling results. A summary of findings and analyses of data comprises the fifth section. This final section summarizes the results by research question.

Frequencies for Categorical Variables

Frequency analyses were run for the categorical variables of institution, education, and gender. Overall, results from 429 students were included in the analyses. In terms of institution, 199 (46.4%) students participated from Epsilon College after the invalid results were purged, while 230 (53.6%) Theta College students were valid. Of the Epsilon College participants, 94 were freshmen, and 105 were seniors. Theta College's respondents included 111 freshmen and 119 seniors. Therefore, there were 205 (47.8%) freshmen and 224 (52.2%) seniors in the sample for this study.

An additional frequency analysis was conducted on gender for the overall sample and by institution. For the entire sample of 429, 262 (61.1%) were female, and 167 (38.9%) were male. Of the 199 valid protocols from Epsilon College, 119 (59.8%) were female, while 80 (40.2%) were male. At Theta College, 143 were female (62.2%), and 87 (37.8%) were male. Since this is a replication of the Narvaez et al. (1999) study, comparing the gender ratios with that study's sample that was comprised of college students at a major university should prove useful. Their sample size was 62 with 38 females (61.3%) and 24 (38.7%) males. Therefore, the gender ratios for the two studies were nearly identical.

Descriptive Statistics for Continuous Predictor Variables and Criterion Variable

Descriptive statistics were calculated for the continuous predictor variables and the criterion variable. The means and standard deviations were calculated for the following scores: DIT2 P, the Inventory of Religious Beliefs (IRB), the political ideology item on the DIT2, and the ATHRI. Table 3 displays these descriptive statistics for the entire sample and for each institution. The final column in the table provides the results from the second study from Narvaez et al. (1999) for comparative purposes. Comparing this study's descriptive results with the Narvaez et al. college sample should provide some perspective on the relative conservatism of this sample.

Table 3. Means and standard deviations for moral judgment, religious ideology, political ideology, and attitudes toward human rights

Variable	Epsilon	Theta	All	Narvaez [a]	*t* [b]
DIT2 P	33.36 (14.47)	28.60 (12.60)	30.81 (13.69)	48.58 (15.13)	19.40 ***
IRB	70.18 (4.92)	70.33 (4.76)	70.26 (4.83)	55.48 (14.78)	-35.91 ***
Political	3.79 (0.92)	3.65 (0.92)	3.71 (0.92)	2.85 (0.94)	-26.88 ***
ATHRI	136.77 (13.76)	136.12 (12.56)	136.42 (13.12)	159.16 (17.26)	63.44 ***

Note. Standard deviations are in parentheses. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology item; ATHRI = Attitudes Towards Human Rights Inventory.

[a] Narvaez et al. (1999) Study II

[b] *t* test difference is the one-sample *t* test for differences between the entire sample for this study and the sample for the second study in Narvaez et al. (1999).

*** $p < .001$.

One-sample *t* tests (*df* = 428) were conducted on each of the variables for the overall sample using the Narvaez et al. (1999) means as the comparison amounts. Each of the variables was significantly different at the $p < .001$ level. DIT2 P scores can range from 0 to 95, indicating the percentage of principled moral reasoning preferred by the individual. The entire sample for this study scored much lower than the Narvaez et al. sample, and the standard deviation was somewhat smaller for this study, reflecting the homogeneity of the sample. The IRB total variable has possible values of 15 to 75, with higher scores indicating religious conservatism. This study's sample mean score was close to the top of the range, which was significantly higher than the Narvaez et al. finding. In addition, the standard deviation was much smaller for this study. These results confirmed that this study's sample was extremely religiously conservative. The Political ideology item was measured on a Likert scale from 1 to 5, with higher scores indicating a more conservative self-rating. The significant difference between the samples' political ideology scores indicated that this study's sample was much more politically conservative. Interestingly, the standard deviation scores were nearly identical. The ATHRI Totals can range from 40, which indicates a more conservative mindset toward critical social issues and less advocacy of civil liberties, to 200, which signifies a liberal stance. This study's sample scored significantly lower, signifying its conservatism toward advocacy for civil rights, plus its standard deviation is slightly smaller, showing the homogeneity of the sample again. In summary, these results indicated that

the sample for this study was considerably more conservative on each measure than the sample in the comparison study.

The IRB and ATHRI means were very similar for both schools. However, there were larger differences on the political item, with Epsilon students scoring more liberally, and on the DIT2 P score, with Epsilon students scoring higher in postconventional thinking. These scores hinted that institutional differences could account for more variance beyond the other predictor variables in the moral thinking regression model.

Since one of the research questions dealt with the amount of variance in moral thinking in freshmen and seniors accounted for by the model, histograms were generated for each of the continuous variables according to classification to provide graphic displays of the data. The histograms for the DIT2 P scores (Figures 2 and 3) illustrated that the scores were more negatively skewed for the freshmen than seniors, indicating that some shifting occurred for the group of seniors toward more postconventional thinking. The distributions of the IRB totals for the freshmen and seniors (Figures 4 and 5) showed one slight difference. For freshmen, the most common response was near the highest possible score for the IRB (i.e., 75), while the most common response for seniors was slightly lower around a score of 70; this indicated a slight change toward a more liberal stance for seniors. The histograms for the responses to the political ideology item (Figures 6 and 7) showed some shifting. More freshmen endorsed a moderate stance (more scores of 3), while more seniors scored slightly more conservative

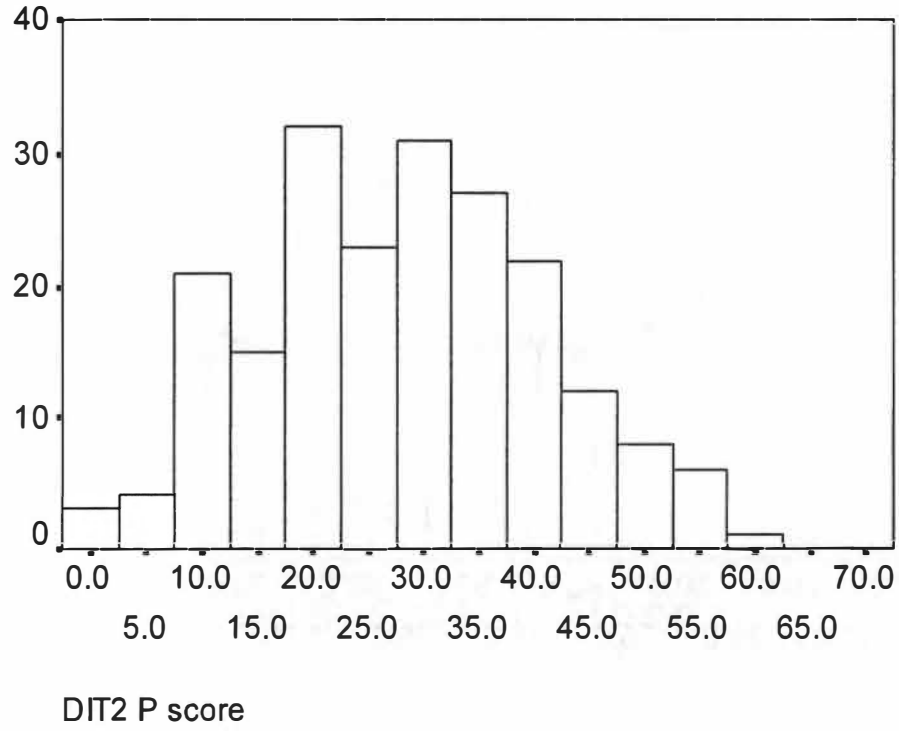

Figure 2. Histogram for freshmen for DIT2 P score

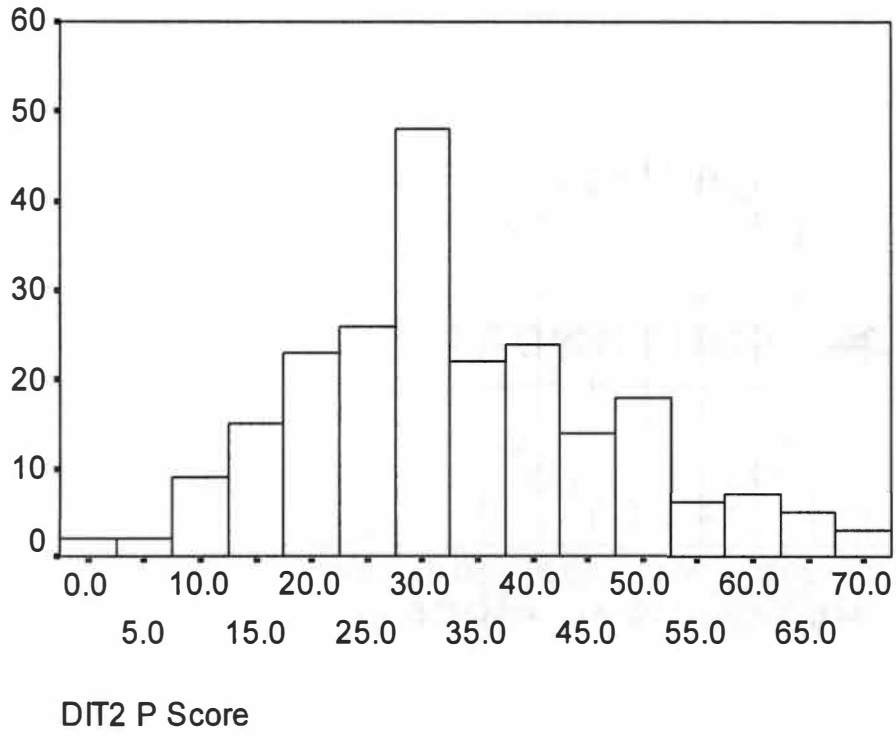

Figure 3. Histogram for seniors for DIT2 P score

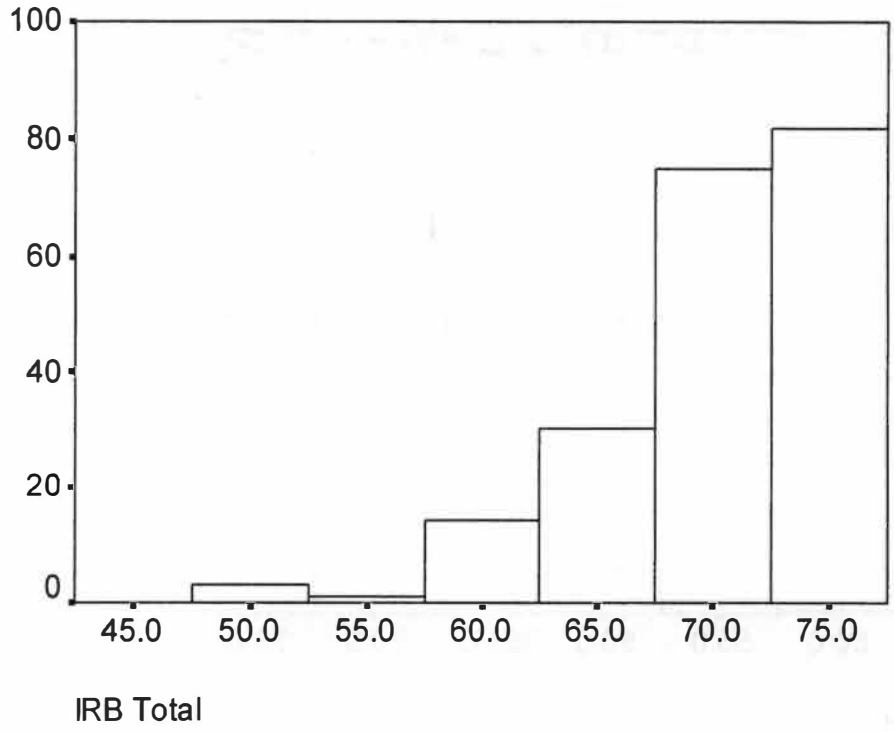

Figure 4. Histogram for freshmen for IRB total

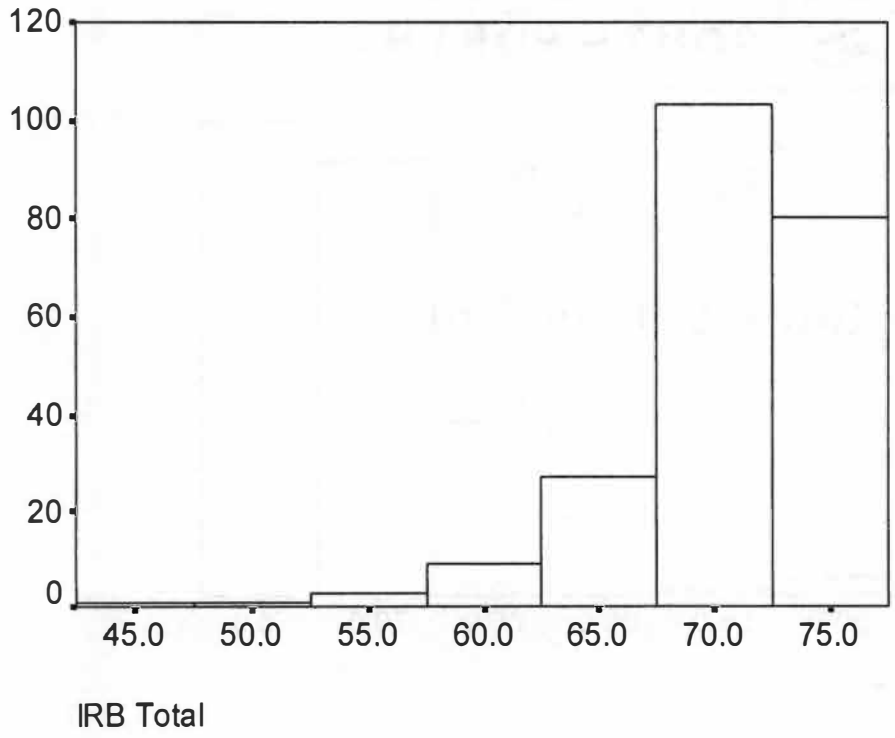

Figure 5. Histogram for seniors for IRB total

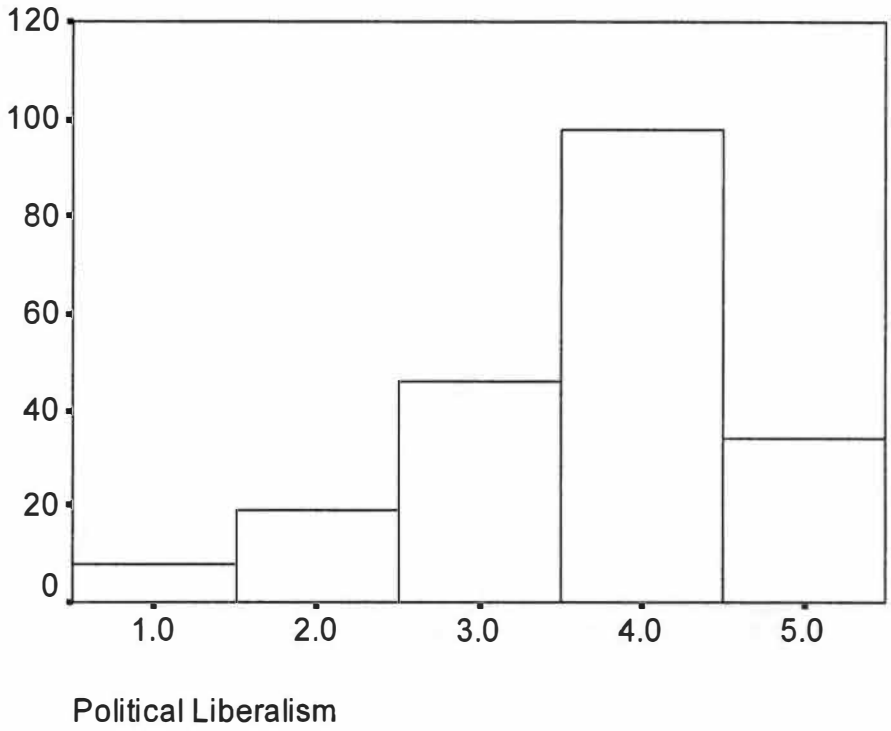

Figure 6. Histogram for freshmen for political liberalism

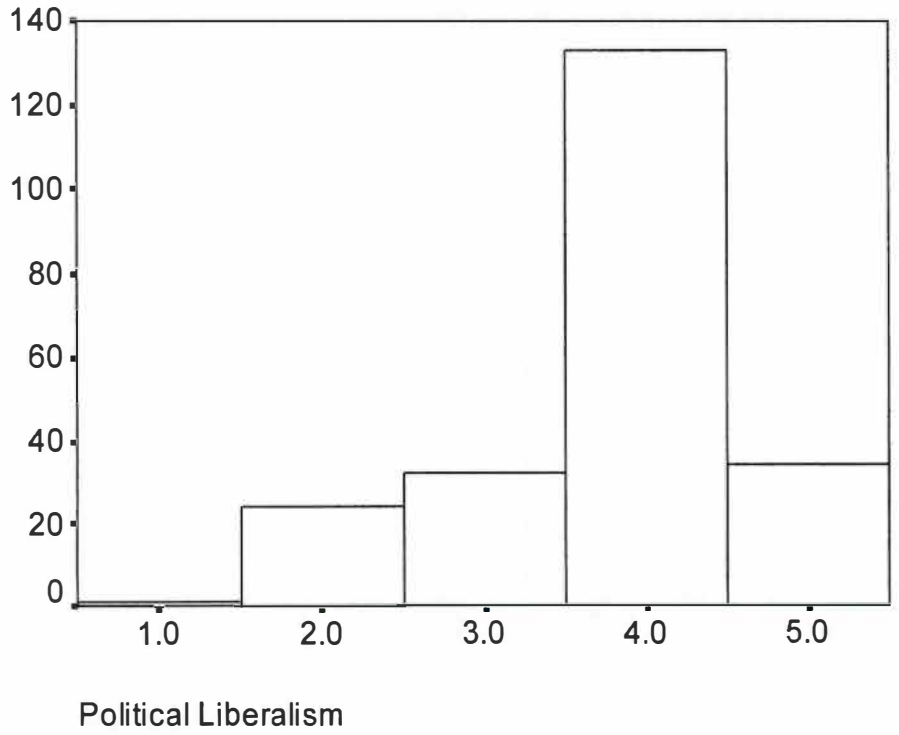

Figure 7. Histogram for seniors for political liberalism

(more scores of 4). The ATHRI totals scores (Figures 8 and 9) appeared to shift to higher scores for the seniors, signifying a cross-sectional shift toward more liberal stances.

To determine the relationships and potential multicollinearity among the variables in the multiple regression equation to be tested, Pearson product-moment correlation analyses were run on each variable pair. The coefficients are listed in Table 4. All of the correlations among the continuous variables were in the directions identified in the literature. As the DIT2 P score rose, the IRB total decreased, the political ideology item score decreased, and the ATHRI total increased, indicating that higher principled moral reasoning corresponded with more religious and political liberalism and more advocacy for civil rights. Furthermore, as the level of political conservatism rose so rose the level of religious conservatism. In addition, those who endorsed more liberal political ideology were more likely to agree with statements supporting human rights, and participants who scored high in religious conservatism were less likely to endorse positions supportive of human rights.

Five of the coefficients among the continuous variables reached statistical significance. The strongest *r* value (i.e., -.35) was between the ATHRI total and the Political item, indicating that only 12.3% of the variance can be explained in one variable by the other. The first study in the Narvaez et al. (1999) project found a stronger relationship with an *r* value of -.58 (r^2 = 33.6%) which accounted for nearly three times the variance between the variables. This pattern of weaker

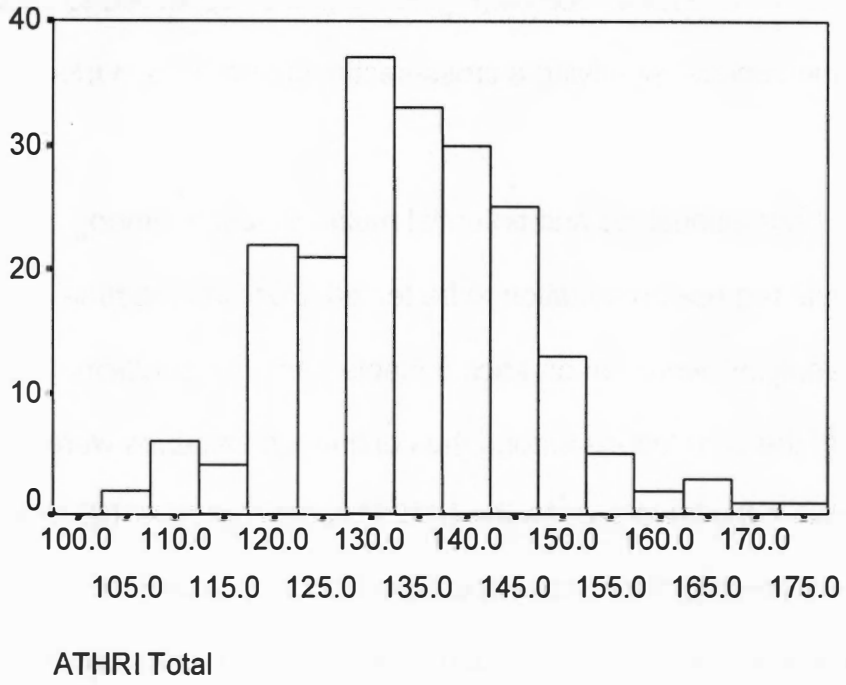

Figure 8. Histogram for freshmen for ATHRI total

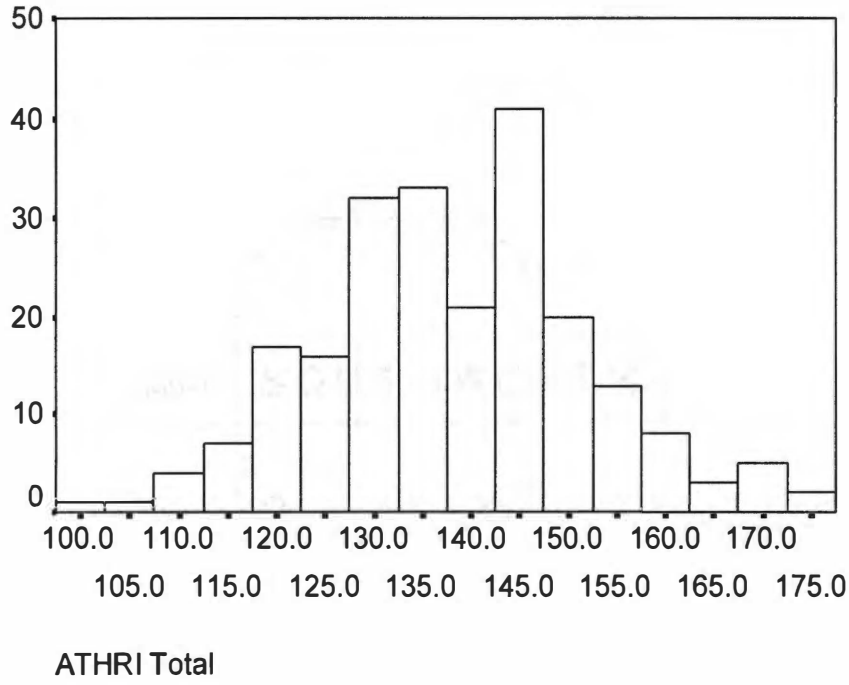

Figure 9. Histogram for seniors for ATHRI total

Table 4. Correlations between variables

Variable	DIT2 P	Political	IRB	ATHRI	Gender	Instit.	Educ.
DIT2 P	---						
Political	-.06	---					
IRB	-.11 *	.31 **	---				
ATHRI	.31 ***	-.35 **	-.23 **	---			
Gender	.15 **	-.06	.06	.04	---		
Instit.	-.17 ***	-.08	.02	-.03	.02	---	
Educ.	.19 ***	.08	.02	.15 **	-.12 *	-.01	---

Note. DIT2 P = Defining Issues Test 2 P score; Political = political ideology; IRB = Inventory of Religious Beliefs; ATHRI = Attitudes Towards Human Rights Inventory; Instit. = Institution (Epsilon = 1 and Theta = 2); Educ. = Education (Freshman = 1 and Senior = 2). Gender coded as Male = 1 and Female = 2.
* $p < .05$. ** $p < .01$. *** $p < .001$

correlations in this study as compared to Narvaez et al. remained consistent with each of the pairs of variables. The differences in r^2 values ranged from 0.4% and 22.1% for the DIT P2 scores and Political ideology and from 9.6% and 19.4% between the Political item and the IRB total. In each case, the coefficient was clearly smaller in this study than in Narvaez et al., which was partly due to the smaller standard deviations in this study. Table 2 indicated that the standard deviations in the IRB were substantially smaller in this study, while the DIT2 P score and ATHRI standard deviations were slightly lower and the Political item standard deviation was nearly the same. Since these standard deviations were smaller, the ranges of the scores were restricted, thereby suppressing the strength of the correlation.

In terms of the relationships involving the categorical variables, gender correlated significantly with two variables. Gender and the DIT2 P score were significantly related to each other. However, the r^2 value indicated that less than 2% of the variance in the P score could be accounted for by gender, confirming the trend in the literature that gender has little to do with P scores. The only other variable that was correlated significantly with gender was education. As the years of formal education rose females were more likely to be sampled.

The P score correlated significantly with two other variables. As expected, the level of education variable correlated significantly with P score with seniors scoring higher than freshmen. In addition, P scores were significantly negatively correlated with the institutional variable, signifying that Epsilon's P scores were

higher than Theta's.

The final significant correlation with a categorical variable was between educational level and the ATHRI total. This indicated that seniors, as a group, scored higher than freshmen.

Although a number of the correlation coefficients reached statistical significance, the multicollinearity among the variables was not at a level that compromised the results of the multiple regression analyses or the structural equation modeling (Sheskin, 2000). Licht (1995) reported that correlation coefficients stronger than .80 should be considered problematic for multiple regression analyses, while Garson (2003) suggested that coefficients stronger than or equal to .85 would be considered high. The strongest correlation in this study was -.35, which was well below .80 and .85.

Results for Multiple Regression Analyses

Multiple regression analyses were run for the entire sample, each school, and the freshmen and seniors for each campus, using the DIT2 P scores, political ideology scores, religious ideology scores, and gender (male = 1, female = 2) as the predictor variables to explain the variance in ATHRI scores, the criterion variable. By conducting these analyses the R^2 values and β weights from this study could be compared to the findings in Narvaez et al. (1999). These analyses would address the research questions dealing with whether the model accounted for a significant amount of variance in moral thinking among

conservative Christian college students, whether the model predicted similar amounts of variance for freshmen and seniors, and whether gender accounted for a significant amount of the variance in moral thinking beyond cultural ideology and moral judgment.

For the entire sample, the regression model yielded a statistically significant result ($F = 29.63$, $df = 4$, $p < .001$, $R = .47$); however, the R^2 value (.22) indicated that only a small amount of the variance was explained by the predictor variables. These results indicated that the model did account for a significant amount of variance in moral thinking in conservative Christian college students, but that variables not in the model accounted for much more of the variance. The results for both campuses were significant as well. Epsilon's campus model ($F = 18.02$, $df = 4$, $p < .001$, $R = .52$) was somewhat stronger than Theta's ($F = 14.40$, $df = 4$, $p < .001$, $R = .45$). Therefore, there did not appear to be differences associated with the campuses. However, again, these findings did not account for a large amount of the variance, suggesting that variables not in the model would do so. The regression results for both groups of freshmen and seniors reached statistical significance, also. The results for the Epsilon freshmen ($F = 9.77$, $df = 4$, $p < .001$, $R = .55$) showed a slightly stronger relationship than the Theta freshmen ($F = 8.43$, $df = 4$, $p < .001$, $R = .49$). The Theta seniors' results ($F = 7.69$, $df = 4$, $p < .001$, $R = .46$) were slightly weaker than the Epsilon seniors' results ($F = 8.65$, $df = 4$, $p < .001$, $R = .51$). Again, although the results were statistically significant, the R^2 values, ranging from

21.2% to 30.3%, indicated that these predictor variables accounted for a small amount of the variance in moral thinking on major social issues. Table 5 displays the regression results in terms of *B*, the standard error of *B*, β, and *t* for the entire sample and for each school, while Table 6 shows the results for freshmen and seniors by school.

These results are of particular interest since this study sought to replicate the Narvaez et al. (1999) methods with a different population and extend their study by adding gender as a predictor variable. In the second study in Narvaez et al., which was based on the sample of students from a major Midwestern university, the political item, IRB total, and DIT2 P score predicted a significant amount of variance in the ATHRI with $R = .82$, which compared to $R = .47$ for the entire sample in this study. The β weights from that study were .27 for the DIT2 P score, -.25 for the IRB total, and -.52 for the Political item. These values compared to .29, -.10, and -.30 respectively in this study. Therefore, the P score achieved a similar weight in this study, while the IRB and political item did not. These findings indicated that the P score was as strong a predictor of moral thinking in the Narvaez et al. study as in this study. However, the IRB and political variables did not account for as much variance in moral thinking in this study as in Narvaez et al.

The β value for gender for the entire sample in this study was very low at -.01; the *t* value did not reach significance. An additional multiple regression analysis was run removing gender as a variable. The results were statistically

Table 5. Multiple regression results for the entire sample and for each school

Group	Variable	*B*	SE *B*	β	*t*	Sig.
Entire Sample						
	P score	.27	.04	.29	6.55	***
	Political	-4.28	.65	-.30	-6.62	***
	Gender	-.28	1.17	-.01	-.24	
	IRB	-.28	.12	-.10	-2.28	*
Epsilon						
	P score	.29	.06	.30	4.85	***
	Political	-5.75	.96	-.38	-5.98	***
	Gender	1.01	1.76	.04	.57	
	IRB [a]	-.00	.18	-.00	-.03	
Theta						
	P score	.25	.06	.25	4.03	***
	Political	-2.79	.87	-.21	-3.21	**
	Gender	-1.71	1.57	-.07	-1.09	
	IRB	-.60	.17	-.23	-3.54	***

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology.

[a] B = -.005. β = -.002.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6. Multiple regression results for each school by classification

Group	Variable	*B*	SE *B*	β	*t*	Sig.
Epsilon Freshmen						
	P score	.19	.10	.19	1.99	
	Political	-6.31	1.16	-.52	-5.43	***
	Gender	-.77	2.44	-.03	-.31	
	IRB	.36	.26	.14	1.39	
Epsilon Seniors						
	P score	.27	.09	.27	3.04	**
	Political	-6.11	1.64	-.34	-3.72	***
	Gender	2.76	2.55	.09	1.08	
	IRB	-.14	.26	-.05	-.51	
Theta Freshmen						
	P score	.21	.08	.23	2.66	**
	Political	-3.84	1.13	-.31	-3.40	**
	Gender	-.57	2.26	-.02	-.25	
	IRB	-.46	.21	-.20	-2.23	*
Theta Seniors						
	P score	.25	.09	.23	2.68	**
	Political	-1.48	1.31	-.10	-1.13	
	Gender	-1.52	2.20	-.06	-.69	
	IRB	-.96	.29	-.31	-3.38	**

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology.
* $p < .05$. ** $p < .01$. *** $p < .001$.

significant ($F = 39.57$, $df = 3$, $p < .001$, $R = .47$) without any decrease in the R value. As a result of these analyses, gender was not included in the structural equation modeling analyses.

Structural Equation Modeling Results

Although previous studies that used the moral thinking prediction model did not use structural equation modeling to assess the model's fit with the data from those studies, the model lent itself to confirmatory analysis (Byrne, 2001). Therefore, the original model from Narvaez et al. (1999), hereinafter labeled Model 1, was assessed for goodness of fit in this study using the DIT2 P score and cultural ideology, comprised of the IRB total and the political item, to predict to ATHRI. The maximum likelihood for estimating the model was used with AMOS. Table 7 provides the weights for the model, the standard error of the estimate, the critical ratios for the paths, and the corresponding p values. Figure 10 displays the path diagram. The diagram includes standardized regression weights since the B values were in different units of measurement, facilitating easier comparison of the "magnitude of effects of different causes" (Cohen, Cohen, West, & Aiken, 2003, p. 464) from the different variables.

To determine the overall goodness of fit of the model, a χ^2 test was run. A good model is characterized by a low χ^2 score that does not reach statistical significance (Cohen et al., 2003). The χ^2 value for the model was 5.20 ($df = 2$; $p = .074$), which did not reach statistical significance. However, Hoelter's Critical N,

Table 7. Regression weights for Path Model 1

Path	Estimate	SE	CR	*p*
ATHRI ← P score	0.27	.04	6.66	.000
IRB ← Cultural	3.14	.72	4.38	.000
Political ← Cultural	1.00			
ATHRI ← Cultural	-9.03	2.06	-4.39	.000

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology; ATHRI = Attitudes Toward Human Right Inventory.

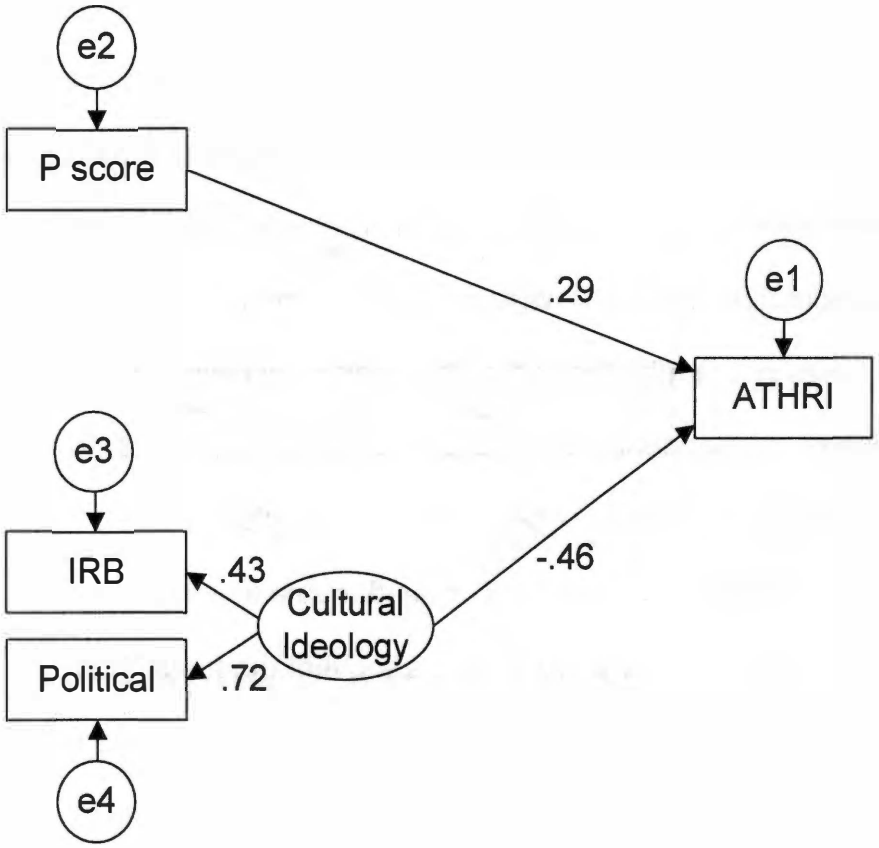

Figure 10. Path diagram for predicting moral thinking (Model 1)

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology; ATHRI = Attitudes Toward Human Right Inventory.

the size of the sample needed to accept the χ^2 results at the .05 level, was 493. Therefore, the model cannot be accepted based on the χ^2 results due to the insufficient sample size. However, Garson (2003) recommended using more than the χ^2 test as the sole determinant of goodness-of-fit. Therefore, the root mean square error of approximation (RMSEA) was used to determine the goodness-of-fit as well. RMSEA "does not require the author [to] posit as plausible a model in which there is complete independence of the latent variables" (Garson, 2003, p. 17), unlike other indicators, and is not affected much by sample size like χ^2. A model has good fit if the RMSEA score is ≤ .05 and adequate fit if the score is ≤ .08. The RMSEA score for Model 1 was .061, indicating that the model had adequate fit. In addition, certain measures "are appropriate when comparing models which have been estimated using maximum likelihood estimation" (Garson, 2003, p. 18). One such measure is the Browne-Cudeck criterion. To assume good fit, the Browne-Cudeck criterion should be close to .9. For Model 1, this value was 29.49, indicating a lack of fit. Since two of the measures did not indicate good fit, the model cannot be accepted. Although each of the paths in Table 7 reached significance ($p < .001$), they are meaningless since the overall model could not be accepted (Garson, 2003).

Since Model 1 did not achieve good fit, exploratory analysis was used to build Model 2. Adding paths to models usually decreases χ^2 (Garson, 2003). When expanding predictive models, Klem (1995) suggested that the new model should take into account current theory and research "about the causal

relationships among a set of variables" (p. 67). Since years of formal education are the single best predictor of a person's moral judgment (Rest, Narvaez, Bebeau, et al., 1999), this variable was used to predict the amount of variance in DIT2 P score, which, in turn, was used to predict directly to moral thinking. This method was employed to attempt to increase the predictive power of the Education ← DIT P2 score path and the overall model. Education was measured as a categorical variable (freshman = 1; seniors = 2). Table 8 provides the regression weight results, while the path diagram appears in Figure 3.

The χ^2 test (χ^2 = 16.58; *df* = 5; *p* = .005) reached significance for Model 2, indicating poor fit. Hoelter's Critical *N* was 286 at the $p < .05$ level. The RMSEA value was .074, suggesting adequate fit. The Browne-Cudeck criterion was 47.01, confirming the results of the χ^2 test. Therefore, Model 2 model was not found to have good fit.

One more model was tested. Model 3 added institution as a predictor variable to Model 2. The literature review for this study found that the highest scoring type of institution on the DIT P score was church-affiliated liberal arts colleges but that institutional selectivity might have a confounding effect on this finding (Pascarella & Terenzini, 1991). Since the two schools that participated in this study differed in their level of admissions' selectivity, institution, a categorical variable, was included in the analysis to determine if it could improve the fit of the model. Table 9 contains the regression results; Figure 12 shows the path diagram.

Table 8. Regression weights for Path Model 2

Path	Estimate	SE	CR	*p*
P score ← Education	5.20	1.30	4.01	.000
ATHRI ← P score	.27	.04	6.66	.000
Political ← Cultural	1.00			
IRB ← Cultural	3.14	.72	4.38	.000
ATHRI ← Cultural	-9.03	2.06	-4.39	.000

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology; ATHRI = Attitudes Toward Human Right Inventory. Education coded as 1 for Freshman and 2 for Senior.

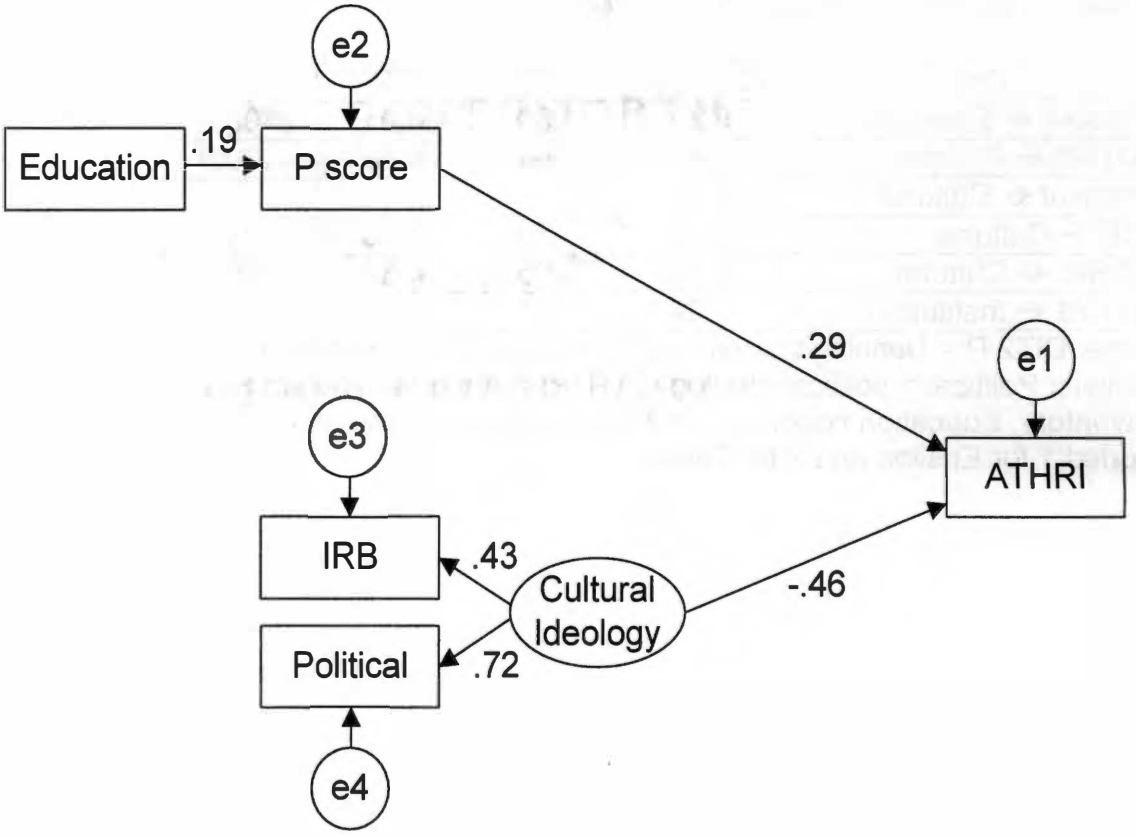

Figure 11. Path diagram for predicting moral thinking (Model 2)

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology; ATHRI = Attitudes Toward Human Right Inventory; Education = years of formal education completed with Freshman = 1 and Senior = 2.

Table 9. Regression weights for Path Model 3

Path	Estimate	SE	CR	*P*
P score ← Education	5.20	1.30	4.01	.000
ATHRI ← P score	.27	.04	6.68	.000
Political ← Cultural	1.00			
IRB ← Cultural	3.14	.72	4.38	.000
ATHRI ← Cultural	-9.03	2.06	-4.39	.000
ATHRI ← Institution	.09	1.12	.08	.937

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology; ATHRI = Attitudes Toward Human Right Inventory. Education coded as 1 for Freshman and 2 for Senior. Institution was coded 1 for Epsilon and 2 for Theta.

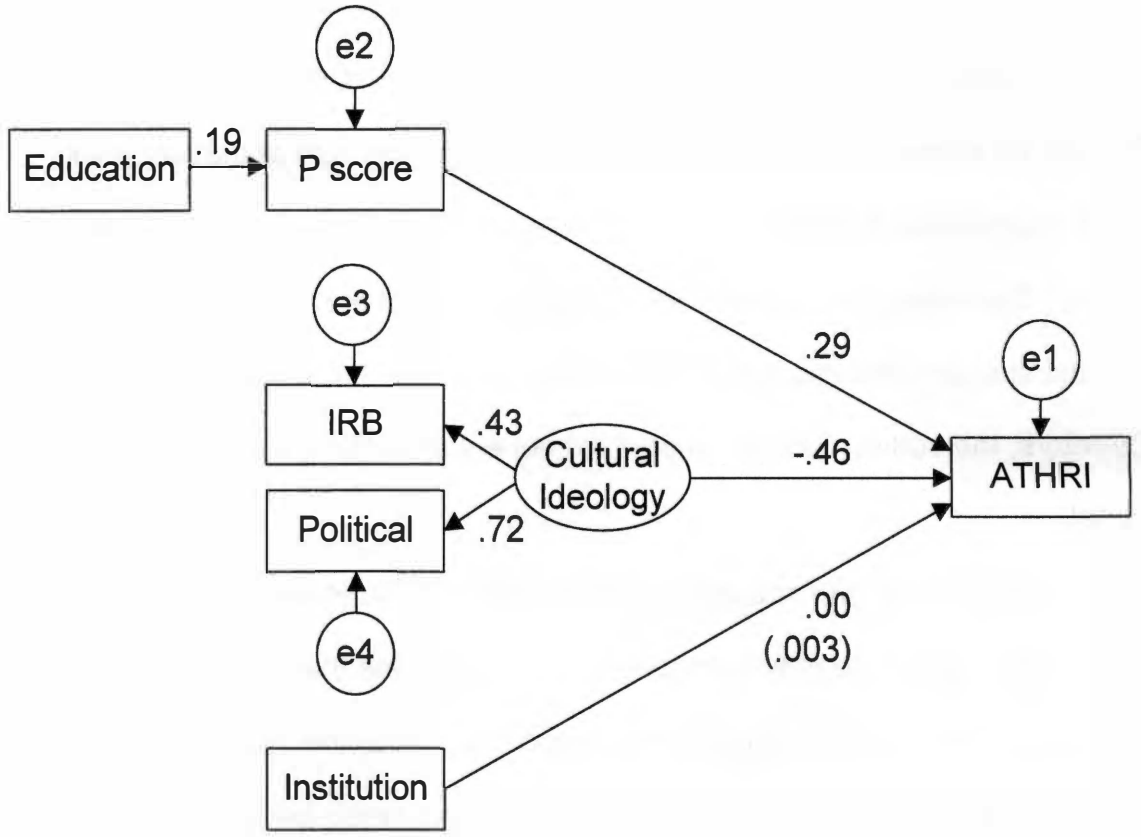

Figure 12. Path diagram for predicting moral thinking (Model 3)

Note. DIT2 P = Defining Issues Test 2 P score; IRB = Inventory of Religious Beliefs; Political = political ideology; ATHRI = Attitudes Toward Human Right Inventory; Education = years of formal education completed with Freshman = 1 and Senior = 2; For Institution, Epsilon = 1 and Theta = 2.

The χ^2 results for Model 3 reached significance ($\chi^2 = 33.76$; $df = 9$; $p < .000$), signifying poor fit, with Hoelter's Critical N at 215 at the $p < .05$ level. The RMSEA value was .080, which reflected an adequate fit right at the cutoff value. The Browne-Cudeck value was 70.36. Once again, the model did not achieve good fit. The institution variable did not predict much of the variance in ATHRI. In fact, the standardized regression weight was .003, which rounded to .00. Therefore, the addition of this variable did not enhance the goodness-of-fit of the model.

The results of the structural equation modeling indicated that the model did not have goodness of fit even when adding variables that were consistent with research in the field. Model 1 may prove to possess the best fit. However, to accept the χ^2 results, the sample size would need to reach the identified level. In addition, the β weight (-.46) for the unobserved variable of cultural ideology was somewhat stronger than the β weight for the DIT2 P score (.29). Of the two observed variables that contributed to cultural ideology, the political item's β weight (.72) was substantially higher than the IRB total (β = .43). Education predicted a small amount of the variance in the P score. However, the variable was measured on a categorical level; therefore, the amount of variance explained was likely attenuated due to the level of measurement. The institution variable predicted almost no variance.

Summary of Findings

Research Question 1: **Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?** The DIT 2 P score, political ideology score, and religious ideology score, and gender explained a significant amount of variance in the ATHRI scores as in Narvaez et al. For the entire sample, the regression model yielded a statistically significant result ($F = 39.57$, $df = 3$, $p < .001$, $R = .47$); however, the R^2 value (.22) indicated that only a small amount of the variance was explained by the predictor variables. These results indicated that the model did account for a significant amount of variance in moral thinking in conservative Christian college students, but that variables not in the model accounted for much more of the variance.

Since this study was a replication of the Narvaez et al. (1999) study, the comparison of the results of the two studies was warranted. The Narvaez et al. study reached an R value of .82 ($R^2 = .67$) without the gender variable. This means that the predictor variables accounted for three times the variance in moral thinking than in the current study. The β weights of each of the three predictor variables in the Narvaez et al. study reached statistical significance, as they did in this study. The β weights for the DIT P scores were nearly identical; it was slightly larger for this study (.29) than in the Narvaez et al. study (.27).

However, the other two variables' β weights were much lower for this study than for the Narvaez et al. study. The political item, the strongest item in both studies, was nearly twice as strong in the Narvaez et al. study (β = -.52) as in the current study (β = -.30), and the IRB total was more than twice as strong in the Narvaez et al. study (β = -.25) as in this study (β = -.10).

Research Question 2: **Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?** The multiple regression results for both groups of freshmen and seniors were statistically significant. The R^2 values (Epsilon freshmen - .30, Epsilon seniors - .26, Theta freshmen - .24, Theta seniors - .21) were low compared to the R^2 value reached in the Narvaez et al. (1999) study (.67). The Epsilon freshmen results explained approximately 4% more of the variance in moral thinking than the Epsilon seniors' results, while the Theta freshmen results explained approximately 3% more of the variance in moral thinking than the results for the Epsilon seniors. Therefore, the model appears to account for a slightly higher amount of the variance in moral thinking for freshmen than for seniors; however, the difference is negligible at 3-4%.

Research Question 3: **Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?** Gender was added as a potential predictor variable to religious ideology, political ideology, and moral judgment in an attempt

to account for more variance in moral thinking. The multiple regression results were statistically significant ($F = 29.63$, $df = 4$, $p < .001$, $R = .47$). However, the regression analysis yielded *t* values that were significant for the other three variables but not for gender; the β value for gender for the entire sample was very low (-.01). Therefore, an additional multiple regression analysis was conducted after removing gender. The results were statistically significant ($F = 39.57$, $df = 3$, $p < .001$, $R = .47$) without any decrease in the *R* value. In fact, the *F* statistic increased as a result of removing gender as a predictor. As a result, gender was not included in the structural equation modeling procedures.

Research Question 4: **Does the model predicting moral thinking from moral judgment and cultural ideology for students at evangelical Christian colleges have adequate statistical fit?** This study sought to extend the original study by Narvaez et al. (1999) by assessing the model for goodness-of-fit by using structural equation modeling. The original model with DIT2 P scores, political ideology, religious ideology, and ATHRI that was used in Narvaez et al. (1999) was the first to be tested. Though the χ^2 goodness-of-fit test results did not reach significance, the sample size was insufficient to accept the model. In addition, the Browne-Cudeck criterion was high, indicating that the model had poor fit. In an attempt to develop a model with good fit with this dataset, two additional models were tested. The first exploratory model included education in the model creating a path of DIT2 P score ← Education that then predicted to ATHRI. This was added due to the consistent relationship between years of

formal education and the DIT2 P score. However, the analyses indicated that this model had poor fit, also. Although the model did not reach significance, the correlation between DIT2 P score and education was significant, and including the variable decreased the value of the Critical *N* considerably. Therefore, it was kept in the model to test the third model. Since institutional selectivity and effects could have a bearing on DIT2 P scores, it was included in the model as a predictor variable to ATHRI. However, the results from this model did not indicate a good fit either. As a result, no models of good fit, including the original one developed by Narvaez et al., were identified in this study.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to assess the utility of a model used to predict moral thinking on major social issues (Narvaez et al., 1999) in Christian, evangelical, liberal arts institutions. The model used moral judgment and cultural ideology, which was comprised of political ideology and religious ideology, to predict to moral thinking. In addition, this study sought to extend the model by including gender as a predictor and by assessing the fit of the model. The research questions that framed this study were:

1. Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?

2. Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?

3. Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?

4. Does the model predicting moral thinking from moral judgment and cultural ideology for students at evangelical Christian colleges have adequate statistical fit?

Over 400 students participated from two Christian colleges that were evangelical, SACS-accredited, and CCCU members. Since the study sought to assess the predictive model's usefulness with new and advanced students, freshmen and seniors were sampled. The students completed three instruments: the DIT2, IRB, and ATHRI, which measured moral judgment, religious ideology, and moral thinking on major social issues. Political ideology was measured with one item on the DIT2. The reliability for each of the instruments was adequate except for the DIT2. Cronbach's α for the DIT2 was below .60, indicating a questionable level of reliability. However, the reliability coefficient was attenuated due to the homogeneity of the sample on years of formal education and conservatism. Regardless, the lower reliability of this measure must be considered when interpreting the results from this study.

The results were analyzed using multiple regression analyses and structural equation modeling. Multiple regression analyses were conducted on the entire sample, each school's students, each school's freshmen, and each school's seniors to determine the amount of variance accounted for by the model with each group. The results were then compared to the findings of the Narvaez et al. (1999) study to see if they were similar in assessing the moral thinking of highly conservative and liberally educated individuals. Structural equation

modeling was used to determine whether the original model or newly developed ones had good fit.

Review of the Findings

This section reviews the findings of the study by research question. Each question is answered with an explanation of how the findings were used to reach the answer.

Research Question 1: **Do moral judgment and cultural ideology (i.e., political ideology and religious ideology) combine to explain a significant amount of the variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities as in the Narvaez et al. (1999) study?** The results showed that moral judgment and cultural ideology did combine to explain a significant amount of variance in moral thinking in students at Christian, evangelical, liberal arts colleges and universities. The β weights for this study, each reaching significance, were -.30, .29, and -.10 for cultural ideology, DIT2 P score, and IRB respectively, while the values in Narvaez et al. (1999) were -.52, .27, -.25 in that same order. As compared to the Narvaez et al. study, these results indicated that the DIT2 P score was slightly more powerful in predicting moral thinking, but political ideology and religious ideology were not as powerful. Although the regression results reached statistical significance, the practical significance of using the model in settings with conservative and liberally educated Christians may be limited since only 22.1% of the variance was

predicted and 67.2% was predicted in the Narvaez et al. study. These results were more similar to the Rest, Narvaez, Thoma, et al. (1999) study, which found that the model predicted only 33.6% of the variance with a more conservative sample by using the DIT2. Therefore, the model accounts for less variance in moral thinking with conservative samples than with samples that are more heterogeneous.

Research Question 2: **Is there a significant difference in the amount of variance in moral thinking that is explained by orthodoxy/progressivism for new and advanced students at evangelical Christian colleges?** The amount of variance in moral thinking accounted for by the model was slightly higher (around 4%) for freshmen than seniors at each school. The results of the regression analyses were significant for both schools and for both schools' freshmen and seniors. The results for Epsilon College explained more variance in moral thinking that the results for Theta College in each pair of analyses. For each school's total sample, the respective amounts of variance predicted were 27.0% and 20.3%. For the Epsilon freshmen, 30.3% of the variance was predicted, while 24.0% was for the Theta freshmen. The amount of variance predicted by the model for Epsilon seniors was 26.0% and 21.2% for the Theta seniors. The variance accounted for with the Epsilon freshmen was 30.3% and with the seniors was 26.0%, with a difference of just over 4%. For Theta College, the variance accounted for with the freshmen was 24.0%, and the senior variance was 21.2%. The difference is just under 4%. Therefore, the model

predicts more variance in moral thinking with freshmen than seniors. However, the amount of variance is negligible. The fact that between 70% and 80% of the variance was unaccounted for remains.

Research Question 3: **Does gender contribute a significant amount of variance in moral thinking beyond orthodoxy/progressivism for students at evangelical Christian colleges?** The first multiple regression that was conducted on the total sample, using the DIT2 P score, the IRB total, the political ideology item, and gender as the predictors, was statistically significant, accounting for 22.1% of the variance. However, the β value for gender for the entire sample was -.01, which did not reach significance. As a result, an additional regression analysis was run on the entire sample without gender as a predictor variable. The results remained statistically significant, while the *F* value increased, and R^2 remained the same. Therefore, gender did not predict additional variance in moral thinking beyond the model used in the Narvaez et al. (1999) and Rest, Narvaez, Thoma, et al. (1999) studies.

Research Question 4: **Does the model predicting moral thinking from moral judgment and cultural ideology for students at evangelical Christian colleges have adequate statistical fit?** In an attempt to extend the original study and determine the goodness-of-fit of the original predictive model (Narvaez et al., 1999), structural equation modeling was conducted using the DIT2 P score, the IRB total, and the political ideology item to predict to the ATHRI total. An analysis using three different goodness-of-fit statistics determined that the

model did not have good fit. Consequentially, two additional models were explored including additional variables consistent with current research and theory. The first of these included education as predictor variable to the DIT2 P score to strengthen that path to ATHRI. However, this model was not accepted due to the lack of fit. Since the critical ratio of the P score ← Education path was significant and it lowered the critical *N* to accept the χ^2 results, it was retained in the third model along with adding Institution as a direct predictor to ATHRI. The results of this model also indicated poor fit. Therefore, none of the models evaluated in this study, including the original Narvaez et al. predictive model, resulted in good fit with the data.

Discussion

The sample from this study was very conservative religiously and politically and was less apt to advocate for civil rights as compared to the Narvaez et al. (1999) study. These differences were expected since students were sampled from evangelical colleges. However, the DIT2 P scores were significantly lower than the students from the Narvaez et al. study, who were sampled from a large Midwestern university. This was somewhat surprising since Pascarella and Terenzini (1991) found that the highest scoring type of institution was the church-affiliated liberal arts college. However, very little research on moral judgment has been done in very conservative evangelical Christian liberal arts colleges, and the campuses selected for this study were likely more

conservative than those Christian liberal arts schools studied before. With this in mind, the findings from this study seemed to confirm the literature concerning moral judgment and religion which consistently points to the relationship between religious conservatism and lower postconventional thinking (Rest, Narvaez, Bebeau, et al. 1999). The moral judgment scores were likely influenced considerably by the conservative political and religious ideologies of the students. Perhaps the students had the ability to think at higher levels but chose to use faith-based principles to make moral decisions, as was the case with the fundamentalist seminarians in Lawrence's study (1979).

The relationships among the continuous variables in this study confirmed the consistent findings in the literature. As P scores fell, religious and political conservatism rose. As P scores rose, the likelihood of advocating for civil rights increased also. Levels of political and religious conservatism increased together. Finally, as political and religious conservatism rose, the tendency to endorse opinions supportive of civil rights fell. Although the directions of the relationships corroborated the findings in the literature, the strength of the correlations was much weaker. The homogeneity of the sample appeared to attenuate the coefficients.

The correlations involving categorical variables were consistent with the moral judgment literature, also. The relationship between gender and postconventional thinking signified that there was a very weak relationship between the two. In addition, P scores and the likelihood of endorsing human

rights positions rose with years of formal education. The significant correlation between the institutional variable and the level of postconventional thinking indicated that there were institutional differences in moral judgment scores. The difference in postconventional scores may have been due to institutional selectivity (Pascarella & Terenzini, 1991) or any number of institutional differences (e.g., enrollment size, ethics instruction, faith integration, Greek clubs, level of academic challenge, etc.).

Although the predictive model achieved statistical significance, the amount of variance explained in moral thinking was less than one-third of that explained in Narvaez et al. (1999). Rest, Narvaez, Thoma, et al. (1999) found that the model explained less variance in a more conservative sample as well. Plus, the political and religious ideology β weights were much smaller in this study than in Narvaez et al. Again, the sample's homogeneity decreased the amount of variance explained. This homogeneity may have been a result of how students responded to the one-item political ideology item. As evidenced in the CCCU project "Taking Values Seriously: Assessing the Mission of Church-Related Higher Education," students may have labeled themselves more conservative, while their views on the ATHRI may have reflected a more liberal stance. At any rate, the low amount of variance in moral thinking explained by the model calls for additional predictors, particularly in settings that are conservative.

The study found that the regression model accounted for a significant amount of variance in moral thinking for freshmen and seniors at both

institutions. The model accounted for a minimal difference of variance (about 4%) in moral thinking between freshmen and seniors with R^2 values higher for the freshman analyses. Theoretically, this would be tenable. The literature indicated that as years of formal education rose, particularly in college, that postconventional thinking, political liberalism, religious liberalism, and the advocacy for civil rights increased as well. Therefore, as the student changes in all areas, the model would still account for similar amounts of variance. Yet, in this study, while the correlations were very weak, the level of education rose as political and religious conservatism increased also. On the other hand, the level of education was significantly positively correlated with postconventional thinking and the endorsement of human rights. Therefore, it appears that the weaker R^2 values for the seniors may be due to the lack of change in a more liberal direction in religious and political conservatism. In addition, the lack of cross-sectional change in religious and political ideology between the freshman and senior years in this study may be consistent with the missions of these schools. This idea points to the apparent tension at evangelical Christian schools between goals of liberal education and indoctrination along lines consistent with the institutional mission. Therefore, using this prediction model on campuses such as those in the sample may be questionable.

Gender was not used as a predictor variable in the previous studies using the model. When it was used in this study, it did not account for additional variance in moral thinking beyond political ideology, religious ideology, and moral

judgment. The β value for gender was -.01 for the entire sample. In fact, when gender was removed from the equation, the *F* statistic for the regression analysis rose. Since gender accounts for almost no variance in moral judgment, this finding was not entirely surprising, given the relationship between the DIT2 and the ATHRI. This finding, then, provided initial evidence that gender does not account for additional variance in the model.

The results from the structural equation modeling indicated that the model did not have good fit in spite of the statistical significance of the regression analyses. Even when predictor variables were added that were consistent with literature, the results did not signify good fit. Once again, a key factor was likely the homogeneity of the sample. Since structural equation modeling is concerned with "validating the measurement model" (Garson, 2003, p. 2), the findings from these analyses suggested that using this model with conservative samples may be problematic. Again, no previous studies have tested for the model's goodness-of-fit. Therefore, these findings provided some foundational evidence for this model's lack of fit, particularly with such conservative samples.

Conclusions

The conclusions that can be drawn from this study are:

1. The model introduced by Narvaez et al. (1999) can be used to predict moral thinking on major social issues for students at Christian, evangelical, liberal arts colleges.

2. The model's predictive validity is similar for new and advanced students.

3. Differences in moral thinking are not dependent on gender.

4. The predictive model does not have good statistical fit for students at Christian, evangelical, liberal arts colleges.

5. The predictive model does not account for as much variance in moral thinking in conservative samples as in heterogeneous samples.

Implications of the Study

The primary implication of the study is that evangelical, Christian, liberal arts colleges, which accent student moral development, can use the model to help them predict how their students think about significant social and political issues. Having assessment models should help such schools assess their students' moral development outcomes, thereby demonstrating that they have accomplished their missions. This is of particular importance since even schools regarded as having exemplary moral and civic development programs seldom are assessed. Historically, schools have chosen not to assess these programs and have lacked valid and reliable tools do so. Assessment models, such as the one utilized in this study, can help these campuses assess their mission achievement, improve in these areas, and inform their programs (Colby, Ehrlich, Beaumont, & Stephens, 2003). As schools begin to use results from assessment models like this, they can determine or tailor specific interventions that can

facilitate the desired change. Obviously, this is predicated on the idea that colleges have a sense of what moral thinking they desire in their students.

However, schools must be mindful that the model lacked good statistical fit, though it accounted for a significant amount of variance in moral thinking. With this in mind, these institutions can assess the fit of the model on their campuses, and when indicated, include other predictor variables consistent with the literature to enhance the model's fit. In fact, schools can develop specific measures for themselves to include in the model. These measures would be particularly useful if there are specific programs that encourage moral discourse and reflection.

Rest, Narvaez, Thoma, et al. (1999) found that the amount of variance accounted for by the model decreased when the participants were more conservative. As a result, they recommended further research to determine how the model would generalize to liberal and conservative samples. The results from this study confirmed those findings. Therefore, although these colleges have a model that can help them account for a significant amount of variance in student moral thinking, they must find additional measures to account for the greater variance with these more conservative samples.

This study contributes to the literature in two more key ways. First, the results of the study confirm that gender does not account for any additional variance beyond the original set of predictor variables. This is particularly informative to conservative campuses since many are still coming to terms with

gender issues and their understanding of how females and males come to think about significant social and political issues. Second, it appears that level of education has a minimal effect on the amount of variance predicted by the model. In fact, the study provides some initial evidence that the difference in the amount of variance predicted by the model between freshmen and seniors on the same campus may be similar across institutions. Obviously, additional research is warranted, particularly since these schools are very conservative and the findings are tentative.

Although it does not relate directly to the research questions of the study, the findings confirmed the trends in the literature among the key variables. Specifically, more politically conservative people tend to be more religiously fundamental. In addition, more politically and religiously conservative people tend to use principled reasoning less and tend to advocate ideas related to civil liberties less frequently. Furthermore, the completion of more years of formal education is significantly correlated with higher DIT2 P scores and a greater likelihood of supporting human rights.

Recommendations for Further Research

Future research in this area should seek to enhance the predictive power and fit of the model by incorporating additional predictor variables. This is of particular importance when using the model with extremely conservative groups and perhaps extremely liberal groups. Some recent research by McNeel,

Frederickson, and Granstrom (1998) has enhanced the model's predictive power with a more religiously conservative sample than in the Narvaez et al. (1999) study by adding measures of how participants hold their faith. In essence, these measures assessed whether conservative Christians approached their faith dogmatically or were open to other insights to their faith. Christians who held their faith less dogmatically tended to endorse positions that were more supportive of human rights. Perhaps these or similar measures should be used when using the model with conservative Christians. In addition, these models should be assessed for goodness-of-fit.

Rest (1979) identified that moral judgment correlated highly with cognitive ability. They are distinct from each other but do overlap. Other recent research has shown that growth in moral reasoning was enhanced by a college's curriculum and the student's ability to think critically (Mentkowski & Associates, 2000). The link between critical thinking and moral reasoning was more pronounced in the first two years of college. Therefore, further research in the field should evaluate the role of critical thinking in predicting attitudes toward human rights. Since the moral thinking regression model has a limited research base, future studies could include measures of critical thinking along with the instruments for moral judgment, political ideology, religious ideology, and attitudes toward human rights. Critical thinking, then, could be used as an additional predictor variable in the model.

This study sought to compare the utility of the predictive model for

freshmen and seniors separately by using a cross-sectional design. However, using a longitudinal design would allow for different measurements across time and give a more accurate assessment of the model's predictive validity with the same subjects over time. Conducting these studies in a variety of colleges, including conservative Christian liberal arts colleges, could help understand moral development in different types of colleges. Colby, Ehrlich, et al. (2003) stated, "Longitudinal research is especially valuable in helping educators understand the way moral and civic development unfolds over time and the long-term impact of various experiences" (p. 274). In addition, this study included transfer students in the senior samples. By using a longitudinal design, transfer students would be excluded from the study. This would allow for more confident generalizations concerning any institution-specific effects.

Pascarella and Terenzini (1991) posited that certain institutional effects, like selectivity, have a bearing on the development of moral judgment. As a result, these effects likely impact students' moral thinking. Astin's (1993) I-E-O model states that the student enters college with certain inputs and that the environment of the college interacts with these inputs to create outcomes. Further research should be conducted to determine the effects of certain environmental variables like the curriculum, specific programs, and co-curricular involvement. Specific longitudinal studies could measure student inputs (e.g., entrance examination scores, reasons for attending college, faith issues, moral judgment, political ideology, religious ideology, moral thinking, etc.), track the

ways in which they engage with the college in and out of the classroom, and assess the outcomes with measures included in the moral thinking model, graduate and professional school entrance scores, and so forth. Assessment could be conducted at various points during the students' course of study.

In addition, certain aspects of the institution's culture or ethos could be assessed, especially since the "hidden curriculum" tends to have a strong influence on morality (Colby, Ehrlich, et al., 2003). For instance, the level of academic challenge at an institution may affect the level of critical thinking achieved by students which, in turn, may affect the level of moral judgment. Recent research with the National Survey of Student Engagement (NSSE) has assessed the level of academic challenge on campuses (Center for Postsecondary Research and Planning, 2001). *The College Student Report*, the questionnaire for the NSSE, could be administered with the measures in the moral thinking model to determine whether the level of academic challenge accounts for additional variance. Other scores from *The College Student Report*, like enriching educational experiences, student-faculty interaction, active and collaborative learning, and supportive campus environment, could be used predictor variables as well.

Obviously, some of the institutional characteristics and the culture itself could be assessed more thoroughly through qualitative methods like interviews, document analysis, focus groups, and observation. Future studies could use mixed methods to understand more fully *how* the college affected the student's

moral thinking. The measures used in the moral thinking model could be used to collect quantitative data, while the methods mentioned above would be used to gather qualitative data. Assessment approaches outlined by Upcraft and Schuh (1996) could be used to understand campus environments, while approaches prescribed by Whitt (1996), Schein (1992), and Kuh and Whitt (1988) could be used to assess student and campus cultures.

One particular issue related to institutional effects that should be considered in future studies is the degree to which moral development is central to the mission and goals of the college. As Colby, Ehrlich, et al. (2003) identified in their study of schools that promoted moral and civic development, "Leadership from administrators, faculty, and campus centers is central to their success, as is establishing a campus culture that supports positive moral and civic values" (p. xv). For schools to facilitate student moral development, they must address these issues in the core and major curricula and offer experiences outside of the classroom that contribute to this growth. As such, consideration should be given to how holistic and intentional the institution's efforts are and how much support and direction are provided by campus leaders, specifically the president, other key administrators, faculty, and staff. Mixed methods could be used to assess the level of institutional commitment to moral growth. For instance, interviews with key administrators, faculty members, staff, and students could help determine the importance of moral development across campus. Specific instruments could be developed to gather data from these groups to supplement interview data, or new

instruments like the Faculty Survey of Student Engagement (Center for Postsecondary Research and Planning, 2004), a faculty companion to the NSSE, could be used to gather information on activities like faculty contact with students outside of the class, which has been shown to facilitate increases in moral judgment (McNeel, 1994). In addition, document analysis could be used to review the college's mission statement, budgetary allocations, and other key documents and publications to ascertain the institution's commitment to moral development.

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Appendices

Appendix A

Stages and Levels of Moral Judgment

Table 10. Stages and levels of moral judgment

Level and stage	Content of stage: What is right	Reasons for doing right	Sociomoral perspective of stage
Level 1 Preconventional			
Stage 1. Heteronomous morality	To avoid breaking rules backed by punishment, obedience for its own sake, and avoiding physical damage to persons and property	Avoidance of punishment and the superior power of authorities.	Egocentric point of view. Doesn't consider the interests of others or recognize that they differ from the actor's, doesn't relate two points of view. Actions are considered physically rather than in terms of psychological interests of others. Confusion of authority's perspective with one's own.
Stage 2. Individualism, instrumental purpose, and exchange	Following rules only when it is to someone's immediate interest; acting to meet one's own interests and needs and letting others do the same. Right is also what's fair, what's an equal exchange, a deal, an agreement.	To serve one's own needs or interests in a world where you have to recognize that other people have their interests, too.	Concrete individualistic perspective. Aware that everybody has his own interests to pursue and these conflict, so that right is relative (in the concrete individualistic sense).
Level 2 Conventional			
Stage 3. Mutual interpersonal expectations, relationships, and interpersonal conformity	Living up to what is expected by people close to you or what people generally expect of people in your role as son, brother, friend, etc. "Being good" is important and means having good motives, showing concern about others. It also means keeping mutual relationships, such trust, loyalty, respect, and gratitude.	The need to be a good person in your own eyes and those of others. Belief in the Golden Rule. Desire to maintain rules and authority which support stereotypical good behavior.	Perspective of the individual in relationships with other individuals. Aware of shared feelings, agreements, and expectations which take primacy over individual interests. Relates points of view through the concrete Golden Rule, putting yourself in the other guy's shoes. Does not yet consider generalized system perspective.
Stage 4. Social system and conscience	Fulfilling the actual duties to which you have agreed. Laws are to be upheld except in extreme cases where they conflict with other fixed social duties. Right is also contributing to society, the group, or institution.	To keep the institution going as a whole, to avoid the breakdown in the system "if everyone did it," or the imperative of conscience to meet one's defined obligations.	Differentiates societal point of view from interpersonal agreement or motives. Takes the point of view of the system that defines roles and rules. Considers individual relations in terms of place in the system.
Level 3: Postconventional or principled			
Stage 5. Social contract or utility and individual rights	Being aware that people hold a variety of values and opinions, that most values and rules are relative to your group. These relative rules should usually be upheld, however, in the interest of impartiality and because they are the social contract. Some nonrelative values and rights like life and liberty, however, must be upheld in any society and regardless of majority opinion.	A sense of obligation to law because of one's social contract to make and abide by laws for the welfare of all and for the protection of all people's rights. A feeling of contractual commitment, freely entered upon, to family, friendship, trust and work obligations. Concerns that laws and duties be based on rational calculation of overall utility, "the greatest good for the greatest number."	Prior-to-society perspective. Perspective of a rational individual aware of values and rights prior to social attachments and contracts. Integrates perspectives by formal mechanisms of agreement, contract, objective impartiality, and due process. Considers moral and legal points of view; recognizes that they sometimes conflict and finds it difficult to integrate them.
Stage 6. Universal ethical principles	Following self-chosen ethical principles. Particular laws or social agreements are usually valid because they rest on such principles. When laws violate these principles, one acts in accordance with the principle. Principles are universal principles of justice: the equality of human rights and respect for the dignity of human beings as individual persons.	The belief as a rational person in the validity of universal moral principles and a sense of personal commitment to them.	Perspective of a moral point of view from which social arrangements derive. Perspective is that of any rational individual recognizing the nature of morality or the fact that persons are ends in themselves and must be treated as such.

Adapted from Kohlberg, 1976, pp. 34-35.

Appendix B

Inventory of Religious Beliefs

Inventory of Religious Beliefs

D. G. Brown & W. L. Lowe

Your Identification Number
|_|_|_|_|_|

Directions

For each of the following statements, circle the number which best expresses your opinion:

1=Strongly Agree (SA)
2=Agree (A)
3=Uncertain (U)
4=Disagree (D)
5=Strongly Disagree (SD)

		SA	A	U	D	SD
1.	It makes no difference whether one is a Christian or not as long as one has good will for others.	1	2	3	4	5
2.	I believe the Bible is the inspired Word of God.	1	2	3	4	5
3.	God created man separate and distinct from animals.	1	2	3	4	5
4.	The idea of God is unnecessary in our enlightened age.	1	2	3	4	5
5.	There is no life after death.	1	2	3	4	5
6.	I believe Jesus was born of a virgin.	1	2	3	4	5
7.	God exists as: Father, Son and Holy Spirit.	1	2	3	4	5
8.	The Bible is full of errors, misconceptions and contradictions.	1	2	3	4	5
9.	The gospel of Christ is the only way for mankind to be saved.	1	2	3	4	5
10.	I think there have been many men in history just as great as Jesus.	1	2	3	4	5
11.	I believe there is a heaven and a hell.	1	2	3	4	5
12.	Eternal life is the gift of God only to those who believe in Jesus Christ as Savior and Lord.	1	2	3	4	5
13.	I think a person can be happy and enjoy life without believing in God.	1	2	3	4	5
14.	In many ways the Bible has held back and retarded human progress.	1	2	3	4	5
15.	I believe in the personal, visible return of Christ to the earth.	1	2	3	4	5

Appendix C

Attitudes Toward Human Rights Inventory

ATHRI

Attitudes about public policies

Your Identification number
|_|_|_|_|_|_|

*[**Directions**: For each of the following statements, circle the number which best expresses your opinion: 1=Strongly Agree (SA), 2=Agree (A), 3=Uncertain (U), 4=Disagree (D), 5=Strongly Disagree (SD).]*

SA	A	U	D	SD	
1	2	3	4	5	1. Counselors should encourage girls to consider training to become pilots, carpenters, military officers, truck drivers and other usually male occupations.
1	2	3	4	5	2. Laws should be passed to regulate the activities of religious cults that have come here from Asia.
1	2	3	4	5	3. Citizens should be allowed to voice their opinions if they disagree with their government.
1	2	3	4	5	4. Welfare assistance should be limited to those who are really needy and not given to those who refuse to work.
1	2	3	4	5	5. Freedom of speech should be a basic human right.
1	2	3	4	5	6. The government should find ways to insure a good food supply for poor children in our large inner-cities.
1	2	3	4	5	7. Teenagers should be allowed to receive medical treatment without parental consent.
1	2	3	4	5	8. Occasionally it is reasonable to deny the right to vote to some groups; for instance to persons involved in un-American activities or to members of the Communist party.
1	2	3	4	5	9. If we let religious fundamentalists teach in our schools they will try to indoctrinate our children.
1	2	3	4	5	10. Our nation should work toward liberty and justice for all.
1	2	3	4	5	11. If some of its students don't speak English, a school should add bilingual teachers even if doing so is expensive.
1	2	3	4	5	12. All people should have food, clothing, and shelter.
1	2	3	4	5	13. Professors in state-run universities should be granted academic freedom in their teaching, even if they teach Marxist ideas.
1	2	3	4	5	14. Books should be banned if they are written by people who have been involved in right-wing White Supremacy groups.
1	2	3	4	5	15. Churches should not change American Indians' beliefs.
1	2	3	4	5	16. It is fair to put to death a person who has willfully taken the life of another.

Attitudes . . .

SA	A	U	D	SD	
1	2	3	4	5	17. In a democratic country, the press should be free from government censorship.
1	2	3	4	5	18. If an Equal Rights Amendment were adopted, it would disrupt society and the division of labor between males and females.
1	2	3	4	5	19. If unemployed people cannot find work, they just are not looking hard enough, and therefore should not be supported by the state.
1	2	3	4	5	20. Teachers who are homosexuals can be good role models for our children, just like anyone else.
1	2	3	4	5	21. People from Fascist countries should not be allowed to come here and spread their propaganda.
1	2	3	4	5	22. Publishers of school books should use inclusive language like person or people, and avoid man or men when appropriate.
1	2	3	4	5	23. The basic rights in the constitution (the right to vote, to be presumed innocent until proven guilty, etc.) should be upheld for all citizens.
1	2	3	4	5	24. The full range of birth control information should be made available to the public at large.
1	2	3	4	5	25. People who oppose the government's taxation policies should not be allowed to organize demonstrations.
1	2	3	4	5	26. People should have freedom of religion (worship as they choose) and freedom of belief (believe as they choose).
1	2	3	4	5	27. Homosexuals shouldn't be hired for jobs requiring considerable contact with the public.
1	2	3	4	5	28. We should not waste time having costly trials for people we are 100% sure are guilty.
1	2	3	4	5	29. People should not be discriminated against because of their race, sex, religion, or handicap in a democratic country like ours.
1	2	3	4	5	30. People who oppose the government's military policies should not be allowed to organize demonstrations.
1	2	3	4	5	31. Teachers who are fundamentalist Christians can be good role models for our children, just like anyone else.
1	2	3	4	5	32. A terminally ill and suffering patient should be able to have the doctor "pull the plug".
1	2	3	4	5	33. Police should not have to get search warrants when they are pursuing suspects with known criminal records.
1	2	3	4	5	34. People from Communist countries should not be allowed to come here and spread their propaganda.

Attitudes . . .

SA	A	U	D	SD	
1	2	3	4	5	35. Books should be banned if they are written by people who have been involved in un-American activities.
1	2	3	4	5	36. Professors in state-run universities should be granted academic freedom in their teaching, even if they teach male superiority.
1	2	3	4	5	37. If they are quiet and well-behaved, students should be allowed to wear black armbands in school to protest a governmental policy or action with which they disagree.
1	2	3	4	5	38. Abortion is any woman's right.
1	2	3	4	5	39. People in a free country should not have to worry about unwarranted intrusions by the government into their private lives.
1	2	3	4	5	40. Loyal citizens should be given full constitutional rights but disloyal citizens should not expect to be given all those rights.
1	2	3	4	5	41. It is legitimate for authorities to curtail the activities of groups protesting a governmental policy or action.
1	2	3	4	5	42. If we let atheists teach in our schools they will try to indoctrinate our children.
1	2	3	4	5	43. Occasionally it is reasonable to deny the right to vote to some groups; for instance to persons involved in militia groups with stockpiles of weapons.
1	2	3	4	5	44. The Roman Catholic Church should work toward allowing women to enter the priesthood.
1	2	3	4	5	45. People should be able to have a voice in how they deal with their own physical well-being, with their health and their illnesses.
1	2	3	4	5	46. Wire-tapping and surveillance are necessary even if they violate the law when danger to the public is suspected.
1	2	3	4	5	47. If busing is the best way to ensure that black students have the same educational opportunities as white students, it should be encouraged.
1	2	3	4	5	48. Gun ownership is every citizen's right.

Appendix D

Permission to Use the ATHRI

From: Muriel Bebeau <bebea001@maroon.tc.umn.edu>
To: Mike Hayes <mhayes@leeuniversity.edu>, Steve Thoma <Sthoma@ches.ua.edu>
Date: 2/8/01 4:49PM
Subject: Re: Permission to Use the ATHRI

Mike:

Thanks for your inquiry, and I'm glad you already have the insturment. I am going to forward your inquiry to Steve Thoma, our research director, as you may want to chat with him about your study and to check out the key for scoring. I'm sure he would also be interested in the replication you plan. We are always interested in expanding the data base for the work we do.

Let me know if this works out or if I can be of further help.

Mickey Bebeau

Mike Hayes wrote:

Dr. Bebeau, Good afternoon. My name is Mike Hayes. I am a doctoral student at the University of Tennessee in the Higher Education Administration program. I am in the process of writing my prospectus. I want to do a replication of the study on how cultural ideology and moral judgment predict moral thinking as conducted by Narvaez et al. (1999) and Rest et al. (1999). I want to replicate the study with advanced undergraduate students at evangelical colleges to see how the model predicts in settings like these. I had faxed the Center in the fall for information on the ATHRI. I received a copy of it. Thanks! However, I wanted to ask for two things. First, I would like official permission to use the ATHRI in my study. Second, I'm fairly confident that I know which items on the ATHRI are reverse scored. However, I was wondering if the Center had a guide for that. If you could, please let me know how I need to go about seeking permission to use the scale and whether or not there is a specific set of guidelines for which items are reverse scored. I have read Getz (1985) dissertation, but it did not provide the reverse scoring information. I look forward to hearing from you.

Thank you,
Mike Hayes
Lee University
Director of Student Development

--
Muriel J. Bebeau, Ph.D.
Professor, Department of Preventive Sciences
School of Dentistry
Executive Director, Center for the Study of Ethical Development
Faculty Associate, Center for Bioethics
University of Minnesota
515 Delaware S.E.
Minneapolis, MN 55455

Phone: 612 625-4633
FAX: 612 626-6096
e-mail: bebea001@umn.edu

http://www.coled.umn.edu/CSED/default.html

Appendix E

Human Subjects Form B

FORM B
APPLICATION

FORM B

IRB # _____

Date Received in OR _____

THE UNIVERSITY OF TENNESEE, KNOXVILLE

Application for Review of Research Involving Human Subjects

I. IDENTIFICATION OF PROJECT

1. Principal Investigator

Michael A. Hayes
1520 Brown Ave. NW
Cleveland, TN 37311
(423)476-3219 (home)
(423)614-8406 (office)
mhayes@leeuniversity.edu

Faculty Advisor

Dr. Norma T. Mertz
Educational Administration and Cultural Studies
315 Claxton Addition
Knoxville, TN 37996
(865)974-6150 (office)
nmertz@utk.edu

Department/Unit

College of Education, Department of Educational Administration and Cultural Studies, Unit of Leadership Studies

2. Project Classification

Dissertation

3. **Title of Project**

Students' Moral Judgment, Cultural Ideologies, and Moral Thinking at Evangelical Christian Liberal Arts Colleges

4. **Starting Date**

Upon IRB Approval

5. **Estimated Completion Date**

May 2002

6. **External Funding**

N/A

1. **Grant/Contract Submission Deadline**: N/A
2. **Funding Agency**: N/A
3. **Sponsor ID Number**: N/A
4. **UTK Proposal Number**: N/A

II. PROJECT OBJECTIVES

The purpose of the study is to examine the relationship between orthodoxy/progressivism, which consists of moral judgment, religious ideology, and political ideology, and moral thinking of students at evangelical Christian liberal arts colleges on attitudes toward human rights.

III. DESCRIPTION AND SOURCE OF RESEARCH PARTICIPANTS

The participants for this study will include seniors from classes at three evangelical Christian colleges which are accredited by the Southern Association of Colleges and Schools, are full members of the Council for Christian Colleges and Universities, have a holiness tradition, and have

undergraduate enrollments of at least 1,000 students.

The classes will be selected by using a systematic sampling strategy. The authorized officer at each of the three schools provided the principal investigator with a Permission to Conduct Research letter and a list of courses that are senior-only or nearly all seniors. The completed Permission to Conduct Research letters are attached to this application. From the list of courses, a random starting point will be selected, and classes will be selected at equal intervals. Permission will be sought from course instructors for administering the materials.

A sample of 32 seniors is required per campus. Therefore, classes will be sampled until the requisite number of students has completed valid protocols for each campus. The three schools are Epsilon College, Theta University, and Omega University. Each school will be identified by a pseudonym, ensuring their confidentiality. In addition, students' results will remain confidential.

IV. METHODS AND PROCEDURES

The principal investigator will travel to each campus and personally administer the batteries of instruments in the approved classes. Participants will be asked to read and sign an Informed Consent form. Once they have consented to the study, they will receive the set of instruments which includes:

- the Defining Issues Test 2 (DIT2) to assess moral judgment. This instrument will take between 35 and 45 minutes to complete.
- Inventory of Religious Beliefs by Brown and Lowe to measure religious conservatism/liberalism, which will take 5 minutes to complete.
- Attitudes Toward Human Rights Inventory (ATHRI) to gauge the advocacy of human rights, i.e., moral thinking. Participants should complete this scale within 15 minutes.

In addition, the DIT2 contains one item that measures political ideology. The instruments will be presented in random order to control for order effects. Respondents will be asked to return their completed materials to the principal investigator.

All of the completed DIT2s will be mailed to the Center for the Study of Ethical Development at the University of Minnesota for scoring. All completed ATHRIs and Inventories of Religious Belief will be scored by the researcher. These inventories will be maintained in a locked file cabinet in the researcher's office at Lee University in Cleveland, Tennessee and will be destroyed after three years.

Complete confidentiality will be given to each participant and each school in this study. The data will be analyzed by school and as an entire set. To ensure confidentiality for the participants, they will receive instruments with code numbers on them. A separate list that identifies each student by code will be available only to the principal investigator to allow for follow-up if students desire to receive their results.

The data will be analyzed using several techniques. Frequencies will be reported for demographic items. Means and standard deviations will be reported for the scores on each of the instruments by school and overall. Correlation analyses will be run between each of the variables to determine relationships among them.

One sample t-tests will be conducted on the scores from each of the instruments by school and for the entire sample. These means will be compared to published means on each of the scales to determine whether the students in this study differ from the published norms.

Multiple regression analyses will be run for each campus and the entire sample, using scores on the DIT2, the item measuring political ideology, and the Inventory of Religious Beliefs, as the predictor variables to explain the variance in ATHRI scores, the criterion variable.

Reliability estimates will generated by using Cronbach's alpha on the DIT2, Inventory of Religious Beliefs, and the ATHRI.

V. SPECIFIC RISKS AND PROTECTION MEASURES

There are no anticipated risks expected to be encountered by the respondents while participating in this project. As mentioned earlier, confidentiality will be ensured to each student and school. Each instrument will have a code so participants' names will not be on the materials. A list of the participants and their corresponding codes will be available only to the principal investigator to allow for follow-up with students if they wish to receive their results. Pseudonyms will be used to ensure confidentiality for the schools. Again, all consent forms and instruments will be locked in a file cabinet in the principal investigator's office along with the list of participants and codes. Only the principal investigator will have access to the files.

VI. BENEFITS

The benefits to participants include the opportunity to receive their individual results on measures of moral judgment, religious ideology, and

attitudes toward human rights. Each of the schools will benefit by receiving the results for its students. The project will contribute to the moral judgment and student development literature.

VII. METHODS FOR OBTAINING "INFORMED CONSENT" FROM PARTICIPANTS

First, the principal investigator discussed the intent and methods for study with the respective chief student development officer (CSDO) at each of the schools in person. The CSDOs provided an initial agreement to forward information on the study to the appropriate administrator on the respective campuses. The principal investigator then emailed information on the study to the CSDOs, requesting that they forward the information to the appropriate person. The authorized administrators then contacted the principal investigator, agreeing to participate in the study. The principal investigator then requested a Permission to Conduct Research letter from each of the authorized administrators. They sent letters to the principal investigator along with a list of classes to sample from their campuses. Once IRB approval is granted, the classes will be sampled. Once a class is identified, permission will be sought from the instructor by the authorized administrator on each campus.

Once the classes are selected, the principal investigator will personally visit each campus to administer the instruments. Before beginning the administration of the instruments, each participant of the study will be asked to read and sign a consent form, which explains the purpose and methods of the study in language that is understandable to them. Once the form is completed, the participants will be given the instruments. They will be reminded verbally that they may withdraw from the study at any time they choose without penalty.

The singed consent forms will be stored in a locked file cabinet in the principal investigator's office for three years, at which point they will be destroyed. Only the principal investigator will have access to the documents.

VIII. QUALIFICATIONS OF THE INVESTIGATOR TO CONDUCT RESEARCH

The principal investigator, Michael A. Hayes, is an Ed.D. candidate in the Leadership Studies program in the Department of Educational Administration and Cultural Studies of the University of Tennessee, Knoxville College of Education. This project will be conducted under the direct supervision of Dr. Norma T. Mertz, doctoral committee chair and

specialist in the area of college student personnel.

IX. FACILITIES AND EQUIPMENT TO BE USED IN THE RESEARCH

The principal investigator's personal computer and software (i.e., SPSS 10.0 for Windows) constitutes adequate support for the storage and analysis of the data. The data without any personal identifiers will be stored on the computer's laptop until the data analyses are completed. Once they are, the data files will be copied to a floppy disk and erased from the computer's hard drive. The floppy disk along with hard copies of the completed consent forms and instruments will then be stored in the locked, fireproof file cabinet in the principal investigator's office which is accessible only by the investigator.

Permission letters from authorized administrators from each institution are attached to this application.

X. RESPONSIBILITY OF THE PRINCIPAL INVESTIGATOR

By compliance with the policies established by the Institutional Review Board of The University of Tennessee, Knoxville, the principal investigator subscribes to the principles stated in "The Belmont Report" and standards of professional ethics in all research, development, and related activities involving human subjects under the auspices of the University of Tennessee, Knoxville. The principal investigator further agrees that:

1. Approval will be obtained from the Institutional Review Board prior to instituting any change in the research project.

2. Development of any unexpected risks will be immediately reported to the Compliances Section.

3. An annual review and progress report (Form R) will be completed and submitted when requested by the Institutional Review Board.

4. Signed informed consent documents will be kept for the duration of the project and for at least three years thereafter at a location approved by the Institutional Review Board.

XI. SIGNATURES

Principal Investigator: Michael A. Hayes

Signature: _____ Date: _____

Faculty Advisor: Norma T. Mertz

Signature: _____ Date: _____

Department Head: Joy DeSensi

Signature: _____ Date: _____

Chair of the Departmental Review Committee: Jeffery Aper

Signature: _____ Date: _____

XII. DEPARTMENT REVIEW AND APPROVAL

The application described above has been reviewed by the IRB departmental review committee and has been approved. The DRC further recommends that this application be reviewed as:

[ ] Expedited Review – Category: _____

OR

[ ] Full IRB Review

Chair of the Departmental Review Committee: Jeffery Aper

Signature: _____ Date: _____

Department Head:Joy DeSensi

Signature: _____ Date: _____

Protocol sent to Compliance Section for final approval on (Date)

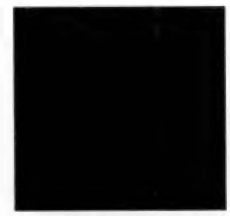
_____

Approved: Compliance Section
Office of Research
404 Andy Holt Tower

Signature: _____ Date: _____

Appendix F

Permission to Conduct Research Letters



PERMISSION TO CONDUCT RESEARCH

As chairman of the [redacted] IRB, I certify that Michael A. Hayes' proposal to conduct research for his doctoral dissertation on this campus has been reviewed and approved.

I understand and agree that:

The purpose of the study is to determine the relationship of orthodoxy/progressivism with moral thinking of students at evangelical Christian liberal arts colleges and to compare the relationships between freshmen and seniors and males and females.

This research will involve selecting courses in which only or mostly freshmen and seniors are enrolled in which to administer a battery of instruments.

Three instruments (i.e., the Defining Issues Test 2, Brown and Lowe's Inventory of Religious Beliefs, and the Attitudes Toward Human Rights Inventory) will be distributed to the consenting students in the identified classes.

Students' information and data will be held confidential.

The college will be given a pseudonym to protect its confidentiality.

The results from the instruments will be used exclusively by the researcher and will be kept in a locked file cabinet in his office at Lee University for a period of three years after which they will be destroyed.

Each participant will be asked to sign a consent form, indicating a willingness to participate in the study. Each participant will be given an opportunity to ask questions of the researcher prior to the administration of the instruments, and each participant may refuse to answer any question and may withdraw from the study at any time for any reason without penalty.

This college will receive a copy of the completed study with an identification of the college's pseudonym.

My signature below indicates my agreement to participate in this research study.

[redacted]

Sept. 7, 2001
Date

[redacted]

[redacted] [redacted]

OFFICE OF THE VICE PRESIDENT
FOR ACADEMIC AFFAIRS

PERMISSION TO CONDUCT RESEARCH

As an authorized agent of [redacted], I grant permission for Michael A. Hayes to conduct research for his doctoral dissertation on this campus.

I understand and agree that:

the purpose of the study is to determine the relationship between orthodoxy/progressivism and moral thinking of students at evangelical Christian liberal arts colleges and to compare the relationships between freshmen and seniors and males and females

this research will involve selecting courses in which only or mostly freshmen and seniors are enrolled in which to administer a battery of instruments

three instruments (i.e., the Defining Issues Test 2, Brown and Lowe's Inventory of Religious Beliefs, and the Attitudes Toward Human Rights Inventory) will be distributed to the consenting students in the identified classes

students' information and data will be held confidential

the college will be given a pseudonym to protect its confidentiality

the results from the instruments will be used exclusively by the researcher and will be kept in a locked file cabinet in his office at Lee University for a period of three years after which they will be destroyed

each participant will be asked to sign a consent form, indicating a willingness to participate in the study. Each participant will be given an opportunity to ask questions of the researcher prior to the administration of the instruments, and each participant may refuse to answer any question and may withdraw from the study at any time for any reason without penalty.

this college will receive a copy of the completed study with an identification of the college's pseudonym.

My signature below indicates my agreement to participate in this research study.

[redacted] [redacted]
Printed Name Title

[redacted] Sept. 9, 2021
Signature Date

[redacted]

Appendix G

Informed Consent Form

INFORMED CONSENT FORM

Students' Moral Judgment, Cultural Ideologies, and Moral Thinking at Evangelical Christian Liberal Arts Colleges

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You are invited to participate in a research study. The purpose of the study is to examine the relationship between orthodoxy/progressivism, which consists of moral judgment, religious ideology, and political ideology, and moral thinking of students at evangelical Christian liberal arts colleges on attitudes toward human rights.

If you agree to participate in the study, you will be asked to complete three instruments which should take you a about an hour to complete. The instruments are the:

- Attitudes Toward Human Rights Inventory to gauge your advocacy of human rights (15 minutes)
- Defining Issues Test 2 to assess your moral judgment (35-45 minutes)
- Inventory of Religious Beliefs to measure how religiously conservative or liberal you might be (5 minutes)

In all, about 40 of your fellow students will be participating in this study. Approximately 80 other students from other similar colleges will take part.

All of your information will be kept confidential. To protect your confidentiality, each of the instruments that you will complete has a code on it so your name will not appear on any of the scales. Your name will appear only on a list that indicates what your code is. Therefore, if you wish to know what your results are, they will be available. All of the materials that you complete, your signed consent form, and the list of codes and names will be locked in a file cabinet at the principal investigator's office at Lee University. No other person but the principal investigator will have access to your data unless you specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link you to the study. In fact, your school will not be identified in the study or any report. All records will be destroyed in three years.

There are no anticipated risks expected to be encountered while you participate in this project. The three scales that you are being asked to complete have been used with several individuals for a number of years and are aimed at assessing your approach to moral, religious, political, and social issues. You may receive some benefit as a result of your participation. If so desired, you may receive feedback on your results. In addition, your participation will help this study contribute valuable information on the moral thinking of students on evangelical Christian college campuses. In addition, your school should benefit from your participation. They will receive a final report on this project.

Please initial here: _____

If you have questions at any time about the study or procedures, you may contact the researcher, Mike Hayes, at Lee University's Office of Student Life by calling (423) 614-8406. If you have questions about your rights as a participant, contact the Research Compliance Services section of the Office of Research at the University of Tennessee, Knoxville at (865) 974-3466.

Your participation in this study is completely voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at anytime without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed, your data will be destroyed.

_____

I have read the above information and agree to participate in this study. I have received a copy of this form.

Participant's Name (print) _____

Participant's Signature _____

Date _____

Vita

Michael Alan Hayes was born in Sidney, OH on April 8, 1967. He graduated from Sidney High School in 1985. From there, he went to Lee College and received a B.A. in psychology in 1990. He completed an M.Ed. in counseling at the University of Tennessee, Chattanooga in 1992 and an Ed.D. in Educational Administration and Policy Studies at the University of Tennessee, Knoxville in 2004.

Michael has worked in various professional settings including mental health center management and church staff positions. Since 1995 he has worked at Lee University in Cleveland, TN, where he currently holds the position of Director of Student Development.