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A CROSS-CULTURAL STUDY OF MORAL DEVELOPMENTAL THEORY: THE INFLUENCE OF COLLECTIVISM ON MORAL REASONING OF ASIAN STUDENTS AND CAUCASIAN AMERICAN STUDENTS

A Dissertation
Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy

by
Chang-ho Clyde Ji
May 1995
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ABSTRACT

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by

Chang-ho C. Ji

Chair: Elsie P. Jackson
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

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Problem Statement

Lawrence Kohlberg’s stage model of moral development has attracted a great deal of attention from educators and psychologists. Not surprisingly, his work has also inspired considerable criticism and revisionism. A number of authors have argued that Kohlberg’s theory does not incorporate the collectivistic moral reasoning that emphasizes human relationships among individuals, families, the community, and society in general.

Methodology

Analyses of variance, t-test, correlational analyses, and regression analyses were performed to investigate the relationship between ethnicity, moral...
reasoning, and collectivism using the Defining Issues Test (DIT) and the Individualism-Collectivism (INDCOL) Scale. These scales were administered to 179 Asian students and Caucasian American students at Andrews University.

Results

The present study showed that collectivism was not associated necessarily with lower P scores. It was found, however, that collectivism may be a significant predictor of moral reasoning when it was combined with ethnicity. This supposition is most likely for collectivistic attitudes toward parents and co-workers.

Conclusions

According to this study, persons from Asian culture may be handicapped on the DIT and other psychological tests that use as their foundations Kohlberg’s theory of moral development. Ethnicity was noted as a powerfully associated factor with the P score on the DIT. It is very likely that Kohlberg’s development theory has not given adequate expression to the concerns and experience of Asian people. The cross-cultural universality of Kohlberg’s theory seems to warrant reexamination. More empirical research, however, is needed to clarify the relationship between collectivistic attitude and moral reasoning.
CHAPTER 1

INTRODUCTION

Research Background

In many settings, Kohlberg’s moral development theory has provided the theoretical foundation for the study of moral reasoning and moral education. Cross-cultural research has shown that people in countries around the world sequentially experience Kohlberg’s stages of moral judgment (Edwards, 1975; Gorsuch & Barnes, 1973; Nisan & Kohlberg, 1982; White, Bushnell, & Regnemer, 1978).

Some researchers, however, report that the rate of progression differs from one culture to another and the percentage of adults who attain the higher stages also may vary (Park & Johnson, 1984). Furthermore, according to some researchers (Harkness, Edwards, & Super, 1981; Nisan & Kohlberg; 1982; Snarey, 1982), there may be nothing in Kohlberg’s theory that deals with how to maintain human relationships among individuals, families, communities and societies in general. Evidence from Kenya, Israeli kibbutz, India, Taiwan, Korea, and China may suggest that some culturally unique moral reasoning in these countries does not appear at the postconventional stages in Kohlberg’s
theory. Kohlberg's construct appears to neglect some elements of collectivistic moral principles and modes of conflict resolution that are commonly stressed in non-Western cultures. However, most of these cross-cultural comments were established on the basis of qualitative and philosophical investigations. Presently, only a few studies have attempted quantitatively to discuss the universality of Kohlberg's theory.

A number of psychological studies concerning moral reasoning have been conducted using Rest's Defining Issues Test (DIT) (Rest, 1986a). The principled morality score (P score) is known to be the superior index among various sets of DIT indices in measuring moral reasoning (Rest, 1986a, pp. 4.2-4.3). More information regarding the DIT and the P score can be found in chapter 3.

Two pilot studies were conducted by the researcher for the purpose of examining the moral reasoning of Caucasian American students and Asian students. In the first study, the DIT was administered to 33 graduate-school students at Andrews University, Berrien Springs, Michigan, in February 1992. The second study was conducted by administering the same instrument to 24 Andrews University graduate-school students in April of the same year. The results indicated that Asian students obtained significantly lower P scores on the DIT than Caucasian American students.

Since most variables except IQ were controlled, the
low P scores from the Asian group, which was approximately two standard deviations below the national mean, may reflect cultural factors in the development of moral reasoning. One hypothesis is that Asian people’s collectivistic attitude may be related to their low P scores. If this suggestion is correct, the high P scores of Caucasian participants on the DIT may reflect their cultural homogeneity with Kohlberg’s moral philosophy and principled stage concept. On the other hand, Asian participants may give significantly less consideration to the principled stages of moral reasoning, because their cultural priority for collective interest and harmony is in conflict with the American individualistic assumption of the moral development theory.

The aforementioned information served as a catalyst for the researcher to initiate a quantitative examination of cultural influence on moral development. This study examined the influence of ethnic background on moral reasoning, and the relationship between moral reasoning and collectivism.

Statement of the Problem

The literature is abundant with critical comments suggesting that Kohlberg’s moral development stages should not be viewed as universal since they reflect the individualistic norm of Western society. Individualism is seen in some studies as the major philosophical base of Kohlberg’s theory. According to this view, people of
individualistic orientation share philosophical affinity
with Kohlberg's definition of postconventional reasoning,
and thus tend to get high scores on the DIT. The
collectivism-individualism paradigm in the literature
suggests that collectivism is a key feature of Asian
culture, and individualism a characteristic of American
culture. It is reasonable to assume that people from Asian
cultures tend to obtain relatively low P scores on the DIT
in comparison with Americans. Therefore, it would be
helpful to explore the impact of collectivism on moral
reasoning. To date, no empirical studies have been
published to examine the relationship between collectivistic
attitude and moral reasoning in the cross-cultural context.

Purpose of the Study

The purpose of this study was to examine the
relationship between ethnicity, moral reasoning, and
collectivism using the Defining Issues Test (DIT) and the
Individualism-Collectivism (INDCOL) Scale.

Research Questions

Specifically, the following questions were
investigated. First, is there a significant difference
between moral reasoning as measured by the DIT of Asian
graduate students and Caucasian American students? Second,
is there a significant difference between the collectivistic
attitude as measured by the INDCOL Scale of Asian graduate
students and Caucasian American graduate students? Third, is there a relationship between collectivism and moral reasoning? Fourth, is there a significant relationship between a set of the DIT subscales and a set of the INDCOL subscales? Fifth, can moral reasoning be predicted from collectivistic attitude, ethnicity, gender, age, religious background, GPA, academic major, and the number of years that subjects have attended church?

Theoretical Framework

Kohlberg’s Moral Development Theory

Lawrence Kohlberg elaborated the cognitive developmental approach in moral judgment research. Kohlberg’s idea was the product of three sets of observations: Piaget’s theory of cognitive development; various philosophers’ systematic delineation of ethical behavior; and Kohlberg’s own research on a group of 84 boys, ages 10, 13, and 16, which provided him with his original empirical data on the development of moral thinking (Berger, 1988, p. 349). From these elements, Kohlberg (1963, 1981) further studied moral reasoning by telling children, adolescents, and adults a set of hypothetical stories that posed ethical dilemmas. Each dilemma challenged his subjects by asking them to choose between (1) obeying authority figure, rule, or law and (2) taking some actions in conflict with these rules and commands while serving a human need. On the basis of the collected data, he
identified a number of features in the recurrent responses to moral dilemmas among his samples, and clustered them into three levels of moral reasoning (preconventional, conventional, and postconventional) and two stages at each level. Kohlberg’s stages form a sequential order in an individual’s moral development (Kohlberg, 1969, p. 400; Kohlberg, Colby, Gibbs, Speicher-Dubin, & Power, 1977, p. 6):

1. Preconventional: Emphasis on Avoiding Punishments and Getting Reward. The individual strives to obey rules imposed by authority figures in order to avoid punishments or to attain personal rewards.

   Stage 1: Punishment and Obedience Orientation. At this stage the most important value is obedience to authority in order to avoid punishment.

   Stage 2: Naive Hedonism, or Instrumental Orientation. Each person tries to take care of his or her own needs. The reason to be nice to other people is so they will be nice to you. In other words, you scratch my back and I will scratch yours.

2. Conventional: Emphasis on Social Rules. The individual conforms to the laws set forth by others so as to win praise and recognition for virtuous conduct or to maintain social order.

   Stage 3: "Good Boy" and "Nice Girl" Orientation. Good behavior is considered behavior that pleases other people and wins their praise. Approval is more important than any specific reward.

   Stage 4: Authority and Social-Order-Maintaining Orientation. Right behavior means being a dutiful citizen and obeying the laws set down by those in power.

3. Postconventional: Emphasis on Moral Principles. Moral standards are internalized and become the person’s own by committing themselves to a set of principles that are often shared with others and yet transcend particular authority.

   Stage 5: Orientation toward Social Contract and
Individual Rights. The rules of society exist for the benefit of all and are established by mutual agreement. If the rules become destructive or if one party does not live up to the agreement, the contract is no longer binding.

Stage 6: Universal Ethical Principles. General universal principles determine right and wrong. These values, such as "Do unto others as you would have others do unto you" or "Life is sacred," are established by individual reflection and meditation, and may contradict the egocentric or legal principles of earlier reasoning.

Kohlberg’s stages represent a developmental sequence that is closely related to age. Individuals advance from one stage to the next of this moral hierarchy as they become more mature. At every age, the way people reason morally, rather than what specific moral conclusions they reach, determines their stage of moral development. For most 10-year-olds, moral reasoning falls in Stage 1 or 2, and many adults never reach Stage 5 or 6 (Colby et al., 1983; Kohlberg & Elfenbein, 1975). Kohlberg believed that only a small minority of any group actually reach Stage 6. In fact, in a recent reformulation of Kohlberg’s scoring procedures for rating stages of moral judgment, Stage 6 was dropped because so few people ever attained it (Colby et al., 1983).

In addition, Kohlberg’s thesis indicated that the development of moral judgment can be explained within Piagetian cognitive-developmental framework. Kohlberg thought that people must be at least at the early formal operations stage (not usually reached until early
adolescence) before they can reach Stage 3, and that a certain amount of life experience and responsibility is a prerequisite for reaching Stage 5. For these reasons, Kohlbergian theorists generally see relatively little progress in moral development during middle childhood, and believe that few adolescents can go beyond Stage 4 (Berger, 1988, pp. 347-348). Duska and Whelan (1975, p. 103) supported Kohlberg's theory by stating that "abstract reasoning ability is essential to entertain alternatives in moral reasoning and to order priorities in values."

The theories underlying the development of moral reasoning have their roots in the works of Piaget (1932). Kohlberg's formulation (1981) was not exceptional. The basis of Kohlberg's theory is that moral reasoning is concerned with how the benefits and burdens of social cooperation are to be distributed. This is reflected in the rules of a social system that assigns people their rights and responsibilities. The development of moral reasoning is analyzed in terms of its successive concepts of how mutual expectations among cooperative individuals are to be equal. These developmental dimensions consist of stages of moral reasoning. Another central concept is that morality involves social interaction. The word "moral" is restricted to the concepts of justice and fairness (Rest, 1979).

One of the basic assumptions of Kohlberg's theory is that both the stages and the sequences of moral development
are universal. There is, in Kohlberg's postulation, a universal sequence in which people enter the moral stages. Cultural factors may accelerate, decelerate, or stop development, yet they do not affect its sequence. All individuals in all cultures use identical moral categories, concepts, or principles. Also, all individuals in all cultures go through the same sequence of stage development, although they vary in rate and terminal point of moral development (Kohlberg, 1971, p. 175). According to this view (Kohlberg, 1969; Nisan & Kohlberg, 1982), the development of moral judgment results from "a process of interaction between organismic structuring tendencies and universal features of social experience," and "the direction of development is toward greater equilibration in the organism-environment interaction and reciprocity between the self and other" (p. 865). In short, moral reasoning represents underlying thought organization rather than specific responses, and thus leads to a universal sequence of stages.

Snarey (1985, pp. 202-206) took account of Kohlberg's claim as implying at least five empirical assumptions. First, moral development studies have been conducted in a variety of different socio-cultural settings enough to produce a reliable theory. Second, all persons in all cultures inquire about the moral domain and ask the same basic kinds of questions or resort to the same basic issues.
Third, stage development among individuals is found to be upwardly invariant in sequence and without significant regression, regardless of cultural settings. Fourth, the full range of moral stages should be found in all cultures. Fifth, all instances of genuine reasoning in all cultures will correspond to one of the modes or stages of moral reasoning described by Kohlberg.

New positions of moral judgment research appeared in the early 1970s (Rest, 1979, pp. 12-16). The first outgrowth was the research that reinvestigated how children process the stimulus materials that Piaget introduced. Second, a number of researchers attempted to identify and describe the basic organizational principles of social knowledge of children in early and middle childhood. The third major outgrowth of Kohlberg's work was research on the DIT by Rest. Rest's research "arose primarily in response to the need for a practical, validated method for assessing moral judgment and the need to establish a data base for the major claims of the cognitive developmental theory" (p. 16). Rest proposed moral development as a continuous variable that would result in a quantitative rather than a qualitative analysis.

Rest's study brought forth the development of the DIT. The foundation of the DIT borrowed core characteristics of Kohlberg's stage scheme (see Rest, 1979, pp. 24-47, for a detailed comparison of Rest's scheme with
Kohlberg's). Subsequently, the development of the DIT attracted a large quantity of research into the moral judgment field because of its ease of administration and scoring.

Rest (1979, pp. 24-39) described six stages of moral reasoning by using different terms from Kohlberg. Each stage includes various sub-themes and representative characteristics. He illustrated two representative characteristics of Stage 1 (Obedience): right and wrong are defined simply in terms of obedience to fixed rules; punishment inevitably follows disobedience, and anyone who is punished must have been bad. The accomplishment of Stage 2 (Instrumental Egoism and Simple Exchange) is characterized by three features: an act is right if it serves an individual's desires and interests; one should obey the law only if it is prudent to do so; cooperative interaction is based on simple exchange. Stage 3 (Interpersonal Concordance) is a matter of establishing and maintaining enduring positive relationships: an act is good if it is based on a prosocial motive; being moral implies concern for the other's approval. Stage 4 was named Law and Duty to the Social Order: right is defined by categorical rules that establish shared expectations, thereby providing a basis for social order; values are derived from and subordinated to the social order and maintenance of law; respect for delegated authority is part of one's obligations to society.
The major accomplishment of Stage 5 (Societal Consensus) is to provide principles for setting up a system of social cooperation: moral obligation derives from voluntary commitments of society's members to cooperate; basic rights are preconditions to social obligations. Stage 6 (Non-arbitrary Social Cooperation) is explained by two sub-themes: moral judgments are ultimately justified by principles of ideal cooperation; individuals each have an equal claim to benefit from the governing principles of cooperation. Stages 4, 5, and 6 are of special importance in Rest's scheme because it has been determined that in American society the majority of people primarily use Stage 4 reasoning (Lerner, 1976), and because Stages 5 and 6 are characterized by "principled moral considerations" (Rest, 1979, p. 101).

**Individualism vs. Collectivism**

Psychological development is not a phenomenon isolated from socio-cultural forces. Likewise, the cultural influences are of considerable importance among the many determinants of moral development. To investigate the universality of moral development, cultural forces must be examined.

Most studies that focus on the effects of non-Western cultures on moral development tend to spell out collectivism as a key aspect of these cultures (Edwards, 1981; Sampson, 1977; Simpson, 1974; Sullivan, 1977; Vasudev
& Hummel, 1987). Collectivistic impact is clearly demonstrated in a number of studies on Asian people (Ho, 1979; Hui, 1984; Leung & Bond, 1984).

The term individualism conventionally refers to the psychological construct that places high value on the freedom of the individual and generally stresses the self-directed, self-contained, and comparatively unrestrained individual or ego (Hui, 1984). Waterman (1984) pointed out four psychological aspects to individualism: (1) a sense of personal identity, which is the knowledge of who one is and one’s own goals and values; (2) Maslow’s self-actualization which is the striving to be one’s true self; (3) internal locus of control which reflects one’s willingness to accept personal responsibility for life’s happiness and sorrows; and (4) postconventional moral reasoning. On the other hand, Hofstede (1980, p. 221) conceptualized individualism as the emotional independence from groups, organizations, or other collectivities.

According to Hayek (1948, p. 32), "the fundamental attitude of individualism is one of humility toward the processes by which mankind has achieved things which have not been designed or understood by any individual and are indeed greater than individual minds." From the sociological perspective, individualism demands a strict limitation of all coercive or exclusive power, but allows almost unlimited scope to human ingenuity. It is the belief
that there is no other way toward an understanding of social phenomena but through our understanding of individual actions directed toward other people and guided by their expected behavior.

American individualism is rooted in the Renaissance and Kant's philosophy. After the Renaissance, individualism emerged as people freed themselves from many previous restraints under the slogans of laissez-faire and utilitarian philosophy (Riesman, 1954, pp. 26-27). In Kant's philosophy, the individual must always be treated as an end and not a means (Sabine & Thorson, 1973, p. 401). Kant's "autonomous will" acknowledges no higher authority than the universal demands of individual reason itself (Holmes, 1984, p. 71). The individual is both logically and ethically prior to group and society. Society is made for man, not man for society. It was this assumed priority of the individual that became the most marked and the most persistent quality of Western moral philosophy. Developed especially by Hobbes, Locke, Mandeville, and Hume, it became a universal characteristic of Western social theory down to the French Revolution and maintained itself far beyond which. In America, this individualism achieved full stature in the work of Alexis de Tocqueville and Lord Acton (Hacker, 1961, pp. 461-508; Hayek, 1948, pp. 1-32), and persisted as a presumption in American political, economic, social, and moral thought.
In America, individualism has usually been regarded by political philosophers as an axiom of any theory of value. In substance, American social theory was an individualist theory of social value in that it took any requirements to be means, relative to its effects on human individuals as ends (Sabine & Thorson, 1973, p. 673). The most forthright social expression of individualism is the theory of natural rights, with its assertion that individuals are created equal and that governments derive their just powers from the consent of the governed. Along with this theory is the belief that the relations between human beings in a community are irreducibly moral relations. This means that a community exists because the people in it do more or less recognize each other as ends or sources of value, and therefore as beings having rights and with a moral claim on the obligations that mutual rights impose (Sabine & Thorson, 1973, p. 674). Accordingly, American individualism not only believes in democracy but claims that democratic ideals spring from the basic principles of individualism (Hayek, 1948, pp. 20-32). Individualism affirms the American political belief that all government should be democratic. It also provides the philosophical base for American capitalism to seek economic equality and prosperity through liberty.

Accordingly, Riesman (1954) convincingly argued that individualism is the philosophical backbone governing
American society from politics to sports and arts. It is doubtless that individualism is deeply embedded in American moral thought and philosophy, and has been expressed in a variety of philosophical and moral idioms.

By contrast, the sense of "we-ness" is salient in Asian cultures. Emphasis is given to membership in organizations and emotional dependence on them. Privacy is reduced, and individuals rely on group decisions. One's identity is derived from the social system rather than from individual attributes (Hofstede, 1980; Hui, 1988, p. 18).

Hui (1984, p. 48) contrasted individualism with collectivism as "a syndrome of attitudes, beliefs, and behaviors towards a wide variety of people." These can all be explained by the phrase "concern for others," which refers to "bonds and links with others." Concern for others permeates "throughout the person’s own feelings, emotions, beliefs, ideology, actions, and so forth which constitute collectivism" (Hui, 1984, p. 19). It is a sense of one-ness with other people, a perception of complex ties and relationships, and a tendency to keep other people in mind. This attitude contains, "the recognition that the basic unit of survival is a group (whatever the group is), and not the individual" (Hui, 1984, p. 23).

Such concern, according to Hui's illustration (1984, p. 48), is manifested in seven ways: (1) consideration of implications of one’s own decisions and actions for others;
(2) sharing of material resources; (3) sharing of non-material resources; (4) susceptibility to social influence by others; (5) "face-work" (field-dependent attitude and behavior); (6) sharing of outcomes of behaviors and events; and (7) feeling of involvement in others' lives.

However, it is difficult to expect a person to have the same degree of concern for intimate significant others compared to distant, impersonal acquaintances (Hui, 1984, p. 23). Concern decreases with decreasing familiarity with the other, while concern for a person close to oneself (e.g., parent and spouse) is higher. Furthermore, past experience with the person enhances the concern. Generally speaking, data support the contention that collectivists regard the idea of concern with more value than individualists in their relationships with others (Hui, 1984, p. 49).

**Asian Collectivism**

Individualism has been a central value in American society, and Americans tend to downplay outside influences on individual decision makers (Befu, 1986, p. 22). The differences between Americans and Chinese were discussed by Hsu (1953, 1981) in terms of individualism and collectivism. Hsu (1953) characterized Chinese as being other-oriented, group-oriented, and conformative. In comparison with their American counterparts, Chinese people tend to be less autonomous, more conforming, higher in social interest, and more cohesive under leadership. Their achievement
motivation tends to be collectivistic-oriented rather than individualistic-oriented. Chinese students are also found to prefer life through group participation and to show sympathetic concern for others. In his later study, Hsu (1981, p. 134) affirmed the foregoing findings that the inner-directness of Americans is clearly manifested by their resentment of conformity. Their individual-centered way of life is in direct contrast with the Chinese group-centered way of life that emphasizes interdependence.

Beyond Hsu's research, empirical studies have already yielded results supportive of the high social orientation of Asian people. In Asian culture, conformity not only tends to govern interpersonal relations, but it also enjoys social and cultural approval. Using a three-variable design, Meade and Barnard (1973) investigated conformity to male and female group pressures among Chinese and American male college students. It was found that Americans show a far greater tendency toward anticonformity than do Chinese. Ho (1979) considered this difference as one that reflects "the fundamental contrast in cultural orientations between the two groups on the collectivist-individualist dimension" (p. 148). Huang (1973) investigated conformity of Chinese and Americans in several different situations. The hypothesis was that Chinese children are socialized into the adult world early in life, and are therefore sensitive and responsive to familial,
social, and environmental influences. The results showed that Chinese subjects conform more than American subjects.

These findings were supported by Hui (1984). Hui compared the group of modernized Hong Kong Chinese and Caucasian Americans by using the INDCOL Scale. The Chinese subjects are as individualistic as their counterparts on parent-collectivism, kin-collectivism, and neighbor-collectivism, yet are more collectivistic on spouse-collectivism, friend-collectivism, and co-worker-collectivism in comparison with Americans.

Singh, Huang, and Thompson (1962), using the Allport-Vernon-Lindsey Scale, compared the values held by Americans, Indians, and Chinese. The research found that Chinese were society-oriented whereas Americans were more self-centered. In addition, American students desired a flexible, multifaceted life, while Asian students preferred to enjoy life through group participation and concern for others. According to the study of Fenz and Arkoff (1962), the Caucasian sample scored higher on the need for individualistic behavior than did Chinese and Japanese students. The Caucasian group emphasized the value of autonomy and de-emphasized need for affiliation, deference, and order in comparison with the Asian students.

The differences between Asian collectivism and American individualism and its impact upon one's psychological development should not be underestimated. A
wide array of explanatory concepts have been offered for the group mentality of Asian people (Frost, 1987, pp. 67-68). One concept attributes the group mentality to the cooperative effort required to maintain the complex irrigation and drainage system of paddy-field agriculture. Another hypothesis is that since Asians value power and influence more than wealth, success is measured by group allegiance; prevalent factionalism is to be tolerated. Additionally, dense population would contribute to the Asian collectivistic mentality.

Another explanation would be rooted in Confucian philosophy (see below) which is deeply embedded in the Asian cultures, especially in Koreans, Chinese, Taiwanese, and Japanese. For example, in his comparison of Chinese business students with American business students, Chiu (1992) clearly pointed out that the collectivistic management style of the Chinese collides with the American style. According to this cross-cultural study, the Hong Kong Chinese students are more collectivistic than the American students, and this difference largely stems from the influence of Confucianism. Whatever their origin, group mentality and a collectivistic attitude appear to be deeply rooted in Asian societies.

The influence of Confucianism on Eastern culture deserves special attention in understanding collectivism. Many aspects of Asian culture no doubt can be traced back to
Confucius who specified an ideal society by highlighting the relationships of ruler-citizen, father-son, brother-brother, husband-wife, etc.

Confucian traditions and values were institutionalized through the formal curriculum of the educational system in many Asian countries. Confucian classics were required textbooks in the school systems throughout the history of China, Korea, and Japan before modern educational curricula were implemented. Government officials used to be selected through national examinations that tested mostly their knowledge and the level of their understanding of Confucian philosophy.

Confucianism was highly influential in the development of the Chinese philosophy of human nature which teaches proper human relationships as the basis of society. In studying human nature and motivation, the teaching of Confucius sets forth four principles from which ideal conduct arises: (1) JEN (humanism), (2) YI (justice, faithfulness), (3) TAO (way), and (4) TE (morality). From these four principles, the following social norms became the dominant rules in governing the behavior of Chinese people: (1) WU LUN (five cardinal relationships), (2) HSIAO (filial piety), (3) LI (propriety), (4) SHU (reciprocity), (5) CH’ING (sympathy), and (6) CHIH (wisdom) (Bond & Hwang, 1983; Chiu, 1992, p. 29; Koller, 1985; Lin, 1977; Ma, 1988; Redding, 1990).
The conception of WU LUN (the five cardinal relationships: king and subjects, father and son, husband and wife, older brother and younger brother, and among friends) governed all aspects of human life and behavior for Chinese. It is based upon the equality of all human beings; but, at the same time, Confucian values rationalized a hierarchical order of status and roles (Chiu, 1992; Lau & Kuan, 1988). Therefore, achieving these virtues was an important means of achieving the ideal Chinese society.

JEN, a good balance between self and environment, and a good manifestation of achieving the virtues of all social roles (Lin, 1977), is the highest concept to which everyone should aspire. The literal meaning of JEN would be ideal interhuman relationship. It is equivalent to virtue or morality. Each person should pay respect to others because it is a basic characteristic of JEN. Being right with the gods, being on good terms with others, being able to examine oneself, and being able to forgive others are said to be the highest states one can achieve. JEN is the beginning of all principles for morality and the goal of all standards of social norms and human behaviors.

Another important characteristic is LI, which indicates propriety, moral standards, and ceremonies. LI, meaning propriety, a standard of conduct in accord with JEN, is the respect of a person for one’s outside world, in religion and social order. Filial piety is an important
aspect of LI. Confucius stressed the spirit of ceremonies rather than external forms. Confucius emphasized propriety in all aspects of life. While JEN is associated with freedom, LI is a regulatory principle and a law of human conduct. Reverence for parents and elders, and ancestor worship are important facets of the Asian mind.

The basic aim of the Eastern mind is to make people "great." Being "great" has a double meaning: (1) the psychological peace and contentment associated with one's completeness, and (2) the ability to live a practical life. Putting "greatness" into practice leads to emphasis on the familial virtues, especially the concept of filial love, which provides the cornerstone of Asian morality. Asian moral and spiritual character is shaped by the family. Asians believe that only through love and respect within the family can moral virtue be cultivated in persons.

At the heart of every Asian mind lies the concept of HSIAO, filial piety. Status, reputation, and the wealth of one's family should be safeguarded and upheld at all times by all members of the family. Therefore, the family becomes the center of each person's social and economic role (Chiu, 1992). In the past, privacy among family members was unknown to a traditional Asian family. Young Asians did not desire, nor were they allowed, to become independent. Young people were recognized as independent only after they had established themselves in a career, usually after the age of
Marriage was not between two individuals, but between two families, and thus, a high degree of personal feeling was generally absent from most couples (Hui, 1984, pp. 6-7). Willmott (1972) and Chiu (1992) described Asian culture as "familism," since filial piety is not only a family virtue, but also a moral and social virtue. When children are taught to respect and show reverence for their parents, they must have respect and love for others too. Obedience to parents and elders is strictly enforced regardless of age and educational level (Lin, 1977). Since the family system is the prototype for structuring all types of social and political organizations in Chinese societies (Pye, 1968), familism becomes the starting point as well as the cornerstone of collectivism.

Many factors have established the family as the basic social unit in Asian countries, including the stated philosophical characterization for thousands of years. The primary family is generally regarded as the most important factor in Asian culture, thus a description of traditional Asian families will lead to a greater understanding of their collectivistic values.

In the traditional Asian family system, what was advantageous and good for the family was permitted; what was disadvantageous and bad for the family was prohibited. Individuals thought of themselves as members of a family and viewed others in the same light. The success or failure of
an individual reflected on the family and increased or decreased its prestige. The family was responsible for the acts of its members and was held accountable for them by the community and the government. In this sense, society was composed of families rather than individuals. Economically, the traditional Asian family was a joint productive effort. The parents had complete authority over their children. Society supported whatever steps parents took to enforce their commands, and public opinion permitted harsh and prolonged physical punishment when children rebelled against parents' edicts. The aged were revered and their desires were granted. Love and affection were diffused over a wide range of relatives. Parents were obliged to train their children to assume their proper roles in society. Children were expected to do everything possible to ensure the comfort and happiness of their parents. The lives of children were not valued over the lives of their parents. From about 4 to 16 years of age, parents taught their children about their future duties for the family and the society. Arranging marriages for their children was one of the primary obligations of parents (Welty, 1970, pp. 198-204).

Under the influence of Confucianism, conformity was constantly emphasized. The priority of the group as opposed to the individual's interest gave birth to the strong notion of conformity (Bond & Hwang, 1983). The importance of
harmony in interpersonal relations, both within and without the family, limited any expression of hostility and aggressiveness (Bond & Hwang, 1983). Compliance to social pressure and norms was always encouraged.

Another product of collectivism is the notion of harmony. Harmony is the relationship between nature and humans. Therefore, the central thrust of LI is the achievement and maintenance of harmony. Thus, to achieve harmony among humans, an adequate adult must conform to the demands of LI in all forms of interpersonal relationships as a manifestation of having the cultivation of JEN (Chiu, 1992).

Turning to Eastern philosophy, the emphasis on inclusiveness of views has been a primary consideration. Rather than seeking truth by excluding alternative views as false, Eastern thought has tended to look for truth in the combination of partially true views. This leads to a spirit of synthesis and harmony that is the backbone of Asian moral thought.

The emphasis on humanity, social well-being, and the preference for methodological inclusiveness suggests that Asian moral tradition possesses its own uniqueness. Asian thought does not fit neatly into American philosophy, which has resulted from an emphasis on the external world, individual accomplishment, and a preference for methodological exclusiveness (Koller, 1985, pp. 245-249).
Confucianism was introduced from China to Korea in the fourth century A.D. Confucianism in Korea is basically the same as Confucianism in China, and its basic teachings were JEN, YI, LI, and social well-being. Two unique aspects of Korean Confucianism would emanate from Yulgok Lee and Shilhak. Lee (1536-1584 A.D.) was one of the greatest Korean minds. It was his conviction that the nation's well-being is the most significant ethical principle. Shilhak was a group of Korean scholars that proclaimed pragmatic Confucianism in the 18th-19th centuries A.D. Shilhak claimed that the real task of Confucianism is dealing with practical social well-being, to establish order in society, and to save people from social, political, and economic troubles through the spirit of genuine human concern taught by Confucius. Confucianism in Korea helped establish a certain level of ethics through its educational system (Kim, 1973, pp. 90-95).

A cultural survey of Japanese society defines the Japanese as less individualistic than Americans (Frost, 1985, p. 67). The prevalence of group behavior and group mentality in Japan is linked to a long tradition of group responsibility. For centuries, Japanese society has been organized into small groups. The groups are held responsible for the actions of individual members. Young Japanese typically downplay individual skill and ability in favor of group-related qualities. Individuals are expected
to let rewards from their talents flow back anonymously for the benefit of their group, company, or family. Even speaking about one’s achievement is considered inappropriate (Frost, 1985, pp. 68-69). To the Japanese, Western individualism has derogatory implications (Frost, 1985, pp. 75-76). Individualism, in the Japanese mind, is associated with materialism and egocentrism. They tend to see individualism as a source of social problems, and associate it with personal gratification and the pursuit of pleasure at the expense of social obligation.

Chiu (1992) summed up Confucian teachings in four paragraphs:

1. The stability of society is based on unequal relationships between people, the WU LUN. These relationships are based on mutual and complementary obligations: the junior partner owes the senior respect and obedience; the senior owes the junior partners protection and consideration.

2. The family is the prototype of all social organizations. A person is not primarily an individual; rather, he or she is a member of [a] family. Children should learn to restrain themselves, to overcome their individuality so as to maintain the harmony in the family.

3. Harmony is found in the maintenance of an individual’s face, meaning one’s dignity, self-respect, and prestige. Social relations should be conducted in such a way that everybody’s dignity is protected. Paying respect to someone else is called "giving face." Virtuous behavior toward others consists of treating others as one would like to be treated oneself.

4. Virtue with regard to one’s tasks in life consists of trying to acquire skills and education, working hard, not spending more than necessary, being patient, and preserving. Moderation is enjoined in all things (p. 32).
Asian societies are undergoing change. The rapid industrialization and westernization have weakened the traditional collectivistic atmosphere in Asian countries. A result is the convergence of American and Asian cultures. Traditional attitudes toward the family and society are being modified in Asian countries. Individuals are now encouraged to think in terms of individual interest and personal accomplishment rather than to the family alone. Although families are still held responsible for teaching their members their roles in society, other institutions such as school and mass media have become increasingly influential. Whereas marriage was formerly a family affair, now it is often a personal affair.

However, there exists no evidence indicating that Asians are catching up with Americans in independence, self-sufficiency, or lack of social support (Hui, 1984, p. 10). Asian societies have never completely abandoned their heritage. Interdependence is still a characteristic of the Asian family (Sue, 1989, p. 104). Deviations from traditional behavior are suppressed, and independent behavior is discouraged. Each family member has a role to play that does not interfere with that of another, and the family structure is arranged so that conflicts within the family are minimized. In addition, Asian families are still patriarchal with authority flowing from parents to children. Personality studies indicate that Asians are less autonomous
and less independent from parental controls and authority figures than are Americans. Asians are obedient, conforming, and socially introverted in comparison to Americans (Sue, 1989, p. 108). They tend to be cautious in directly expressing their feelings in interpersonal relationships.

Yu (1974) measured the need for achievement, familism, filial piety, and educational achievement by using a Chinese sample. The data collected suggested that filial piety is a potent social/psychological variable upheld among Chinese teen agers. In addition, achievement is significantly correlated with filial piety. These findings, according to Yu, are evidence of the saliency of a collectivistic orientation among Chinese. In Yang's (1981) study of values among college students in Taiwan, the Chinese students favored a lifestyle that emphasized participation in the community. Least favored was individual gratification.

Most Asian countries still retain the traditional virtues emphasizing family, harmony, inclusiveness, and collectivistic well-being. The importance of a traditional collectivistic attitude in shaping the Asian mind should not be underestimated in psychological research, even though it varies with the individual, the circumstances, the locality, and the culture. In short, patterns of behavior in Asian countries have changed, yet neither traditional mind-set nor
collectivistic attitudes of the Asian people have gone away. Asian societies still possess basic collectivistic values from the past. Consequently, Asians are less individual-oriented than Americans.

**Significance of the Study**

The significance of this study is that this is the first attempt to examine empirically if the collectivistic attitude is negatively related with Kohlberg’s postconventional moral judgment, and if the individualistic attitude is positively related with principled moral reasoning. Results of this empirical study may provide an answer to the question of whether a collectivistic cultural virtue is missing in Kohlberg’s moral development theory, an issue that has been discussed only philosophically and hypothetically in the literature.

The additional significance of this study is that this is the first cross-cultural attempt at using the P score of the original English DIT to compare the moral reasoning levels of Asian graduate students and Caucasian American graduate students. All samples of previous cross-cultural studies using the DIT were conducted with children, adolescents, or undergraduate students, and some used the translated version of the DIT into the subjects’ first languages. This study utilized college graduate adults and uses the original English version of the DIT to examine whether cultural bias is potentially inherent in the DIT.
Delimitations and Limitations

This study confined itself to administrating the DIT and the INDCOL Scale to Caucasian American and Asian graduate-school students attending Andrews University in 1994. Another delimitation was that the present subjects were only those who voluntarily sent the information back to the researcher. Moral reasoning was defined according to the P score measured by the DIT. Collectivistic attitude was defined according to the GCI score measured by the INDCOL Scale (Hui, 1984).

One of the major limitations of this study was the lack of heterogeneity of the sample. All the samples were taken from Andrews University, which is an institution owned and operated by the Seventh-day Adventist Church. Thus, the question of generalization of the findings obtained from this religious sample to non-religious, non-Adventist populations remains to be answered.

Definition of Terms

Collectivism: A characteristic of a culture highlighting concerns for others. Collectivistic societies are tightly integrated societies that assume people belong to one or more tight in-groups, from which they cannot detach themselves. Collectivism is characterized by the high GCI score.

The Defining Issues Test (DIT): An objective psychometrical instrument measuring moral reasoning. This
test was designed by James Rest (1986a; 1986b) and is based on the six stages of moral development suggested by Kohlberg.

The General Collectivism Index or the GCI: An overall score to collectivism on the INDCOL Scale derived by adding together the six subscale scores of the INDCOL Scale.

Individualism: A characteristic of a culture emphasizing self interest. Individualistic societies are broadly integrated societies and assume that people look primarily after their own interests and the interests of their immediate families. Individualism is characterized by a low GCI score as measured by the INDCOL Scale.

The Individualism-Collectivism (INDCOL) Scale: An objective psychological test, designed by Harry Hui (1986), to measure collectivism and individualism, which is based on six subscales (spouse, parents, kin, neighbor, friend, and co-worker).

Moral Reasoning: A system or pattern of thinking regarding justice and equity. Kohlberg identified three major levels of moral reasoning development, each level with two types of moral judgment. The development of moral reasoning is thought to be a gradual and continuous process as the individual passes through a sequence of increasingly sophisticated moral stages.

The P Score or Principled Morality Score: An overall index to the level of a subject's principled
reasoning in making a moral decision. The P score is obtained by adding the points together from moral development Stages 5A, 5B, and 6, and converting the raw stage scores to percentages by dividing the raw scores by .60 (Rest, 1986a, pp. 3.1-3.4).

Organization of Chapters

This dissertation is organized into five chapters. Chapter 1 provides the introduction, statement of the problem, purpose of the study, theoretical framework, significance of the study, research questions, definitions of terms, and the delimitations and limitations of the study.

Chapter 2 reviews the literature on critiques of Kohlberg's moral development theory, cross-cultural moral developmental studies, and studies of Adventist students.

Chapter 3 describes the methodology and type of research, which includes the population and sample selection variables, research techniques, instruments, data collection, and statistical analyses.

Chapter 4 presents the findings and interpretations of the results.

Chapter 5 provides a summary of the study, discussion of the results, implications of the findings, and recommendations for further research.
Kohlberg (1969) stated that all of the children in every cultural setting display the identical fixed order of stages as they grow older. That is, Kohlberg’s stage concept of moral development implies universality of sequential stages of development under varying cultural conditions. It implies that moral development is not merely a matter of learning the verbal rules or values of the child’s culture but reflects something more universal in development that would occur in any culture. Kohlberg (1971) later admitted, however, the cultural limits of his approach by recognizing the possibility that Stage 6 might not be at the end point in moral development.

Evidences for the universality of Kohlberg’s stages have been provided by some cross-sectional studies performed in Kenya (Edwards, 1975), Honduras (Gorsuch & Barnes, 1973), the Bahamas (White, 1975), New Zealand (Moir, 1974), and Korea (Park & Johnson, 1984). This claim to universality has also been supported by some longitudinal studies in the Bahamas (White, Bushnell, & Regnemer, 1978) and Turkey (Nisan & Kohlberg, 1982; Turiel, Edwards, & Kohlberg, 1978).
Their results present a consistent support for Kohlberg’s claim that moral reasoning advances with age across cultures.

Kohlberg’s theory attracted a great deal of attention because many people had apparently been searching for a way to clarify and focus their concern about moral education and growth.

However, with this attention came criticism on a number of counts. In particular, critical researchers have spelled out that the cross-cultural sequential advance in stages of moral development is limited to the first four stages of Kohlberg’s theory. If this is so, it is possible that the higher stages of Kohlberg’s scheme do not fit into the moral reasoning structures in other cultures (Nisan & Kohlberg, 1982, p. 874).

The present review delineates some major critiques on Kohlberg’s development theory. In order to provide an adequate background for the present study, it was also necessary to review literature critical of the cross-cultural invariant sequence of Kohlberg’s stages.

**Critiques on the Moral Development Theory**

**Gender Differences**

The most compelling and best-known criticism is that Kohlberg’s original moral dilemma scheme was validated only on males but was applied to females as well. Gilligan (1977, 1979, 1982) has been the most articulate critic
alleging sex bias in Kohlberg's theory. Girls and women, according to Gilligan's criticism, tend to see moral dilemmas differently from boys and men. In general, females give greater consideration to the context of moral choices, focusing on the human relationships involved. Gilligan contends that women are reluctant to judge right and wrong in absolute terms because they are socialized to be nurturant, caring, and non-judgmental.

Despite Gilligan's contention, an exhaustive review of gender differences in moral reasoning concluded that only a few inconsistent gender differences were found in childhood and adolescence (Walker, 1984). Although females may approach moral decisions somewhat differently from males, there is no evidence that these differences systematically affect the scores on Kohlberg's dilemmas. Most studies in which males and females were compared found no gender differences at all. Among those few studies that did find adolescent and adult males scoring higher than females, the women generally had less education than the men with whom they were compared, and the old scoring system was used, which tended to favor sophisticated verbal fluency, a product of education, rather than gender (Walker, 1984). Overall, then, Kohlberg's general scheme seems to apply equally to both genders. Although men and women may analyze dilemmas differently, neither gender is deemed more morally astute than the other.
Emotion and Socialization

Gibbs and Schnell (1985) stated that Kohlberg’s development approach to morality seemed to have been assimilated into mainstream psychology. However, they perceived that Kohlberg’s theory would imply the rejection of two mainstream psychological theses about morality (Gibbs & Schnell, 1985). According to them, the first mainstream thesis about morality is emotivism. Morality is fundamentally a matter of feeling, and that moral behavior owes its emotive power to affective socialization processes. The second is societalism, the idea that morality is a matter of the accommodation of the individual to the values and requirements of the society through conformity and internalization processes (Spiro, 1951). In other words, whereas Kohlberg charged socialization theories with societalist extremes, critics have charged Kohlberg’s theory with extreme individualism; whereas Kohlberg charged emotivism, Kohlberg’s critics have countercharged rationalism or cognitive primacy.

Kohlberg’s challenge to socialization theory as emotivist may not have gone unanswered. Critics see Kohlberg’s emphasis on far-minded rationality in morality as inappropriately "cold" (Maccoby, 1980, p. 325), as failing to encompass the "caring" entailed in the behavioral application of moral-cognitive maturity, or as reducing affectively intense, sometimes irrational moral interchanges
to the dispassionate deliberations of an abstract thinker. Elmer (1983, p. 49) explicitly suggested that the individualism and rationalism of Kohlberg originated in the 17th-century Cartesian celebration of "solitary thought." Thus he claimed that rationalism constitutes an intellectual form of individualism. Others (Gilligan, 1982; Hann, 1978; Hogan & Busch, 1984) flatly denied Kohlberg’s assumption that human moral motivation is largely rational; instead, they posited that a nonrational basis for morality is personality structure. Sullivan (1977) argued that Kohlberg’s cognitive-structural basis leaves the person lost in abstract thought, with no affective impetus for moral action and commitment.

In addition, some psychologists (Kohlberg, Scharf, & Hickey, 1971; Rybash, Roodin, & Lockey, 1981) explored the premise that the closer and more intense a person’s emotional proximity to the moral dilemma, the greater the associated stress and anxiety and the more likely it is that less consideration would be given to the principled stages of moral reasoning.

**Religious Critiques**

Historically, many philosophers and theologians have maintained that religious belief is the progenitor of moral judgment and moral conduct. However, many empirical studies comparing religious belief and moral conduct (Black & London, 1966; Hartshorne & May, 1928; Kilpatrick, 1949)
suggested that religiosity is not a crucial determinant of situational honesty. Other studies correlating religious beliefs with social attitudes indicated that religious persons showed more intolerance of other ethnic and racial groups (Allport, 1966).

Kohlberg (1967), in his cross-cultural study of moral development of Buddhists, Catholics, Protestants, and Muslims, found that they did not differ on levels of moral development. In line with Kohlberg, Grimley (1974) could not find any significant differences between various religious groups. Grimley’s sample included African tribal religions, Catholics, Protestants, Jews, Buddhists, and atheists. The results indicated that religious variables were unrelated to moral reasoning.

However, the accumulation of empirical research based on the approaches of Kohlberg and Rest have strongly challenged Kohlberg’s contention and in some cases repudiated it. In many studies, adults who are conservative in religious belief are less apt to score at higher stages.

For example, Ernsberger and Manaster (1981) noted that two conservative churches (Baptist and Missouri Synod Lutheran) showed significantly less preference for principled moral thinking in their educational materials and statements than did two liberal congregations (United Methodist and Unitarian-Universalist).

Blizard (1982) provided a similar conclusion that
members of churches that teach a personal God, an external source of authority, and an evangelical social perspective got lower P scores than members of churches that teach an abstract God, an internal source of authority, and a humanitarian social perspective.

A study by Lawrence (1979) probed further into the influence of religious commitments with regard to preference for or rejection of principled moral reasoning. He asserted that seminarians have the capacity to understand principled statements but discount them in favor of responses that are in harmony with their church’s teachings. Those teachings are generally Stage 4, reflecting a law-and-order orientation. The seminarians’ low P scores, according to Lawrence, seemed to have been the result of their placing more value on ideological commitments than on critical and independent thinking.

Cady (1982) assessed whether there were significant differences in preference for principled moral reasoning between the conservative and the liberal clergy. Cady also found that liberal Christians who have a flexible interpretation of the Bible show a greater preference for principled reasoning. Most published studies (Hann, Smith, & Block, 1968; McGeorge, 1976) tend to support this inverse relationship between religious conservatism and principled moral reasoning.

For the last 3 decades, many students have performed
psychometrically sound studies by using Rest's DIT in studying moral development.

Rest performed an extensive literature review concerning religion and moral reasoning. The most conspicuous finding from the literature about moral judgment and religion was the consistent relationship between the P score and religious beliefs (Rest, 1986b, p. 131). Conservative Christians tend to have lower P scores than their liberal peers. Affiliation has little relation to moral judgment, and religious education shows an unclear and inconsistent relation. Religious knowledge tends to correlate significantly with moral reasoning since both are related to cognitive ability. It would thus appear from Rest's review that adults who accept the basic doctrines of the Christian faith are less likely to achieve Kohlberg's postconventional stages than those who do not accept the Christian faith.

Clouse (1985) discussed this growing consensus and gave the rationale that the conservative nature is to conventionalize or to conserve. The conservation or preservation of the society is based on getting along with others and on obeying the law of the land. Faced with an increasingly lawless society and being the victims of that lawlessness, conservative members of the society tend to oppose any ideology they perceive as contributing to this unfortunate state of affairs. On the religious front as
well, those who are conservative are more apt to accept without question the teachings of the church whereas those who are liberal place social diversity before institutional conformity and self-chosen ethical principles before ecclesiastical expectations.

Wahrman (1981) suggested that dogmatism explains the weak relationship between conservative religious affiliation and moral judgment. According to his research, greater dogmatism is associated with lower levels of moral reasoning.

Ernsberger and Manaster (1981), questioning Kohlberg’s assertions of irrelevance of religious factors in moral development, concluded that doctrinal differences apparently relate to strong differences in moral reasoning. According to them, both the degree of intrinsic religious orientation and the moral stages normative for one’s religious community are predictors of moral development. Contrary to Kohlberg’s assertions, logical superiority is not the only important factor determining preference for moral arguments. Theological superiority or some other related psychological cause may overrule an awareness of the logical superiority of another line of moral reasoning.

Social and Economic Environment

Several critics attempted to incorporate social relations into their own interpretations of moral learning. At a societal level, Edwards (1975, 1981) asserted that
societal complexity is related to moral reasoning, and that the upper stages (4 and 5) are probably only found in the more complex societies of the world.

Buck-Morss (1975) stated that cognitive-developmental stages mirror and serve to reproduce a class structure that is found in industrial, capitalist economic systems.

Snarey (1985) also pointed out the urban- and class-biased attribution of the theory as saying that subjects in urban societies have a faster rate and higher terminal point of development than do subjects from traditional folk societies. The data also confirmed a social class difference. Upper-middle- and middle-class subjects always have a faster rate of development than working- or lower-class subjects within the same society, although their terminal points of development can be the same. Snarey saw Kohlberg’s theory as positing the priority of an asocial individual.

Some Kohlbergians acknowledged that an individualistic emphasis, specifically, a focus on the cognitive activity of the individual, characterizes much cognitive-structural research (Snarey, Kohlberg, & Noam, 1983). A specific reference for the individualistic charge is Kohlberg’s equating of socio-moral judgment maturity with a postconventional level, wherein the person "has differentiated his self from the rules and expectations of
others and defines his values in terms of self-chosen principles" (Kohlberg, 1976, p. 33).

Lastly, anthropological explanations were attempted by Hampton (1982) and Reid (1984) who utilized Douglas's grid/group analysis (1982) to explain how social relationships are connected to moral judgment. According to the explication of grid/group theory, it is possible to categorize modes of moral justification into a four-part typology. Unlike Kohlberg's typology, Douglas's types of moral bias are directly related to an individual's position in a socially structured environment as determined by the matrix created by the intersection of dimensions that Douglas terms "grid" and "group." Grid describes the range of regulation or constraint imposed on an individual, while group refers to the individual's degree of commitment or allegiance to a given group. A traditional and communal environment, for example, would have a high grid and high group rating, as would individual members of such an organization (see Figure 1).

Reid (1984, p. 60) distinguished four types and hypothesized relationships between each of four types and Kohlberg's stages. Type A, the low grid/low group environment, is characterized as individualism. It is a social environment that allows options for negotiating contracts or choosing allies, and one that fosters individual mobility. The individual often feels little
Figure 1. The Hypothesized Correlation between Douglas' Grid/Group Social Environment Types and Kohlberg's Stages.
commitment to a group in Type A environment. Those who are
born and reared in this type of society seem to choose
Kohlberg's Stage 5 reasoning, the social contract
orientation, which Kohlberg characterized as
postconventional and autonomous. This is the stage in which
a person defines moral values and principles apart from the
authority of the groups or people holding these principles.
Free agreement and contract are binding elements of
obligation (Kohlberg, 1981).

Type B, high grid/low group, is called the atomized
subordination type. In such an environment, individual
behavior is highly limited by those in power. In a complex
society certain people will be in a position, usually not by
their own choice, where they must do as they are told
without the protection and privileges of group membership.
Thompson (1982) said that people in this society are
characteristically passive and conforming, and this type
seems to correspond to Kohlberg's Stage 3 "good boy-nice
girl" orientation.

Type C, high grid/high group, is described as
ascribed hierarchy. This is the environment of large
institutions where loyalty to the group and its rules is
rewarded and hierarchy respected. It appears to correspond
to Kohlberg's Stage 4, the society maintaining orientation
toward authority, fixed rules, and social order.

Type D, the low grid/high group, is marked by
factionalism, which is the environment of small groups formed in disagreement with and withdrawn from the larger society. This type poses something of a puzzle for Kohlberg's stage schema and does not neatly correspond to any particular stage.

In short, critiques on Kohlberg's moral development theory have focused mainly on gender differences, emotional aspects of moral development, and the relationship between moral development and socialization, the relationship between religion and moral development. Of four areas, the critiques on the gender bias of Kohlberg's theory have been proved untenable. Exhaustive studies on gender differences in moral development have suggested that only a few inconsistent gender differences were found in childhood and adolescence. On the other hand, a challenging issue is why conservative Christians obtain lower scores on the DIT and other psychological instruments that measure moral development. This fact is in conflict with the general notion that religious belief is the progenitor of moral judgment and conduct. The final decision on this issue and the other two critiques seems premature and warrants more research.

Cross-cultural Studies and Critiques

The aspect of Kohlberg's theory that has been most difficult for many social scientists to accept is the claim that the development of moral reasoning follows a universal
invariant sequence of his model toward the same universal ethical principles in all cultural settings. The number of research studies comparing moral development in different nationalities is quite large. These studies found that while moral choices are cultural, differences in moral choice appear to be attributable to cultural differences (e.g., Nisan & Kohlberg, 1982; Harkness et al., 1981; Snarey, 1982).

For his cross-cultural study of moral development, Grimley (1974) selected subjects from Zambia, the United States, Hong Kong, Japan, and England. The total sample, 206 subjects, was composed of four age groups, 13, 15, 17, and 19+ years old. Those 19 years of age and older were all college students attending universities in the United States, Zambia, England, Hong Kong, and Japan. Although the rate of moral development was found to vary somewhat from one culture to another, no significant differences between nationalities were found in the development of moral judgment.

To consider the universality of Kohlberg's theory, Rest (1986b, pp. 94-110) examined research findings from 20 cross-cultural studies using the DIT in 15 different cultures. He found that "the similarities between cultures are much more striking than the differences between them" (p. 110). Although the magnitude of the obtained relationships was somewhat lower than that obtained in the
American studies, they attributed these differences to translation error. Additionally, the age/education comparisons suggested more similarity in moral reasoning development across various cultures than dissimilarities. Non-Western samples tended to show a flatter rate of developmental increase than Western samples, but all samples showed increasing levels of moral judgment in higher age/educational levels. They rejected the often-encountered criticism that Kohlberg's theory failed to identify principled reasoning in non-Western populations. Their conclusion was that the DIT is not affected by this cross-cultural criticism.

However, this affirmative conclusion should not be accepted without caution. According to the foregoing review, there were seven cross-cultural DIT studies comparing the Asian and the American. All these studies attempted to address the question of the universality of moral judgment development as measured by a translated version of the DIT. However, most of the DIT cross-cultural studies do not provide detailed descriptions of the translation procedures. Of the seven studies using Asian subjects, two provided reliability data. Park and Johnson (1984) obtained a test-retest coefficient ($r = .69$) comparable to those found with the original DIT in a sample of Korean students. Using $P$ score of the DIT, Hau (1983) found the low test-retest reliability ($r = .32$) in his
Chinese version of the DIT, although the internal structure of his version was much like that found in the original DIT version. Furthermore, the samples of these studies were obtained basically from children and adolescents, during which the principled moral reasoning is rather rare. In other words, all these studies could have been affected by age/education variables. This point should not be treated lightly since the major weakness of Kohlberg’s theory is on the principled reasoning, not preconventional and conventional levels, that finally become common among highly educated adults. The moral developmental similarities between Asian and American samples of childhood and adolescence may be the result of cognitive development largely following the universal pattern.

Hogan (1975) contended that Kohlberg’s theory placed at the summit of moral development the subjective, and possibly anti-societal, individualistic philosophies of elite individuals who consider themselves "beyond" society. Many of these authors (e.g., Dien, 1982; Kitwood, 1983; Sampson, 1977; Simpson, 1974; Sullivan, 1977) matched Hogan’s characterization of Kohlberg’s postconventional principles as ideological in the sense of reflecting not structure but the content of Western individualistic philosophy. Others have been moved to suggest the need for revision. These constructive critics have questioned the appropriateness of Stages 5 and 6 as cross-culturally valid...
end-state moral development and have proposed revisions
designed to enhance the validity of the moral maturity
construct in Kohlberg’s theory.

Simpson (1974) characterized Kohlberg’s theory as a
combination of philosophy and cognitive psychology.
According to him, Kohlberg’s claim to universality is not
based on empirical evidence. Simpson contended that
Kohlberg’s assumption on moral development is confined
strictly to Western philosophy and fails to consider the
difference between Asian and Western philosophies. He
characterized Kohlberg’s theory as an offspring of a Kantian
epistemology, and his predilection for such moral principles
as justice, equality, and reciprocity are associated with
his inclination to the Kantian philosophy. Kohlberg’s Stage
6, according to Simpson, reflects the Kantian epistemology
that has been thoroughly socialized into the company of the
Western intellectual elites who value and practice analytic,
abstract, and logical reasoning. This fact demonstrates why
there is a strong and consistent correlation between moral
development stage and IQ, since IQ is essentially a measure
of cognitive ability. Simpson’s final comment is that there
is no universal sequential development beyond conventional
moral thought.

Sullivan (1977) was in line with Simpson when he
attempted a critical analysis of Kohlberg’s theory in the
context of an ideological critique. Kohlberg’s stage
theory, from Sullivan's point of view, is characterized as a species of Western "liberal" ideology. Sullivan agreed with Simpson by contending that Kohlberg's postconventional stages were established on Rawl's philosophy of "just community," assuming that there are individuals before societies. According to Sullivan, the separation of thought from action stems from Kohlberg's structural point of view.

Edwards (1981), noting the cross-cultural infrequency of Stage 5, suggested research on "adults from societies that are as complex as the Western industrial nations but guided by different political and economic ideologies" (p. 523). Gibbs (1979, p. 108; Gibbs & Widaman, 1982, pp. 36-39) discovered that considerable ethical value can be present even at Stages 3 and 4; hence, the traditional Kohlbergian view of Stages 3 and 4, as merely conventional and less than mature, becomes hard to maintain.

The Chinese collective perspective was presented by Lei and Cheng (1984) and Dien (1982). They found that the most frequently matched moral judgments in Chinese culture are those related to the traditional values of filial piety and collective utility.

Ma (1988) administered the DIT to subjects in Hong Kong, mainland China, and England. While cultural difference between Hong Kong and England does not violate the overall developmental and hierarchical hypotheses of the Kohlbergian scores, it reflects a cultural difference in
perceiving the intermediate stage—Stage 4 issue-statements. The Hong Kong Chinese tend to regard the Stage 4 statement as more similar to Stages 5 and 6 than to Stages 2 and 3, whereas the English tend to regard the Stage 4 statements as more similar to Stages 2 and 3 issue-statements than to Stages 5 and 6. The findings in mainland China were less obvious in terms of supporting Kohlbergian hypotheses. Ma’s conclusion was that the mainland Chinese judge moral issues in a different way from Hong Kong and England subjects.

Comparative data between Korea and the United States suggested that Korean subjects show the same age-related changes in mean scores as do American subjects, but they generally lag a bit behind the Americans (Park & Johnson, 1984). American subjects show an almost 2-1 preference for Stages 2, 3, and 4 in both junior and senior high school and then, at or beyond college level, shift to about a 3-1 preference for principled morality statements on the DIT. The age/grade change of Koreans was much more gradual.

Gielen’s (1982) study of Buddhist monks from Tibetan culture concluded that while Kohlberg’s scheme is sufficient to score the preconventional and conventional elements of Buddhist reasoning, it was not sufficient for an understanding of their cooperative and nonviolent principles.

In their interviews of Indian people, Vasudev and Hummel (1987) also found that all of Kohlberg’s models of
moral reasoning are present in India, but that all Indian modes of moral reasoning are not reflected in Kohlberg’s scheme. Many of the Indian subjects see Heinz’s situation not as a hypothetical dilemma, but as an immediate and real dilemma of their society. Heinz’s predicament signifies the mass deprivations, poverty, and social injustice observable across the Indian scene. One of the interviewees emphasized the social implication of Heinz’s dilemma:

The problems that Heinz is up against are not individual problems that are afflicting 1 or 2 Heinzes of the world. These are social problems. . . . If a poor man steals so he can feed his children or because his wife is dying, that is not even theft. I feel it is the society which has driven him to that. . . . Heinze is a victim of the society. . . . It is the failure of the state to provide any relief and to discourage monopoly of such drugs. (Vasudev & Hummel, 1987, p. 110)

According to Vasudev and Hummel, this person’s views are not confined to conventional rules, but undoubtedly postconventional. She accepted stealing to save lives; she weighed the importance of single theft in relation to community and common wealth. Furthermore, their interviews illustrated how the moral principle of the unity of all life informs some Indian subjects’ decision making.

In her study of Kenya, Edwards (1987) found lower P scores among the community leaders, but careful reanalysis of her interviews led her to conclude that Stage 4 reasoning of the adult community leaders include an understanding of organizational aspects of a social structure and the operation of a legal system. According to her, Kenyan
leaders endeavor to have a clear and elaborated vision of fair and reasonable rules for running a prosperous extended family based on unity, respect, and understanding.

Tietjen and Walker (1984) proposed that the issue of the relationship of the individual to the community is a moral issue of central importance to collectivism-oriented people. Their argument continued that there is nothing in the current scoring manual for moral reasoning measurement that deals with maintaining human relationships between the level of individual and the level of society in general.

In the longitudinal study of moral development among kibbutz-born kibbutz members in Israel, Snarey (1982) reported that a postconventional communal equality and collective happiness principle are missing from Kohlberg’s theoretical model and scoring manual. His findings indicated that all Kohlberg’s stages, including the postconventional, are present among kibbutz members, but that Kohlberg’s scoring manual fails to capture some elements of kibbutz postconventional reasoning. Snarey’s extensive interviews indicate that the collective equality and happiness principle common to kibbutz members is more mature than Kohlberg’s definition of Stage 4, but is missing from Kohlberg’s definition of Stage 5. He concluded that Stage 5 is based on the philosophies of Kant, Rawls, and other Western philosopher, who emphasized individualistic orientation.
Perhaps the most important study was performed by Snarey (1985) who reviewed the 45 studies concerning the cross-cultural universality of moral development. These studies used Kohlberg's model and one of his scoring systems, the Sentence and Story Scoring method (Kohlberg, 1958), the Structural Issue Scoring method (Kohlberg, 1968; 1972), or current Standard Scoring method (Colby et al., 1978). The results indicated that Stage 1 to Stage 4 are virtually universal. In addition, nearly all samples from urban cultural groups or middle-class populations exhibited some postconventional reasoning. However, the close examination of the data signified the relative absence of principled reasoning in many populations. Other values, like collective solidarity, that are commonly stressed in either traditional folk cultures or in working-class communities, are missing from Kohlberg's theory. Snarey considered three possible interpretations. First, Kohlberg's definitions of principled reasoning are completely culture bound and ethnocentric. Second, the data support a doctrine of social evolution with so-called primitive societies at the bottom of the hierarchy and the United States at the top. Third, socio-cultural systems should be expected to vary in modal stage of usage and should also be understood as fully equal. A key to the last position is to distinguish between society and culture and to bring a developmental perspective to both. Snarey was
inclined to the third interpretation. Kohlberg’s preconventional and conventional stages, in Snarey’s final comment, are based on empirical operative judgments rather than on philosophical ethical systems, but not principled stages. Since descriptions of higher stage reasoning are based mainly upon Kant, Rawls, and other Western philosophers, Kohlberg’s postconventional stage characterization is incomplete, and it should have drawn more pluralistic ethical codes from a wider range of cultural world-views.

The result of Bergling’s empirical study (1981) was virtually identical to Snarey’s exploration. According to Bergling’s research, there is cross-national evidence of universality within Stages 1-4 during childhood. However, this unidirectional development of moral reasoning becomes irregular during adulthood and old age. An additional finding was the variations found between cultures and countries with regard to promoting the development of moral reasoning. These findings were taken as evidence opposing a universal development of moral reasoning, and pointing instead towards the fundamental importance of cultural influences stemming from philosophically grounded values of the society.

In short, cross-cultural studies contend that changes in moral reasoning from Stage 1 to Stage 4 rely on cognitive development, whereas an ideological and
philosophical motivation appears to affect one’s moral reasoning beginning with Stage 5. Critics have questioned whether principled moral stages are culturally universal, who point out that some elements of collectivist moral principles and modes of conflict resolution may be absent in Kohlberg’s moral development theory.

**Previous Studies of Adventist Students**

Quintino conducted a moral reasoning study by using the P score of the DIT with 125 graduate students at Andrews University in 1987. Her sample included five professional groups: theology, business, information science, allied health, and education. The subjects had a wide age range and came from many different countries.

Her results showed that the mean score of the survey group was lower than that of the normative group of Rest (1986a): For the Andrews University group, 29.6% were in the fourth quartile by getting P scores of 47 or higher, and 36.8% fell into the third quartile with corresponding P scores of 35-46 (Quintino, 1987, p. 62).

There was no statistically significant difference in the P scores of the graduate students enrolled in theology, business, information sciences, allied health, and education. The mean score of theology majors recorded 34.50 (N = 34, SD = 11.94); information science, 35.09 (N = 22, SD = 11.89); allied health, 40.96 (N = 27, SD = 13.33); and education, 42.54 (N = 42, SD = 14.31). The mean P scores of
females (42.68) were higher than that of males (36.95), and the difference was significant \( t = 2.49, p < .014 \). No statistically significant difference was found for the three age groups, i.e., 20-29 \( (N = 38, M = 39.82, SD = 10.52) \); 30-39 \( (N = 46, M = 42.46, SD = 13.72) \); and 40 and over \( (N = 40, M = 36.35, SD = 14.28) \).

Quintino (1987, pp. 66-67) classified her subjects into seven categories: (1) North American, (2) Central American, (3) South American, (4) Far Eastern, (5) African, (6) European, and (7) the South Pacific. Mean P scores for subjects from North America and South America were above 40, whereas those for subjects from the Far East, Africa, and South Pacific islands were respectively 31.92 \( (N = 13, SD = 9.14) \), 26.56 \( (N = 9, SD = 13.25) \), and 26.20 \( (N = 5, SD = 10.05) \). A one-way analysis of variance and the Newman-Keuls test indicated that the means for the North American and the South American students were significantly greater than the mean for the students from the South Pacific. All other contrasts were nonsignificant.

However, it is noteworthy that the Far Eastern group in Quintino's study obtained very low P scores when compared with the North American group. The mean P score of the Far Eastern students lagged behind that of the North American students by 12.57, which is almost one standard deviation apart in Rest's national normative group. In addition, the large standard deviations of the North American sample...
should be noted \((N = 68, \bar{M} = 44.49, SD = 13.09)\). Quintino’s North American sample was very likely to include African American students who tend to obtain lower P scores on the DIT in comparison with Caucasian American students. For instance, the research done by Locke and Tucker (1988) found that Black subjects show lower mean P scores, even if the difference is not significant, compared to the mean P score of the Caucasian American students. If so, Quintino’s results are not helpful in comparing the P scores of Asian graduate students and Caucasian American students. Having separated African American students and Caucasian American students, the difference between Caucasian American students and Far Eastern students could be statistically significant.

Eva (1981) compared the moral reasoning of Adventist religion/theology professors with the moral reasoning of Seventh-day Adventist church administrators. Randomly selected, 25 professors and 35 administrators participated in this research. The results taken from the DIT suggested that religion/theology professors demonstrated a higher level of principled moral reasoning than Adventist administrators. The mean P score earned by professors was 46.07 \((SD = 9.71)\), administrators obtained 34.38 \((SD = 6.13)\). The combined mean P score of the two groups recorded 38.87. It is interesting to note the means of professors and administrators at each of the six stage levels. It was observed that the greatest mean for the professors was at
the Stage 5 level, followed closely by Stage 4. The greatest mean for church administrator was at Stage 4 with a considerable smaller mean at Stage 5.

In sequence, a statistically significant difference was found between the P score means of three age groups. The younger age group (25-44) obtained the greatest mean score followed by the middle age group (45-60) and then the older (over 60). The probability of the obtained F was .021. Results showed the mean score of the young age group to be significantly higher than for the middle age group or the older age group. No significant difference, however, existed between the means of the middle and older age groups.

Madgwick (1990) explored a conceptual paradigm of personality through the relationship between moral reasoning and cognitive flexibility. In her study, moral reasoning was measured by the DIT, and data were obtained from 133 Adventist college students. La Sierra University students comprised 99 and the remaining 34 subjects were students at Columbia Union College. The sample consisted of 68 (51.1%) females and 65 (48.9%) males. Their mean age was 18.99 years with a range of 17 to 40 years of age. The mean P score of Madgwick's sample was 40.585 with standard deviation of 6.203. The range of P scores was reported at 6.700-75.00 (Madgwick, 1990, pp. 77-78). No further detailed information regarding moral reasoning and
demographic information of her samples was provided.

Studying moral development as related to students' perceptions of the high-school environment, Proctor (1975) compared both Adventist academies and public schools. All subjects rated at either Stage 2 or 3 with one exception at Stage 4. A significant interaction effect for the humanism scale is associated with high moral maturity, and low strict control is connected with low moral maturity.

Bauer (1979) additionally utilized Adventist students to examine moral reasoning and dogmatism in relation to two instruction methods. The main purpose of this study was to determine whether small group discussions of selected moral dilemmas and creative drama experiences centered on moral dilemmas contribute to growth in moral reasoning and to the reduction of dogmatism of students. One-hundred-twenty-one college students participated in the study, who were enrolled in the Communication Skills class at Andrews University. The conclusion of this study was that the use of small group discussions on moral dilemmas could provide an effective means for stimulation of moral reasoning in students attending a conservative religious college. An additional finding was that moral development could continue through late adolescence and early adulthood.

Brantley (1986) conducted her doctoral dissertation research on adolescent moral development and religious exposure in a Black Adventist parochial school in Alabama.
It included 67 11th- and 12th-grade Black students (27 males and 40 females). The DIT assessed the survey group’s moral reasoning. There was significant relationship between moral development and grades in Bible class, frequency of family worship, and grade level. Moral developmental scores were also significantly higher for one third of the survey group who regularly attended prayer meeting. There was a nonsignificant relationship between the moral development and number of years of formal religious education, Sabbath School attendance, 11 o’clock church service attendance, and frequency of personal Bible study. In general, relatively little correspondence was found between moral development and religious exposure variables. It was further discovered that the moral developmental reasoning level of the group was lower than the national high-school sample.

In short, the foregoing studies show that Adventists are more likely to obtain slightly lower P scores on the DIT in comparison with Rest’s national normative group, although such differences are not statistically significant. This fact is reminiscent of previous studies showing that conservative Christians tend to get lower P scores on the DIT.

**Summary**

Although the sequence of stages in children’s moral development may be invariant from culture to culture, the higher stages may be culture-specific. This implies that
only the first four of Kohlberg's stages constitute universal modes of moral reasoning. In most cultures explored by researchers to date, adolescents and young adults typically reason about moral issues at a higher level than children do. From virtually all societies, the dominant level of moral reasoning is conventional morality. Criticisms have centered around whether principled moral stages are culturally universal. The critics pointed out that the universality of Kohlberg's stages should be questioned, as long as the higher stages remain unconfirmed cross-culturally. Kohlberg's description, based on the foregoing reviews, may miss some elements of collectivist moral principles and modes of conflict resolution. The evidence from Kenya, Israeli kibbutz, India, Taiwan, Korea, and China suggests that collectivistic moral judgments do not appear at the higher stages in theory or scoring manual of Kohlberg and Rest. These findings may indicate that collective or communalistic principled reasoning is missing or misunderstood, which is commonly stressed in either traditional folk cultures or in religiously conservative communities.

Several researchers conducted their studies regarding moral development by using Adventists as their samples. Most of these studies showed that Adventists tended to obtain slightly lower P scores on the DIT in comparison with Rest's national normative group, although
such differences are not statistically significant. These findings are consistent with much previous research underlining that conservative Christians tend to get lower $P$ scores on the DIT.
CHAPTER 3

METHODOLOGY

Type of Research

The research design was a correlational, causal-comparative design utilizing cross-sectional methodology and standardized psychological tests. The purpose of the design was to investigate to what extent Caucasian American and Asian graduate students differ on collectivism and moral reasoning, and to evaluate the influence of collectivism upon moral reasoning.

Population and Sample Selection

The sample for the study was comprised of male and female graduate students above 20 years old attending the Seventh-day Adventist Theological Seminary, the School of Business, the School of Education, and the College of Arts and Sciences at Andrews University in Michigan. Andrews University is affiliated with the Seventh-day Adventist Church, which is well known for its international student body. The subjects came from two different cultural backgrounds. The first group consisted of Caucasian American graduate students who lived and had been educated in the United States. The second group consisted of Asian
graduate students who were born in Korea, Taiwan, Japan, or Malaysia, and who attended high schools and/or colleges in their own country before coming to Andrews University. Asian students who completed their secondary or college education in the United States were not included in this sample, since these students were assumed to be acculturated much more to American culture than those who did not (cf. Sue, 1989, p. 107).

The population of subjects included all Caucasian American and Asian seminarians enrolled in the Master of Divinity program, the Master of Arts program, and the doctoral program in the seminary, and the Caucasian American and Asian graduate students enrolled in the Master of Business Administration program, Master of Science programs, Master of Arts programs, Educational Specialist program, and doctoral programs in the College of Arts and Sciences, the School of Business, and the School of Education.

Procedure

In spring, 1994, the researcher contacted the directors of the Academic Records Office and Computing Center at Andrews University to obtain current lists of enrolled graduate students. Six-hundred-forty-four names were obtained from the center, with their ethnic background, phone number, current address, and mail box number. All the graduate students classified as Asian and Caucasian American were selected for the initial telephone contact.
A questionnaire to collect demographic information about each graduate student in the population was developed (see appendix B). Respondents were asked to indicate personal information regarding ethnicity (Asian, Caucasian American), age, gender (male and female), GPA, religious affiliation, and years of church attendance.

In the first telephone interviews attempts were made to reach all Caucasian American and Asian seminarians enrolled during the 1993-1994 school year, between March 28 and April 5, 1994. Between April 8 and April 10 in 1994, attempts were made to contact all Caucasian American and Asian graduate students in the School of Business, the School of Education, and the College of Arts and Sciences who registered during the 1993-1994 school year. Participation was absolutely voluntary. During the interview, the researcher asked subjects if they wished to participate in the study. If they answered "yes," the researcher put sealed questionnaires with a stamped, self-addressed return envelope in the participants' mail box at Andrews University. Participants were asked to mail back the questionnaires to the researcher's address or to place them in his mail box in the seminary or School of Education building. The DIT, the INDCOL Scale, demographic questionnaires, and cover letter were distributed to all participants with a requested return date 3 weeks later.

In the preliminary notification interview, potential
subjects were informed that all information would be kept confidential. They were also informed that they should make no identifying marks on the questionnaire or on the envelope that was to be returned to the researcher. Participants were informed that all data sheets would be destroyed following data entry. The researcher had the only copy of identification numbers that identified who had responded to the questionnaires. Once information was processed, the questionnaires were destroyed. Scale scores were computed, and the results and demographic information were entered into the computer for analysis.

**Instrumentation**

**Defining Issues Test**

An important contribution to measurement in moral judgment research was Rest's Defining Issues Test (DIT), constructed and validated in the 1970s (Rest, 1975, 1979, 1979; Rest, Cooper, Coder, Masanz, & Anderson, 1974). It took 30-40 minutes for a subject to complete the DIT. The test provided measures of moral reasoning at Stages 2 through 6 as described by Rest (1979). The DIT consisted of six moral dilemmas about social issues, in which each dilemma was followed by 12 related considerations in the form of questions or statements. Participants were asked to rate the importance of the considerations with regard to making decisions about the dilemmas. Each of the considerations exemplified a stage of moral reasoning.
The DIT was scored in terms of stage percentages, that is, the percentage of considerations rated relatively high for each stage. The primary score was the P score, the combined percentage score for Stages 5 and 6. The P score was defined as "sum of weighted ranks given to Stage 5 and 6 items" and construed as "the relative importance a subject gives to principled moral consideration in making decisions about moral dilemmas" (Rest, 1986a, p. 4.2).

To obtain the raw P score, the scorer first looked only at the four rankings at the bottom of each page of the DIT, i.e., the numbers in response to the question, "From the list of questions above, select the four most important: Most Important ______, Second Most Important _____, Third Most Important _________, Fourth Most Important _______." The DIT score chart indicated what stage each item exemplified. After locating the item's stage, the scorer weighed the choices by giving a weight of 4 to the first rank ("most important"), 3 to the second rank, 2 to the third rank, and 1 to the fourth rank. Points were totaled across the six stories. For example, if a Stage 3 item was ranked in first place and another Stage 3 item was ranked in fourth place on the first story, and if another Stage 3 item on the next story was ranked in second place, Stage 3 points would be 4 + 1 + 3. Total points were computed for each stage. There were 60 points in all, and the total number of points at each stage was divided by .60 to yield a
percentage score. The P score was obtained by adding the points together from Stages 5A, 5B, and 6. The final step was to convert the raw stage scores to percentages by dividing the raw scores by .60 (Rest, 1979, 1986a, pp. 3.1-3.4).

The DIT was based on Kohlberg's moral developmental theory, and the nature of the stages taken into consideration in the DIT was basically Kohlberg's. Rest (1986a, p. 4.1) pointed out some differences between the DIT and Kohlberg's test. Rest noted:

1. Kohlberg's assessment asks a subject to spontaneously bear a solution de novo to a problem, whereas the DIT leads a subject to evaluate various considerations provided to the subject. The DIT is a recognition task rather than a production task, as accordingly subjects are more advanced on the DIT [see Rest, 1979, pp. 146-203, for further information].

2. Kohlberg's procedure calls for a judge to classify a subject's responses according to scoring guides, whereas the DIT requires the subject himself/herself to classify his/her own responses, thus making objective scoring possible.

3. Kohlberg's appraisal characterizes a subject in a developmental sequence by stage typing, whereas the DIT's P score locates a subject in the light of a continuous number representing the developmental continuum. The way that a subject's development is indexed depends upon various factors [see Rest, 1979, pp. 75-105, for further information].

4. In terms of doing research on subjects' judgments of stage-prototypic statements, the DIT formulated definitions of stage characteristics which draw heavily on Kohlberg's stage discussions but is also different in some respects [see Rest, 1979, pp. 17-47 for further information].

The DIT did not provide scores equivalent to Kohlberg's test. Correlations were up to the .70s for heterogenous
groups, and much lower for homogenous groups. The DIT research took the identical theoretical approach as in Kohlberg’s assessment, but it adopted a different data source, different method of data categorization, and different scoring system. Rest concluded that it was inappropriate to use the DIT to predict scores on Kohlberg’s test because of the validity coefficient often lower than .70.

The DIT has been considered a valid and reliable measure of general moral judgment function (Martin, Shafto, & Van Deines, 1977; Rest, 1979, 1990). The psychometric properties of the test were demonstrated to be over .70 for validity and reliability in America (Davison, Robbins, & Swanson, 1978).

Face Validity: The DIT involved making judgments concerning moral problems. According to Rest (1986a, p. 5.1), the DIT attempted to ask what line of moral action the subject favored, and the subject’s moral reasons behind the choice.

Psychometric reliability: According to Davison et al. (1978), the test-retest reliabilities for the P score ranged between .71 and .82, and Cronbach’s Alpha index of internal consistency was mainly in the high .70s.

Criterion Group Validity: Rest (1986a, p. 5.4) compared the development of moral judgment of a group of Ph.D. students in moral philosophy and political science to
ninth graders. He also investigated the development of
moral reasoning of high school students and collegians.
Rest found out that Ph.D. students got the highest scores of
moral reasoning, and the ninth graders got the lowest
scores. Groups of high school students and collegians were
placed between Ph.D. students and the ninth graders. Group
differences were statistically significant, accounting for
nearly 50% of the variance in DIT scores in some studies.

Longitudinal Validity: Several longitudinal studies
were discussed in Rest’s Development in Judging Moral Issues
(1979, pp. 126-135), reporting significant upward trends
over four years at three testings (F = 20.1, p<.001) for the
P score. Similarly, analyses of individual patterns of
change showed an upward trend. Cohort-sequential and time-
sequential analyses were indicated that this upward movement
could be attributed to individual developmental change. It
was additionally reported that longitudinal trends were to
be attributed to education and life experience, rather than
testing effects or sampling bias.

Convergent-divergent Correlation: The correlations
between the DIT and other measures of moral reasoning
(various versions of Kohlberg’s test and the comprehension
of Moral Concepts test) reached the .60s and .70s, averaging
about .50. The correlations with other measures of
cognitive development and intelligence were about .36. The
correlations were usually non-significant or inconsistent
with various measures of attitudes and personality.
Demographic variables such as sex, socioeconomic class, and political party were also insignificant (Rest, 1979, pp. 146-203, 1986a, p. 5.5).

The discriminant validity of the DIT was supported by several other studies (Rest, 1979, pp. 146-222; 1986a, p. 5.5). There was useful information in DIT scores not directly associated with IQ, age, social economic status, and attitudes.

Validation through Experimental Enhancement Studies: Educational intervention studies resulted in changes in DIT scores. The movement of experimental groups was significantly greater than in the control groups, although the extent of change was less than in the longer-term longitudinal studies. It was found that a philosophy class in logic did not move subjects forward on the DIT, whereas the ethics class did.

Education had the most significant relation to the DIT. The P scores of junior-high-school subjects were in the 20s, senior-high-school subjects in the 30s, college subjects in the 40s, graduate students in the 50s, and adults in general in the 40s. The importance of education in predicting the P score was consistent in both cross-sectional studies and longitudinal studies.

IQ was also closely associated with the P score. Kohlberg (1969, p. 391) stated that the correlations of his
measure of moral judgment to IQ tests were commonly in the .30-.50 range. According to Rest (1986a, p. 6.4), the correlations between the DIT and various types of intelligence tests fall in the range of the .20s to .50s. "It is worth noting that math and science test scores seem to predict DIT scores as well as language, vocabulary, or social science test scores" (p. 6.4). This indicated that "it is the general factor of intelligence that these tests have in common with the DIT and not some special factor or skill, like language skills or knowledge of a special terminology" (p. 6.4). There was no proof that high scores on the DIT are due to reading or vocabulary skills but rather than due to general cognitive development (Rest, 1986a, p. 6.4).

A conservative intellectual milieu was known to lower the P scores. Inconsistent relationships were reported for gender, socioeconomic status, political party, type of residence, profession, or college major. Age was not related to the DIT in adult groups (Rest, 1986a, p. 6.6).

**INDCOL Scale**

The Individual-Collectivism (INDCOL) Scale was designed by C. Harry Hui (1986) in his doctoral dissertation. He defined collectivism as a set of feelings, beliefs, behavioral intentions, and behaviors connected with solidarity and concern for others. On the basis of this
conceptualization, the INDCOL Scale was developed as a paper-and-pencil instrument to measure this target-specific, multifaced construct. This test was a self-reporting psychological test that consisted of six subscales, namely, spouse, parents, kin, neighbor, friend, and co-worker. The primary index was the GCI score computed by summing up subscale scores. It took about 15 minutes to administer the INDCOL Scale.

What did the GCI measure? According to Hui (1988, p. 32), it measured the target-specific construct of collectivism. It predicted psychological reactions to responsibility sharing, and measured consistency between felt obligation and behavioral intention. Collectivism appeared to be the emotional construct of interpersonal concern, and the belief in the group, rather than the individual, as the basic unit of survival.

Psychometric reliability: Spearman-Brown's split-half reliability coefficient from 108 Hong Kong Chinese and 132 Americans ranged between .38 and .76. The Chronbach Alpha taken from the same sample was between .46 and .76. Additional information was obtained from Chinese university students in Hong Kong (N = 178). Cronbach Alpha coefficients taken from this data were between .41 and .68. Test-retest reliability coefficients of the six subscales computed from 45 American subjects were in the .70s. Reliabilities of the Spouse subscale were all in the
.40s. Most of the other reliability coefficients were in the .60s (Hui, 1988, p. 22).

Six studies were conducted to examine aspects of the validity of this scale.

Face validity: The INDCOL Scale was sent to 60 colleagues working in Africa, Asia, Australia, Europe, and the United States. A total of 41 responses was obtained. T-tests comparing 18 "individualists" and 23 "collectivists" demonstrated significant differences (p<.025, one-tailed) for 58 out of 63 items. The differences in subscale scores ranged between 1.13 (parent-collectivism) to 1.77 (co-worker-collectivism). This study indicated that almost all items discriminated between individualists and collectivists. The items appeared unbiased as the scale was acceptable by researchers in different cultures. According to the respondents, the ideal collectivist was regarded as someone who was high on all six subscales.

Social interest: One who was high in social interest valued interpersonal cooperation more than individual virtues, and considered cooperation more important than being successful. This conceptualization of social interest was consonant with the idea of collectivism, and hence a positive correlation between social interest and INDCOL scores would provide support for the scale’s validity. The Social Interest Scale (SIS) was used for this study, but correlations between the SIS and the target-specific
subscale were expected to be lower, as the SIS and the INDCOL subscales do not correspond in their level of specificity. The test battery was administered to 50 Hong Kong university students and 121 American university students. The mean SIS score of the Hong Kong sample was 8.14 (SD = 3.35), and that of the American subjects was 8.61 (SD = 3.31). The difference was not statistically significant. Social interest correlated moderately with the GCI. All the correlations between scores on the SIS and the INDCOL scores were positive, although not all of them reached statistical significance.

Need for approval: Individuals who had a high need for approval might respond in order to align themselves with others possessing the characteristics. On the basis of this reasoning, Hui hypothesized that the need for approval would correlate positively with the GCI among Chinese valuing interpersonal harmony but negatively among Americans emphasizing independence. As expected, there was a significant correlation of .25 between the GCI and social desirability among the Chinese. Social desirability was not related to the GCI (r = -.01) or any of its subscales among the Americans. The positive correlation in the Chinese sample was supportive of the contention that the INDCOL Scale measures something that was valued in Chinese culture.

Obligation-Intention correspondence: It was hypothesized that individualists pay more attention to their
own feelings about the behavior than obligation to others in
determining their behavioral intention. On the other hand,
collectivists were more concerned with the latter. In
addition, the obligation-intention relationship of behavior
toward an acquaintance was assumed to be lower for
individuals than for collectivists. The obligation-
intention consistency of behavior toward close friends
should be high among both individualists and collectivists.
These hypotheses were tested by the data taken from 25
female American subjects who responded to the INDCOL Scale.
When the target person was a good friend, both
individualists and collectivists displayed strong
obligation-intention consistency. There was still a
positive correlation between obligation and intention among
the collectivists when the target person was a recently met
classmate. Individualists, however, demonstrated negative
correlation. The difference between the two correlation
coefficients was significant ($r = 2.66, p<.005$).

Responsibility sharing: Collectivists tended to
share in outcomes of others’ actions and to let others share
in outcomes of their own actions. Individualists were
likely to take responsibility only for their own actions,
and were not willing to share in others’ predicaments. The
INDCOL Scale was administered to 25 American college
students to test the correlations between the ratings of the
six options and the GCI. According to the results,
collectivists considered "Assuming-full-responsibility," "Assuming-no-responsibility," "Sacrifice," and "Indifference" less fair than individualists to carry the total burden of their own mistakes. Perhaps the collectivists' reasoning was that since this was a group game, the negative outcome should be divided among the participants.

The prediction of responsibility sharing or any other collectivism-related behaviors directed to a certain target was hypothesized to be stronger in the case of target-specific collectivism than for other collectivism. Forty-five American college students were asked to respond to the INDCOL Scale to test this assumption. The data were in agreement with the predictions.

Finally, a construct validity study was conducted by Triandis, McCusker, and Hui (1990), in which five of the INDCOL subscales were used. Scores on the scale were negatively related to hedonistic values, and positively with altruistic values. Furthermore, this study examined correlations between the INDCOL Scale and other personality scales such as Locus-of-control Scale, Helmreich and Spence Achievement Motivation Questionnaire, F Scale, and Budner's Tolerance of Ambiguity Scale. Thus, the INDCOL Scale has discriminant validity from those instruments.
Data Analysis

Research Questions

Five research questions were developed to test the relation among the P score, the GCI score, and other variables:

1. Is there a significant difference between the moral reasoning as measured by the DIT of Asian graduate students and Caucasian American students?

2. Is there a significant difference between the collectivism of Asian graduate students and Caucasian American graduate students?

3. Is there a relationship between collectivism and moral reasoning?

4. Is there a significant relationship between a set of the DIT subscales and a set of the INDCOL subscales?

5. Can moral reasoning be predicted from collectivism, ethnicity, gender, age, religious background, GPA, academic major, and the number of years that subjects have attended church?

Statistical Technique

*t*-tests were conducted to test the relations among the P score, the GCI, and gender. To investigate the relations among the P score, the GCI, GPA, the number of years that the subject have attended church, and age, Pearson product-moment was used. Since the Pearson product-moment requires at least interval scale measurement, this
correlation coefficient was used only for the P score, the GCI, GPA, the number of years of church attendance, and age.

One-way ANOVA were conducted to test the relations between the P score and religious affiliation, and the P score and academic major. This statistical method was used because it is a highly flexible technique for testing hypotheses involving multiple variables. It allows one to determine whether the P score and the GCI are significantly different in view of religious background and academic major. It is a method that allows for simultaneous comparison of means to determine whether group means differ significantly. It is a procedure that investigates the variance of all the observations including internal variation of the populations, or variation from one group to another. The process allows a researcher to examine if variability is due to different sources and to base the test of significance on a comparison of these estimates using the F distribution.

To answer research questions 1 and 2, t-tests were used. For research question 3, the Pearson product-moment was used. This technique was used for testing the relations among the P score, the GCI score, the five subscale scores of the DIT, and the six subscale scores of the INDCOL Scale.

For research question 4, canonical correlation was performed to analyze the relationships between five DIT subscales and six INDCOL subscales. Canonical correlation
provides a statistical analysis for research where each subject is measured on two sets of variables and the researcher wants to know how the two sets relate to each other.

For research question 5, regression analyses were used. Regression analysis is useful in eliminating variables that are superfluous to build prediction models. It was conducted on moral reasoning by using eight predictors: collectivistic attitude, ethnicity, gender, age, GPA, academic major, religious background, and church attendance.

For testing each of research questions, alpha was set at .05.
CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

The purpose of this study was to examine the relationship between ethnicity, moral reasoning, and collectivism using the DIT and the INDCOL Scale. This chapter presents the results of the data analyses based on the information gathered from a representative sample of Asian and Caucasian American graduate students attending Andrews University.

General Characteristics of Sample

Of 644 contacted students, 211 students (32.8%) agreed to participate in the research through telephone contact, and 179 students (85%) returned the questionnaires. Fourteen of these subjects returned invalid questionnaires, thus the resulting N was 165.

The resulting sample included 165 subjects. This is about 26% of 644 Caucasian American and Asian graduate students enrolled for the spring quarter, 1994, at Andrews University. Accordingly, 54.3% of 128 Asian students and 18.5% of 516 Caucasian American students participated in the research. Table 1 presents the summary of general characteristics of the study sample.
Table 1

**General Characteristics of Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDA Theological Seminary</td>
<td>72</td>
<td>43.6</td>
</tr>
<tr>
<td>School of Education</td>
<td>30</td>
<td>18.2</td>
</tr>
<tr>
<td>College of Arts and Sciences</td>
<td>44</td>
<td>26.7</td>
</tr>
<tr>
<td>School of Business</td>
<td>19</td>
<td>11.5</td>
</tr>
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<td>Total</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>70</td>
<td>42.4</td>
</tr>
<tr>
<td>Caucasian American</td>
<td>95</td>
<td>57.6</td>
</tr>
<tr>
<td>Total</td>
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<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>111</td>
<td>67.3</td>
</tr>
<tr>
<td>Female</td>
<td>54</td>
<td>32.7</td>
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<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30 Years Old</td>
<td>94</td>
<td>56.9</td>
</tr>
<tr>
<td>31-40 Years Old</td>
<td>55</td>
<td>33.3</td>
</tr>
<tr>
<td>over 40 Years Old</td>
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<td>9.8</td>
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<td>Total</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td><strong>Religious Background</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh-day Adventist</td>
<td>136</td>
<td>82.4</td>
</tr>
<tr>
<td>Other Protestant</td>
<td>13</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td></td>
</tr>
</tbody>
</table>

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Seventy-two subjects came from the SDA Theological Seminary (43.6%); 30 subjects were students from the School of Education (18.2%); 44 subjects were students from the College of Arts and Sciences (26.7%); and the remaining 19 subjects came from the School of Business (11.5%).

Of the 165 students who participated in this study, 70 were Asian students (42.4%) and 95 were Caucasian Americans (57.6%).

Male subjects comprised 111 of the study sample (67.3%); female subjects comprised 54 of the sample (32.7%).

The average age of the subjects was 32 years and 8 months, ranging from 23 to 57 years. In terms of age distribution, 94 subjects (56.9%) were between 23 and 30 years old and 55 subjects (33.3%) were between 31 and 40 years old. The remaining subjects were over 40 years of age.

One-hundred-thirty-six subjects reported a Seventh-day Adventist background; this constituted the majority of the sample (82.4%); 13 subjects (7.9%) reported a Protestant religious background; 16 subjects (9.7%) reported other religious backgrounds.

The average years that the subjects had attended church was 23 years and 2 months (SD = 9.33) with a range from 3 to 49 years.

The average GPA was 3.55 (SD = .36) with a range from 2.35 to 4.00.
Description of the Results

Analyses of Demographic Data

This section addresses whether there are relationships between moral reasoning as measured by the P score, and GPA, age, gender, academic major, religious background, and the number of years that the subject has attended church. In addition, this section describes the relationships between collectivism as measured by the GCI, and GPA, age, gender, academic major, religious background, and the number of years that the subject has attended church. Tables 2, 3, 4, and 5 present descriptive and inferential overviews. \(t\)-test or ANOVA was used to test the significance of each analysis.

The mean P score of male subjects was 40.21, whereas that of the female subjects was 44.52 (see Table 2). The mean GCI score of male subjects was 14.00, whereas that of the female subjects was 14.23. \(t\)-test analyses were conducted to test the significance of gender on the P score and the GCI. No statistically significant effect of gender was found on the P score and the GCI.

In terms of religious background, the subjects who were affiliated with the Seventh-Adventist Church had 41.64 P scores; those with other Protestant religious backgrounds, 45.17 (see Table 3). The subjects who were affiliated with the Seventh-Adventist Church were more likely to have 14.01 GCI; those with other Protestant religious backgrounds,
Table 2

**P Score, GCI, and t-tests for Gender**

<table>
<thead>
<tr>
<th>Result</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>111</td>
<td>54</td>
</tr>
<tr>
<td>M</td>
<td>40.21</td>
<td>44.52</td>
</tr>
<tr>
<td>SD</td>
<td>14.78</td>
<td>15.65</td>
</tr>
<tr>
<td>t</td>
<td>-1.72</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>.09</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>t</td>
</tr>
<tr>
<td>p</td>
</tr>
</tbody>
</table>

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Table 3

P Score, GCI, and Analysis of Variance for Religion

<table>
<thead>
<tr>
<th>Result</th>
<th>SDA</th>
<th>Protestant</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>136</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>M</td>
<td>41.64</td>
<td>45.17</td>
<td>38.54</td>
</tr>
<tr>
<td>SD</td>
<td>15.64</td>
<td>13.03</td>
<td>12.41</td>
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<table>
<thead>
<tr>
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<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion</td>
<td>315.08</td>
<td>2</td>
<td>157.54</td>
<td>0.68</td>
<td>0.51</td>
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<tr>
<td>Residual</td>
<td>37346.01</td>
<td>162</td>
<td>230.53</td>
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</tr>
<tr>
<td>Total</td>
<td>37661.09</td>
<td>164</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result</th>
<th>SDA</th>
<th>Protestant</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>136</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>M</td>
<td>14.01</td>
<td>14.25</td>
<td>14.49</td>
</tr>
<tr>
<td>SD</td>
<td>1.77</td>
<td>1.61</td>
<td>1.58</td>
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</table>

<table>
<thead>
<tr>
<th>Source</th>
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<th>df</th>
<th>MS</th>
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<th>p</th>
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<tbody>
<tr>
<td>Religion</td>
<td>3.74</td>
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<td>1.87</td>
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<td>0.54</td>
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<tr>
<td>Residual</td>
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<td>162</td>
<td>3.04</td>
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</tr>
<tr>
<td>Total</td>
<td>495.88</td>
<td>164</td>
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</table>
Table 4

P Score, GCI, and Analysis of Variance for School

<table>
<thead>
<tr>
<th></th>
<th>P Score</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Seminary</td>
<td>Education</td>
<td>Sciences</td>
</tr>
<tr>
<td>N</td>
<td>72</td>
<td>30</td>
<td>44</td>
<td>19</td>
</tr>
<tr>
<td>M</td>
<td>40.67</td>
<td>45.95</td>
<td>42.70</td>
<td>35.88</td>
</tr>
<tr>
<td>SD</td>
<td>14.90</td>
<td>16.17</td>
<td>14.91</td>
<td>13.84</td>
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<table>
<thead>
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<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1303.98</td>
<td>3</td>
<td>434.66</td>
<td>1.93</td>
<td>.13</td>
</tr>
<tr>
<td>Residual</td>
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<td>161</td>
<td>225.82</td>
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<tr>
<td>Total</td>
<td>37661.09</td>
<td>164</td>
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<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>GCI</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Seminary</td>
<td>Education</td>
<td>Sciences</td>
</tr>
<tr>
<td>N</td>
<td>72</td>
<td>30</td>
<td>44</td>
<td>19</td>
</tr>
<tr>
<td>M</td>
<td>14.20</td>
<td>13.81</td>
<td>14.25</td>
<td>13.59</td>
</tr>
<tr>
<td>SD</td>
<td>1.90</td>
<td>1.81</td>
<td>1.39</td>
<td>1.73</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
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<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>9.08</td>
<td>3</td>
<td>3.03</td>
<td>1.00</td>
<td>.39</td>
</tr>
<tr>
<td>Residual</td>
<td>486.81</td>
<td>161</td>
<td>3.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>495.88</td>
<td>164</td>
<td></td>
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</tr>
</tbody>
</table>
Table 5

Correlation for Age, GPA, Years of Church Attendance, P Score, and GCI

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. GPA</td>
<td>.025</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Church Att.</td>
<td>.314</td>
<td>.016</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. P score</td>
<td>-.003</td>
<td>.168*</td>
<td>.120</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>5. GCI</td>
<td>-.040</td>
<td>.019</td>
<td>.098</td>
<td>-.148</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note. N=161.
* p< .05.
14.25 and other religions, 14.49. The results of one-way ANOVA indicated that in terms of P score and GCI, there was no significant difference among the Seventh-day Adventist subjects, non-SDA Protestant subjects, and the subjects with other religious backgrounds.

In terms of academic major, the students from the School of Education had 45.95 P score; those from the SDA Theological Seminary, 40.67; the College of Arts and Sciences, 42.70; the School of Business, 35.88 (see Table 4). The students from the College of Arts and Sciences had higher GCI scores (14.25) than those from the SDA Theological Seminary (14.20), the School of Education (13.81), and the School of Business (13.59). One-way ANOVA was conducted to test the mean differences among the subjects from the SDA Theological Seminary, the School of Education, the College of Arts and Sciences, and the School of Business on the P score and the GCI. There was no significant effect of school on the P score and the GCI.

Table 5 records the results of correlation analyses using the P score, the GCI, age, GPA, and the number of years that the subjects had attended church. No significant correlations were found between age and the P score, between age and the GCI. The number of years that the subjects have attended church had no significant relation to the P score or the GCI. A significant relation, however, existed between GPA and the P score ($r = .17, p<.05$), although the
correlation coefficient between them was very low. GPA had no significant correlation with the GCI.

In short, gender, religious background, and academic major had no significant effects on P score and the GCI. GPA was significantly correlated with P score, but this correlation ($r = .168$) was very low. No significant correlations were found between P score, age, and the number of years that subjects have attended church. The GCI was not significantly related to GPA, age, and the number of years that subjects have attended church.

**Research Question 1**

Research question 1 asks whether there are any significant differences between moral reasoning as measured by the DIT of Asian students and Caucasian American students. t-tests were conducted to test the effect of ethnicity on the DIT. Table 6 provides the detailed results of the t-tests. The analyses indicated a significant effect of ethnicity on the P score ($t = -4.75$, df = 141, $p<.00001$), and the subscale scores for Stage 4 ($t = 2.25$, df = 152, $p<.05$) and Stage 5 ($t = -4.53$, df = 145, $p<.00001$) in the DIT. The Caucasian American subjects obtained significantly higher P scores ($M = 46.34$, $SD = 13.61$) in comparison to the Asian subjects ($M = 35.55$, $SD = 14.96$). The Asian students had significantly higher scores in the Stage 4 subscale ($M = 32.71$, $SD = 13.92$) than the Caucasian American students ($M = 27.67$, $SD = 14.55$). On the other hand, the Caucasian
Table 6

t-tests for Mean P Scores by Ethnicity

<table>
<thead>
<tr>
<th>Result</th>
<th>Asian</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>94</td>
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<td>M</td>
<td>35.55</td>
<td>46.34</td>
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<tr>
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<td>14.96</td>
<td>13.61</td>
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<tr>
<td>df</td>
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<tr>
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<td>12.89</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>t</td>
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<td>11.56</td>
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</tr>
<tr>
<td>t</td>
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</table>

*p < .05.
American subjects obtained significantly higher scores in the Stage 5 subscale ($M = 36.28$, $SD = 12.89$) than the Asian subjects ($M = 26.88$, $SD = 13.22$).

**Research Question 2**

Research question 2 asks whether there are significant differences between the collectivistic attitude of Asian students and Caucasian American students. Table 7 presents the results of the $t$-test analyses. There were no significant differences between Asian and Caucasian American students in terms of the GCI. Ethnicity, however, had significant effect on the Parent-Collectivism subscale score ($t = 3.00$, $df = 162$, $p<.01$). The Asian subjects had significantly higher scores in the Parent-Collectivism subscale ($M = 2.22$, $SD = .51$) than the Caucasian American subjects ($M = 2.00$, $SD = .40$).

**Research Question 3**

Research question 3 asks whether there is a relationship between collectivism and moral reasoning. Table 5 presents the correlations among the P score and the GCI. The correlation coefficient between the P score and the GCI was very low and not significant ($r = -.15$, $p>.05$).

**Research Question 4**

Research question 4 asks whether there is a relationship between a set of the DIT subscales and a set of the INDCOL subscales. The results are provided in Table 8.
Table 7

t-tests for Mean GCI by Ethnicity

<table>
<thead>
<tr>
<th>Result</th>
<th>Asian</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCI</td>
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<tr>
<td>N</td>
<td>70</td>
<td>94</td>
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<tr>
<td>M</td>
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<td>13.89</td>
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<tr>
<td>t</td>
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</tr>
<tr>
<td>Spouse Subscale</td>
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</tr>
<tr>
<td>N</td>
<td>70</td>
<td>94</td>
</tr>
<tr>
<td>M</td>
<td>2.42</td>
<td>2.33</td>
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<td>SD</td>
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<td>.53</td>
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<tr>
<td>df</td>
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</tr>
<tr>
<td>t</td>
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<tr>
<td>Parent Subscale</td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>94</td>
</tr>
<tr>
<td>M</td>
<td>2.22</td>
<td>2.00</td>
</tr>
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<td>.40</td>
</tr>
<tr>
<td>df</td>
<td>163</td>
<td></td>
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<tr>
<td>t</td>
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<tr>
<td>Kin Subscale</td>
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<tr>
<td>N</td>
<td>70</td>
<td>94</td>
</tr>
<tr>
<td>M</td>
<td>2.73</td>
<td>2.86</td>
</tr>
<tr>
<td>SD</td>
<td>.52</td>
<td>.51</td>
</tr>
<tr>
<td>df</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>-1.52</td>
<td></td>
</tr>
<tr>
<td>Neighbor Subscale</td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>94</td>
</tr>
<tr>
<td>M</td>
<td>2.09</td>
<td>2.02</td>
</tr>
<tr>
<td>SD</td>
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<td>.48</td>
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<tr>
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<tr>
<td>t</td>
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<tr>
<td>Friend Subscale</td>
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<tr>
<td>N</td>
<td>70</td>
<td>94</td>
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<td>2.13</td>
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<td>.43</td>
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<tr>
<td>df</td>
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<td></td>
</tr>
<tr>
<td>t</td>
<td>1.59</td>
<td></td>
</tr>
<tr>
<td>Co-worker Subscale</td>
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<tr>
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<td>94</td>
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<tr>
<td>M</td>
<td>2.62</td>
<td>2.55</td>
</tr>
<tr>
<td>SD</td>
<td>.60</td>
<td>.54</td>
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<tr>
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<tr>
<td>t</td>
<td>.74</td>
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</tr>
</tbody>
</table>

*p < .05.
Canonical correlation was performed between a set of the DIT subscales and a set of the INDCOL subscales. The DIT set included the subscale scores of Stages 2, 3, 4, 5, and 6. Each stage score indicated the percentage of one's moral reasoning that could be assigned to a particular moral stage of Kohlberg. The INDCOL set measured one's attitudes toward spouse, parent, kin, neighbor, friend, and co-worker. Increasingly large numbers of each scale reflected more collectivistic attitudes toward spouse, parent, kin, neighbor, friend, and co-worker.

The first canonical correlation was .40 (16% of variance); the second was .25 (6% of variance); the third was .20 (4% of variance); the fourth was .11 (1% of variance). The remaining one canonical correlation was effectively zero. With four canonical correlations included, chi-square was 47.05 with df = 30 and p < .05. With the first canonical correlation removed, chi-square was 19.46 with df = 20 and p = .49. Subsequent chi-square tests were not statistically significant either. The first pair of canonical variates, therefore, accounted for the significant relationships between two sets of variables.

With a cutoff correlation of .33, the variables in the DIT set that were correlated with the first canonical variate were Stages 2, 4, 5, and 6. Among the INDCOL subscales, Parent- and Co-worker-Collectivism correlated with the first canonical variate. This pair of canonical
Table 8

Canonical Correlation Analyses for Subscales of the DIT and the INDCOL Scale

<table>
<thead>
<tr>
<th>Canonical Correlation</th>
<th>Approximate Chi-square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 .40024</td>
<td>47.05</td>
<td>30</td>
<td>.0246</td>
</tr>
<tr>
<td>2 .25137</td>
<td>19.46</td>
<td>20</td>
<td>.4919</td>
</tr>
<tr>
<td>3 .19555</td>
<td>9.15</td>
<td>12</td>
<td>.6901</td>
</tr>
<tr>
<td>4 .11025</td>
<td>1.06</td>
<td>6</td>
<td>.0810</td>
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</table>

Standardized Coefficients for Canonical Variables of the First Set

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2</td>
<td>-.389</td>
</tr>
<tr>
<td>Stage 3</td>
<td>-.086</td>
</tr>
<tr>
<td>Stage 4</td>
<td>-.418</td>
</tr>
<tr>
<td>Stage 5</td>
<td>.621</td>
</tr>
<tr>
<td>Stage 6</td>
<td>.577</td>
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</table>

Standardized Coefficients for Canonical Variables of the Second Set

<table>
<thead>
<tr>
<th>Variable</th>
<th>Function 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spouse Scale</td>
<td>-.016</td>
</tr>
<tr>
<td>Parent Scale</td>
<td>-.523</td>
</tr>
<tr>
<td>Kin Scale</td>
<td>.080</td>
</tr>
<tr>
<td>Neighbor Scale</td>
<td>-.272</td>
</tr>
<tr>
<td>Friend Scale</td>
<td>-.163</td>
</tr>
<tr>
<td>Coworker Scale</td>
<td>-.823</td>
</tr>
</tbody>
</table>
variates indicated that a combination of more Stage 5 ( .62) and Stage 6 moral reasoning ( .58), and less Stage 4 (-.42) and Stage 2 moral reasoning (-.39) tended to indicate less collectivistic attitudes toward co-worker (-.82) and parent (-.52).

Research Question 5

Although the preceding results improve our understanding of the relationships between the P score and the other variables, these analyses did not consider how these multiple variables might interact. Thus, regression analyses were used to determine which variables among the GCI, age, gender, GPA, ethnicity, academic major, religious background, and the number of years that the subjects have attended church had the greatest impact on predicting the P score of the subjects.

Academic major, religious background, gender, and ethnicity were converted into sets of variables by dummy variable coding. In defining academic major that has 4 categories, 3 dummy variables were defined to index these categories. Since there are 3 categories in religious background, the number of dummy variables was 2. Gender and ethnicity had 2 categories, and thus 1 dummy variable was generated for each variable. Among the coding schemes available for regression, reference cell coding method was adopted (Kleibaum, Kupper, & Muller, 1988, p. 262). That is, each variable took on only value of 1 and 0, and each
variable indicated group membership (1 for a specific group, 0 otherwise). For example, the two dummy variables for religious background represented Adventist and Protestant. D1 = 1 if Adventist and zero otherwise; D2 = 1 if Protestant and zero otherwise. The "other" group had a value of zero on each of the two dummy variables, and was taken as the reference group to which all the others were compared.

For the present analyses, stepwise regression was performed between the P score and continuous-scale variables such as the GCI, GPA, age, and the number of years that subjects have attended church. On the other hand, hierarchical regression analyses were adopted for academic major, religious background, gender, and ethnicity. Each of these variables entered the equation in block in an order specified by the researcher. In hierarchical regression, the researcher normally assigns order of entry of variables according to logical or theoretical considerations. Each independent variable is assessed in terms of what it adds to the equation at its own point of entry (Tabachnick & Fidell, 1989, p. 143-144).

To select the first best variable, regression analyses were performed between the P score as the dependent variable and eight variables (ethnicity, the GCI, GPA, gender, academic major including three vectors, age, religious background including two vectors, and the number of years that the subject has attended the church) as
independent variables. Of the eight variables, ethnicity, the GCI, GPA, and gender accounted for significant shares of the P score, with ethnicity clearly the best predictor of the P score (see Table 9). Ethnicity alone explained 11% of the variance of the P score with $F = 17.43, p < .001$.

After ethnicity was selected for the equation, regression analyses were performed between the P score and each of the GCI, GPA, gender, academic major including three vectors, age, religious background including two vectors, and the number of years that the subject has attended church to find the second best variable. Academic major, religious background, and gender entered the equation in blocks in orders specified by the researcher. In addition, a stepwise regression was performed between the P score and continuous variables such as the GCI, GPA, age, and the number of years that the subject has attended church. According to these regression analyses, the two-variable model of ethnicity and the GCI explained 12% of the variance of the P score with $F = 9.25, p < .001$ (see Table 10). The model of ethnicity and gender also explained 12% with $F = 9.21, p < .001$. The model of ethnicity and GPA explained 14% of the variance with $F = 11.79, p < .001$. The other models explained less than 12% of the variance. Although the model of ethnicity and GPA accounted for 14% of the variance, the GCI was chosen as the second best predictor because of its theoretical importance for this study.
Table 9

Summary of Hierarchical Stepwise Regression Analysis for Variables predicting P Score (One-variable Models)

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square</th>
<th>R square Change</th>
<th>Sig. R square Change</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
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<td>.11</td>
<td>.00</td>
<td>17.43</td>
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<td>.02</td>
<td>.00</td>
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<td>Gender</td>
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<td>.02</td>
<td>.09</td>
<td>2.99</td>
<td>.09</td>
</tr>
<tr>
<td>GCI</td>
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<td>.02</td>
<td>.09</td>
<td>2.79</td>
<td>.09</td>
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</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-.33</td>
<td>-4.17</td>
<td>.00</td>
</tr>
<tr>
<td>GPA</td>
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<td>1.88</td>
<td>.00</td>
</tr>
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<td>Gender</td>
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<td>-.14</td>
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<td>.09</td>
</tr>
<tr>
<td>GCI</td>
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<td>-.14</td>
<td>-1.67</td>
<td>.09</td>
</tr>
</tbody>
</table>
Table 10

Summary of Hierarchical Stepwise Regression Analysis for Variables predicting P Score (Two-variable Models)

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square</th>
<th>R square Change</th>
<th>Sig. R square Change</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity &amp; GPA</td>
<td>.14</td>
<td>.03</td>
<td>.02</td>
<td>11.79</td>
<td>.00</td>
</tr>
<tr>
<td>Ethnicity &amp; Gender</td>
<td>.12</td>
<td>.01</td>
<td>.32</td>
<td>9.21</td>
<td>.00</td>
</tr>
<tr>
<td>Ethnicity &amp; GCI</td>
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<td>.01</td>
<td>.30</td>
<td>9.25</td>
<td>.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>-10.83</td>
<td>-.35</td>
<td>-4.43</td>
<td>.00</td>
</tr>
<tr>
<td>GPA</td>
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<tr>
<td>Ethnicity</td>
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<td>-.32</td>
<td>-3.93</td>
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</table>
To select the third best variable, regression analyses were performed between the P score and GPA, gender, age, academic major including three vectors, religious background including two vectors, and the number of years that the subject has attended church, after ethnicity and the GCI entered the equation. Academic major, religious background, and gender entered the equation in blocks in orders specified by the researcher. In addition, a stepwise regression was performed between the P score and the continuous-scale variables (GPA, gender, age, and the number of years that the subject has attended church) after ethnicity and the GCI entered the equation. The three-variable model of ethnicity, the GCI, and GPA accounted for 15% of variance of the P score with $F = 8.28$, $p < .0001$; the model of ethnicity, the GCI, and the number of years that the subject has attended church explained 14% with $F = 7.33$, $p < .001$; the model of ethnicity, the GCI, and gender explained 12% with $F = 6.56$, $p < .001$ (see Table 11). Addition of GPA to the equation resulted in a significant increment in $R^2$; while the addition of the number of years that the subject has attended church and gender to the equation resulted in smaller increments in $R^2$ square. The other models explained less than 15% of the variance.

After GPA was added to the equation, age, gender, academic major, religious background, and the number of years that the subject has attended the church entered the
### Table 11

**Summary of Hierarchical Stepwise Regression Analysis for Variables predicting P Score (Three-variable Models)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square</th>
<th>R square Change</th>
<th>Sig. R square Change</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity, GCI, &amp; GPA</td>
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<td>0.03</td>
<td>0.02</td>
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<td>0.00</td>
</tr>
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<td>Ethnicity, GCI, &amp; Church Attendance</td>
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<td>0.02</td>
<td>0.08</td>
<td>7.32</td>
<td>0.00</td>
</tr>
<tr>
<td>Ethnicity, GCI, &amp; Gender</td>
<td>0.12</td>
<td>0.00</td>
<td>0.28</td>
<td>6.57</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>-10.35</td>
<td>-0.33</td>
<td>-4.17</td>
<td>.00</td>
</tr>
<tr>
<td>GCI</td>
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<td>-0.09</td>
<td>-1.10</td>
<td>.27</td>
</tr>
<tr>
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<td>.02</td>
</tr>
<tr>
<td>Ethnicity</td>
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<td>.00</td>
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</tr>
<tr>
<td>Church Att.</td>
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<td>-0.14</td>
<td>1.80</td>
<td>.08</td>
</tr>
<tr>
<td>Ethnicity</td>
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<td>-0.30</td>
<td>-3.61</td>
<td>.00</td>
</tr>
<tr>
<td>GCI</td>
<td>-0.80</td>
<td>-0.09</td>
<td>-1.11</td>
<td>.27</td>
</tr>
<tr>
<td>Gender</td>
<td>-2.92</td>
<td>-0.09</td>
<td>-1.09</td>
<td>.28</td>
</tr>
</tbody>
</table>
equation using hierarchical regression and stepwise regression. The model of ethnicity, the GCI, GPA, and the years of church attendance, explained 17% of variance of the P score with $F = 7.11$ and $p<.0001$ (see Table 12). The other four-variable models accounted for less than 17% of the variance.

In terms of R square and theoretical validity of the model, the four-variable model of ethnicity, the GCI, GPA, and the number of years that subjects have attended church seemed to be the best model in predicting the subjects' P scores.

**Summary of Findings**

The coefficient between the P score and GPA was significant, but quite low. No significant relationships were found between the P score and gender, age, academic major, religious background, and the number of years that the subject had attended church. All these data failed to reach the .05 statistical significance level.

To answer research question 1, t-test was performed. There was significant effect of ethnicity on the P score measuring one's postconventional moral reasoning in the DIT.

To answer research question 2, t-test was performed. No significant effect of ethnicity was found on the GCI. Statistical results concerning the relationship between moral reasoning and collectivism were mixed.

To answer research question 3, correlation analyses
Table 12

Summary of Hierarchical Stepwise Regression Analysis for Variables predicting P Score (Four-variable Models)

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square</th>
<th>R square Change</th>
<th>Sig. R square Change</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity, GCI, GPA, &amp; Church Att.</td>
<td>.17</td>
<td>.02</td>
<td>.08</td>
<td>7.11</td>
<td>.00</td>
</tr>
<tr>
<td>Ethnicity, GCI, GPA, &amp; Gender</td>
<td>.16</td>
<td>.01</td>
<td>.18</td>
<td>6.70</td>
<td>.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>-10.45</td>
<td>.33</td>
<td>-4.24</td>
<td>.00</td>
</tr>
<tr>
<td>GCI</td>
<td>-.90</td>
<td>-.10</td>
<td>-1.27</td>
<td>.21</td>
</tr>
<tr>
<td>GPA</td>
<td>7.65</td>
<td>.19</td>
<td>2.40</td>
<td>.02</td>
</tr>
<tr>
<td>Church Att.</td>
<td>.23</td>
<td>.14</td>
<td>1.80</td>
<td>.08</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>-9.66</td>
<td>.31</td>
<td>-3.82</td>
<td>.00</td>
</tr>
<tr>
<td>GCI</td>
<td>-.86</td>
<td>-.10</td>
<td>-1.21</td>
<td>.22</td>
</tr>
<tr>
<td>GPA</td>
<td>8.12</td>
<td>.20</td>
<td>2.52</td>
<td>.01</td>
</tr>
<tr>
<td>Gender</td>
<td>-3.57</td>
<td>-.11</td>
<td>-1.34</td>
<td>.18</td>
</tr>
</tbody>
</table>
were performed. There was no significant correlation between the P score and the GCI.

Canonical correlation analysis was performed to answer research question 4, and the results showed that the P score was significantly related to the GCI. The variables in the DIT set that were correlated with the first canonical variate were Stages 2, 4, 5, and 6. Among the INDCOL subscales, Parent- and Co-worker-Collectivism correlated with the first canonical variate.

To answer research question 5, regression analyses were performed. The four-variable model of ethnicity, the GCI, GPA, and the number of years that subjects have attended church seemed to be the best model in predicting the subjects' P scores.
CHAPTER 5

SUMMARY, DISCUSSION, CONCLUSIONS
AND RECOMMENDATIONS

This chapter presents the summary, discussion of the findings, conclusions of the study, and recommendations for future research. The summary includes a statement of the problem, brief review of the literature, the purpose of the study, and the methodology. The discussion deals with the findings and interpretation. The conclusions and recommendations given are based on the findings of the study.

Summary

The Problem

Lawrence Kohlberg's stage model of moral development has attracted a great deal of attention from educators and psychologists. Not surprisingly, his work has also inspired considerable criticism and revisionism. A number of authors have argued that Kohlberg's theory does not incorporate the collectivistic moral reasoning that emphasizes human relationships among individuals, families, the community, and society in general. The literature has suggested that people in the Asian collectivistic culture employ a...
relatively group-oriented way to deal with moral conflicts, whereas people of the American individualistic culture hold an individual-oriented stance toward conflict. The notion that cultural differences between Asians and Caucasian Americans have certain effects upon one’s moral reasoning, however, had not been empirically explored yet.

Overview of Related Literature

Lawrence Kohlberg (1969) stated that all people in different cultures and countries develop their moral reasoning along the same fixed sequence of stages as they grow older. This universality is a key element of Kohlberg’s moral development theory. Some cross-cultural studies conducted in Asia, Africa, and Latin America have provided some evidences for universality of Kohlberg’s stages (e.g., Bushnell, & Regnemer, 1978; Edwards, 1975; Gorsuch & Barnes, 1973; Grimley, 1974; Moir, 1974; Nisan & Kohlberg, 1982; Park & Johnson, 1984; White, 1975).

A group of researchers, however, has argued that the cross-cultural sequential advance in stages of moral development is limited to the first four stages of Kohlberg’s theory (e.g., Harkness et al, 1981; Nisan & Kohlberg, 1982; Snarey, 1982). Researchers have further suggested that the postconventional stages of Kohlberg’s theory do not meet the moral standard in the Asian, African, and Latin American cultures.

Hogan (1975) contended that Kohlberg posited the
subjective and individualistic philosophies of Western elite individuals at the summit of his stages. Simpson (1974) defined Kohlberg's scheme as a psychological theory based on Western individualistic philosophy. According to Sullivan (1977), Kohlberg's theory was a psychological descendent of Western structuralism and liberal ideology. A core agreement between Simpson and Sullivan was that Kohlberg's postconventional stages were established on Western philosophy that places individuals before societies.

The foregoing argument was supported by a number of other researchers who conducted their studies in a variety of Asian and African countries. Lei and Cheng (1984), Dien (1982), and Ma (1988) found that the most frequently matched moral judgments in the Asian culture were those related to the traditional values of filial piety and collective utility. A cross-cultural study between Korea and the United States suggested that Korean subjects generally lagged behind American subjects in their moral development (Park & Johnson, 1984). Gielen (1982), and Vasudev and Hummel (1987) also discovered in their interviews with Tibetan Buddhist monks and Indian village elders that Kohlberg's scheme was not sufficient for an understanding of their cooperative and nonviolent moral principles. Edwards (1987) contended that Kohlberg's Stage 4, rather than Stage 5, was more or less connected with the African moral code underlining fair and just rules for running a prosperous
extended family based on unity, respect, and understanding. According to Tietjen and Walker (1984) and Snarey (1982, 1985), Kohlberg failed to include the issue of relationship between individual and community as a core moral issue, which was of central importance to collectivistic cultures.

**Purpose of the Study**

The purpose of this study was to empirically investigate whether the moral reasoning measured by the DIT is influenced by the presence or absence of the effects of collectivistic attitudes measured by the INDCOL Scale.

**Methodology**

In order to obtain the data necessary for the analyses in this research, two psychological instruments were employed to measure moral reasoning and collectivistic attitude. The DIT was employed to measure the postconventional moral reasoning currently held by the subjects, whereas the INDCOL Scale was used to identify their collectivistic attitude.

Five research questions were formulated:

1. Is there a significant difference between the moral reasoning as measured by the DIT of Asian graduate students and Caucasian American students?

2. Is there a significant difference between the collectivism of Asian graduate students and Caucasian graduate students?
3. Is there a relationship between collectivism and moral reasoning?

4. Is there a significant relationship between a set of the DIT subscales and a set of the INDCOL subscales?

5. Can moral reasoning be predicted from collectivistic attitude, ethnicity, gender, age, religious background, GPA, academic major, and the number of years that the subject has attended church?

Subjects chosen for the research were graduate students from the SDA Theological Seminary, the School of Business, the School of Education, and the College of Arts and Sciences at Andrews University. They were composed of Asian and Caucasian American students including both male and female. The survey was carried out in April, May, and June of 1994. Two psychological protocols with a demographic information sheet were sent to each participant after an initial telephone contact. Questionnaires were collected after 3 weeks. Of 644 contacted students, 211 students (32.8%) agreed to participate in the research through telephone contact, and 179 students (85%) returned the questionnaires. One-hundred-and-one Caucasian American students and 78 Asian students returned the questionnaires. Statistical analyses of \( t \)-test, analysis of variance, and correlation were used for research questions 1, 2, and 3. For each analysis, alpha was set at .05. Hierarchical stepwise regression and canonical correlation analysis were
performed for research questions 4 and 5. To establish a predictor model for the P score, stepwise regression was employed. Canonical correlation analysis was performed to establish the relationships between the five subscales of the DIT and the six subscales of the INDCOL Scale.

**Discussion of Findings**

No significant relationships were found between the P score and gender, age, academic major, religious background, and the number of years that the subject has attended the church. A significant relation, however, existed between GPA and the P score ($r = .17, p < .05$), although the correlation coefficient between them was very low. This result supports the previous studies showing that educational achievement has a significant correlation with the P score (Kohlberg, 1969, p. 391; Rest, 1986b, p. 4). On the other hand, Gilligan’s (1982) charge of gender-bias in Kohlbergian moral development theory was not warranted by the present evidence. Male and female subjects were not significantly different in terms of their P scores.

**Research Question 1**

Research question 1 asks whether there are significant differences between the moral reasoning measured by Asian subjects and Caucasian American subjects. As noted in chapter 4, the mean difference of the P score between the Asian and Caucasian American subjects was statistically
significant \((t = -4.75, \text{df} = 141, p < .00001)\). The Caucasian American subjects obtained significantly higher P scores \((M = 46.34, \text{SD} = 13.61)\) compared with the Asian subjects \((M = 35.55, \text{SD} = 14.96)\). This difference should be attributed to two facts: (1) the Asian subjects had significantly higher scores in the Stage 4 subscale \((M = 32.71, \text{SD} = 13.92)\) than the Caucasian American subjects \((M = 27.67, \text{SD} = 14.55)\); and (2) the Asian subjects obtained significantly lower scores in the Stage 5 subscale \((M = 26.88, \text{SD} = 13.22)\) than the Caucasian American subjects did \((M = 36.28, \text{SD} = 12.89)\).

According to the DIT manual, the average P scores of American graduate-students were in the 60s: the average P score of the male subjects was 61.0 with SD = 14.0; the female subjects, 63.0 with SD = 10.9. Adults in general were in the 40s: the average P score of the male adult was 42.8 with SD = 11.8; the female adult, 46.0 with SD = 12.9. Thus, the mean P score of the present Asian subjects was far lower than the standardized mean of the graduate student norm. The average P score of the Caucasian American subjects was also below the national mean of the graduate student norm.

It should be noted that 95% of the subjects in this study had a conservative Christian religious background. Accordingly, the low P scores of the present subjects may support the previous findings that conservative Christians tend to get lower P scores in the DIT. It is a well-
established fact that moral development is independent of religion (Getz, 1984; Kohlberg, 1967, 1976, 1981). The mean difference between the Asian subjects and the Caucasian American subjects in this data, however, should be attributed to ethnicity rather than any religious causes. The results of sets of hierarchical stepwise regression analyses showed that the religious denomination accounted for only 2% of the variance of the P score at most. If so, the low P scores of the Asian subjects are attributable to their high Stage 4 score and low Stages 5 and 6 scores. If Kohlberg’s scheme is universal, the moral development of most Asian subjects appears to have stopped at Stage 4, regardless of their educational achievement. Another possibility is that Stage 4 scores of the Asian sample may have been confounded by an Asian moral reasoning undefined in the DIT and Kohlberg’s theory with Kohlbergian Stage 4 moral reasoning. This assumption is reminiscent of Snarey’s cross-cultural contention (1982, 1985). Snarey contended that Kohlberg’s first four stages are virtually universal, yet his theory of postconventional stages are inept in measuring "post-Stage 4" moral reasoning in collectivistic cultures.

Research Question 2

Research question 2 asks whether there is any significant mean effect of ethnicity on the GCI. This question was not supported. This finding was somewhat
inconsistent with the general belief that Asians are more collectivistic than Caucasian Americans. However, the Asian subjects obtained modestly higher mean GCI scores, although not significant, than the Caucasian American subjects. Thus, the INDCOL Scale appears to measure something socially valued in the Asian cultures but not necessarily in Caucasian American cultures.

The t-test analyses by using ethnicity and the scores of the INDCOL Scale, however, revealed that the Asian subjects tended to get higher scores (M = 2.22, SD = .51) than Caucasian American subjects (M = 2.00, SD = .40) in the Parent-Collectivism Scale. This reached .05 statistical significance level. It was stated above that the concept of filial piety lies at the center of every Asian mind. Asian children are instructed to respect and show reverence for their parents. Obedience to parents and elders has been traditionally enforced with every person, regardless of age and educational level. Along with this general understanding, these current results showed that filial piety and parental collectivism may be important moral values to the Asian subjects.

Research Questions 3, 4, and 5

The issue that has received attention in this study was the extent to which one’s collectivistic attitudes account for moral reasoning. Empirical support concerning this issue was mixed. The results of correlation analyses
and regression analyses showed that the GCI was not significantly related to the P score, whereas the results of canonical correlation analysis indicated some significant relations existed between the P score and the GCI.

Calculation of Pearson's correlation between two scores yielded $r = -.15$ with $p > .05$. This failed to meet the .05 significance level. The P score was not significantly correlated with the GCI. Thus, this result indicates that one's moral reasoning is not related to collectivistic attitude. This is a surprising result, since the qualitative and philosophical contention by Simpson (1974), Hogan (1975), Sullivan (1977), Lei and Cheng (1984), Dien (1982), Ma (1988) and Snarey (1982, 1985) was not supported. Furthermore, the direction of correlation was opposite from these authors' suggestions.

According to the stepwise regression, ethnicity was the best predictor of the P score by accounting for 11% of variance. Entering the GCI into the model with ethnicity increased 1% of $R^2$, and entering GPA into the model of ethnicity and the GCI increased 3% of $R^2$. These results suggested that a combination of the GCI and other variables could be effective in predicting the P score. In other words, the GCI appeared to be more or less sensitive to the P score, when associated with ethnicity and GPA. The four-variable model of ethnicity, the GCI, GPA, and the number of years that subjects have attended church appeared
to be the best model in predicting the subjects’ P scores. This suggestion hinges mainly on the theoretical importance of the GCI rather than its statistical contribution to the prediction equation. The unique contribution of the GCI was smaller than the other two variables. Its addition to the equation resulted in only 1% increase in predicting the P score. Thus, the results from the stepwise regression analysis did not fully support the assumption that collectivistic attitudes are related to moral reasoning.

Promising evidence came from the canonical correlation analysis between a set of the DIT subscales and a set of the INDCOL subscales. The variables of Stages 2, 4, 5, and 6 were correlated with the subscales of Parent-Collectivism and Co-worker-Collectivism in the INDCOL Scale set. The canonical correlation was .40, predicting 16% of the variance. This pair of canonical variates indicated that a combination of more Stage 5 (.62) and Stage 6 moral reasoning (.58), and less Stage 4 (-.42) and Stage 2 moral reasoning (-.40) tended to predict less collectivistic attitudes toward co-worker (-.82) and parent (-.52). The direction of effects deserves some attention.

The outcomes from the Parent-Collectivism and Co-worker-Collectivism subscales were associated with the Stages 5 and 6 moral reasoning in a negative way. This finding was consistent across all the subscales of the INDCOL Scale, except the Kin-Collectivism subscale. The
collectivistic attitudes seemed to correlate negatively with the postconventional moral reasoning of Stages 5 and 6. Since that the Caucasian American subjects had significantly higher scores in Stages 5 and 6 than the Asian subjects, the higher P scores of the Caucasian American subjects, computed from Stages 5 and 6, may be associated with their lower GCI scores. In this regard, the higher INDCOL subscale scores of the Asian students appeared to contribute to their lower P scores. Therefore, it is evident that ethnic background and collectivistic attitude are potentially powerful indicators in predicting the extent of Kohlbergian postconventional moral reasoning.

One possible interpretation of this finding from the canonical correlation analysis is that Kohlberg's definitions of the postconventional moral stages are more or less culture-bound and ethnocentric. Collectivistic-principled reasoning emphasizing filial piety and communal work seems missing or misunderstood. Thus, it is not improbable that Kohlberg's postconventional stage descriptions are incomplete for people with strong Asian backgrounds. Asian moral thinking seems to be different from that of Western culture. Kohlberg would have assumed that a system of moral philosophy common to the entire world exists, and the integration of all existing systems is feasible. In reality, each culture appears to have some types of principled moral codes distinctive from other
cultures. Filial piety that Asian people have valued for centuries seems to be an example. There is a need for a moral development theory that includes culturally specific examples of formal principles from diverse cultures. This is particularly demanding if one wants to conduct research on the moral development of Asian people who hold fast to filial piety and communal work as key moral codes.

This contention is in line with a number of previous studies suggesting that Kohlberg's theory placed at the summit of moral development Western individualistic philosophy (e.g., Dien, 1982; Hogan, 1975; Kitwood, 1983; Sampson, 1977; Simpson, 1974; Sullivan, 1977). Simpson (1974) may have correctly pointed out that Kohlberg failed to consider the difference between Asian and Western philosophies. Edwards (1981) noted the cross-cultural infrequency of Stage 5 and suggested that adults from non-Western cultures were as complex as the Western industrial nations, but guided by different moral codes. This suggestion appears to be in agreement with the present finding that Asian graduate students tend to get higher Stage 4 subscores on the DIT, and the Caucasian American students tend to get higher Stage 5 subscores. The significant, positive correlation between Stage 4 subscore and the Parent-Collectivism subscale score also supports the contention of Lei and Cheng (1984), and Dien (1982). They posited that filial piety needs to be considered in the
studies dealing with Chinese.

The belief that Kohlberg’s developmental stages are universal across different cultures and ethnic groups seems related to the age-old assumption that people living in non-Western nations are physically and culturally underdeveloped and therefore inferior to those living in Western nations in their cognitive ability. According to Bodley (1994, pp. 105-128), many investigators have argued that the cognitive development of non-Western people stop before early adolescence. This view suggests that all people are born with equal cognitive potential, but primitive cultures stifle this potential by inferior child-rearing practices and education. In terms of Piagetian cognitive development theory, primitives tend to be retarded at the preoperational stage, and thus the majority of primitive adults are incapable of what formal operational thinking. In line with this position is the suggestion that non-Western thoughts are more likely to be concrete, whereas Western thinking is abstract and conceptual.

However, collectivistic attitude and behavior that are characteristic of many non-Western cultures should not be understood according to the principles of Western individualistic psychology. Bodley (1994) argues that the differences in cognitive patterns between non-Western societies and Western industrial peoples are related to differences in the basic way of life, but "there is no
necessary implication that such differences reflect developmental stages or absolute superiority of one culture over the other" (p. 111). Failure to identify high cognitive skills in different cultures tells only about deficiencies in psychological measurements and Western cognitive concepts. Bodley (1994) questions "the validity of applying test procedures developed in one culture to people in an entirely different culture, especially where there is no practical context, content, or experience for the procedure or any familiarity with the concept" (pp. 110-111) of intelligence tests and other cognitive measurements.

This anthropological argument implies the difficulties of making meaningful cross-cultural comparisons of moral development on the basis of Kohlberg's theory and related psychological testings. For Kohlberg's moral development theory and the DIT scores to be meaningful, they must be applied and conducted within the cultural and ecological context of the Western industrial society. This suggestion refutes the Kohlbergian concept of universal moral development, and instead maintains that cross-cultural differences in moral development cannot be explained in terms of Kohlberg's theory. This view rejects the validity of Kohlberg's theory and related psychological tests that are applied outside Western cultures for which they were originally devised.

Despite a persistent criticism over the past 30
years and the persistent awareness that when used indiscriminately, Kohlberg's moral development theory and Kohlbergian tests of moral development are culturally biased, many scholars still use them as means of appraising moral development of a variety of cultural groups, including that of lingual and ethnic minority groups in the United States. A possibly devastating effect is that non-Western people can be labelled as morally inferior to Western people. This research indicates that the development of moral reasoning is related to cultural and ethnic factors probably more than education, intelligence, socioeconomic level, gender, and religious backgrounds.

**Conclusions**

The results of this study indicated that there were significant difference in the P scores of the DIT between Asian and Caucasian American subjects. An apparent conclusion resulting from the statistical analysis is that ethnicity is a primary variable affecting one's performance on the DIT. The Asian subjects tend to get lower P scores on the DIT. They often appear less postconventional in moral reasoning than the Caucasian American subjects. This conclusion supports the long-lived cross-cultural criticism that Kohlberg's moral development theory needs input from certain moral codes located in Asia, Africa, and Latin America.

Educators and psychologists have been concerned
about the use of psychological theories and tests with persons of diverse cultural backgrounds. Each culture and subculture encourages and fosters certain abilities and ways of behaving; and it discourages or suppresses others. Cultural differences operate in many ways to bring about group differences in behavior. Since all behaviors are affected by the cultural milieu in which the individual is reared and since psychological tests are but samples of behavior, cultural influences will and should be reflected in test performance. That is, psychological theories and tests tend to reflect the culture of the society where such theories and tests are employed. To the extent that a score on such a psychological test reflects the degree to which test-takers have been integrated into the society and the culture, it would be expected that members of different cultures would score lower.

In this sense, the present findings are not surprising. Kohlberg’s moral development theory and the DIT should favor persons from the culture in which they were developed. It is expected that on the DIT developed within the majority Caucasian American culture, persons reared in that culture will generally excel. Since Kohlberg’s moral development theory was constructed within the Caucasian American culture, which differs markedly from the Asian culture, Caucasian Americans would appear standard in terms of moral reasoning.
Data available in this study suggested that persons from Asian cultures may be handicapped on the DIT and other psychological tests prepared within Kohlberg's theory and the Caucasian American moral paradigm. Ethnicity should be noted as a powerfully associated factor with the P score in the DIT. According to the present study, it is very likely that Kohlberg's development theory has not given adequate expression to the concerns and experience of Asian people. The cross-cultural universality of Kohlberg's theory seems to warrant reexamination.

One of the purposes of this research was to identify what aspect of the Asian culture preempts development of Kohlbergian moral reasoning. Asian collectivism has been spelled out by a number of psychologists as a possible factor. The present study showed that collectivism is not necessarily associated with lower P scores. It was found, however, that collectivism may become a significant predictor of one's moral reasoning when it is combined with ethnicity. This supposition is most likely for one's collectivistic attitudes toward parents and co-workers. This conclusion, however, appears not decisive as yet. More empirical research is necessary to clarify the relationship between one's collectivistic attitude and moral reasoning. This is a question that awaits further research in the future.
Recommendations

Suggestions for further research are threefold. First, similar studies with a larger sample should be undertaken. Second, further studies need to be conducted using Asian and Caucasian American populations other than an Adventist Christian group. Third, additional studies are also expected to investigate the effect of African, Hispanic, and Afro-American ethnic backgrounds on one’s moral development.
April 20, 1994

Chang-Ho Ji
600 Beechwood Ct. D-51
Berrien Springs MI 49103

Dear Chang-Ho:

The Human Subjects Review Board (HSRB) has reviewed your proposal, "A Cross-Cultural Study of Moral Developmental Theory: The Influence of Individuality and Collectivism on Moral Reasoning of Oriental Students and White American Students," under the Exempt Review Category. You have been given clearance to proceed with your research plans.

Please be advised that any serious or adverse reactions and/or physical injury must be reported immediately in writing to the Human Subjects Review Board. If your proposal and research design are of such a nature that there is physical risk involved, any project related physical injury must also be immediately reported to the University physician, Dr. Loren Hamel by calling (616) 473-2222.

All changes made to the study design and/or consent form after initiation require prior approval from the HSRB before changes are implemented. Feel free to contact our office if you have any questions. The duration of the present approval is for one year. If your research is going to take more than one year, you must apply for an extension of your approval in order to be authorized to continue with this project.

We wish you success as you implement the research project as outlined in the approved protocol.

Sincerely,

James R. Fisher, Director
Office of Scholarly Research

c: Elsie Jackson
Dear Dr. Rest:

I am a doctoral student in Educational and Counseling Psychology at Andrews University. I am currently engaged in a research project (dissertation) investigating on the Moral Reasoning of graduate students. I am consequently asking your permission to administer the Defining Issues Test (DIT). The test will be administered to the graduate students at Andrews University who are enrolling at the theological seminary, the school of education, the school of business, and the school of arts and science.

The sample will represent graduate students from Oriental and American populations and will be both male and female.

The purpose of the study is to compare the moral reasoning of Oriental graduate students and White-American graduate students enrolled in the professional programs listed above. Thank-you for your cooperation as I anticipate an early response.

Cordially yours,

Chang-Ho Ji

Graduate Student
Department of Educational and Counseling Psychology
Andrews University
Berrien Springs, MI
Dear M. Ji:

I grant you permission to use the Defining Issues Test in your study. If you are making copies of the test items, please include the copyright information on each copy (e.g., Copyright, James Rest, 1979, All rights reserved.

I hereby grant you permission to reprint the Defining Issues Test questionnaire as an appendix in your dissertation. This includes the stories and test items, but not the scoring system or directions for analysis. Please make sure that the copy contains the usual copyright information. I understand that copies of your dissertation may be duplicated for distribution.

Please send me a copy of the report of your study. Thanks for your interest in the Defining Issues Test.

Sincerely,

James Rest
Professor
Educational Psychology

Chang-Ho Ji
Andrews University
600 Beechwood Ct
D-51
Berrien Springs, MI 49103

04-09-1994
APPENDIX B

QUESTIONNAIRES
Dear

Thank you very much for your cooperation in an educational study focusing on social perception and attitude. The purpose of this research is to obtain data for Chang-Ho Ji’s doctoral dissertation.

Participation will never be identified by name. The front page showing your name will be destroyed upon your returning this questionnaire. Your identity will be kept fully confidential. All data collected will be completely destroyed after analysis and interpretation.

The information that you provide will serve as an essential resource in developing insights into social attitude and perception.

After you have completed these questionnaires, please drop them into one of the following mail boxes listed below after you have finished answering them.

1. Seminary Building, Student Mail Box #357
2. School of Education Building Student Mail Box #87

Otherwise, you may mail these questionnaires to Chang-Ho Ji by using the enclosed return envelope. If possible, please return these questionnaires by April 15, 1994, or no later than April 25, 1994.

Since your participation in this study is voluntary, you may withdraw at any time. If you have a question or comment, you may contact me.

Your assistance is greatly appreciated.

Sincerely yours.

Chang-Ho Ji
Graduate Student
Department of Educational/Counseling Psychology
Andrews University

Returning Address

Chang-Ho Ji
600 Beechwood ct. D-51
Berrien Springs, MI 49103
(616) 471-6446
Demographic Data Sheet

Please answer each of the following questions:

1. Gender _____M _____F

2. Age ______

3. Religion ________SDA
    ________Other (please specify_____________

4. How many years have you attended your church? _____

5. Current GPA at Andrews University (Graduate Program)
    ______

6. Ethnic Background ________Asian (Oriental)
    ________Caucasian (White-American)

7. Country where you finished undergraduate education__________

8. Your Current Major __________________________
    Degree that you are currently pursuing
    __________________________

9. How many years have you been in the United States?
    ______

10. What is the nationality of your best friend?
    ________________
Direction: Please circle one number representing your idea (0-5, Strongly Disagree/False (0) to Strongly Agree/True(5)).

0 1 2 3 4 5 1. If a husband is a sports fan, a wife should also cultivate an interest in sports.

0 1 2 3 4 5 2. A marriage becomes a model marriage when the husband loves what the wife loves and hates what the wife hates.

0 1 2 3 4 5 3. Married people should have some time to be alone from each other everyday, undisturbed by their spouse.

0 1 2 3 4 5 4. If one is interested in a job about which the spouse is not very enthusiastic, one should apply for it anyway.

0 1 2 3 4 5 5. Even if my spouse were of a different religion, there would not be any interpersonal conflict between us.

0 1 2 3 4 5 6. It is better for a husband and wife to have their own bank accounts rather than to have a joint account.

0 1 2 3 4 5 7. The decision about where one is to work should be jointly made with one’s spouse, if one is married.

0 1 2 3 4 5 8. It is desirable that a husband and a wife have their own sets of friends, instead of having only a common set of friends.

0 1 2 3 4 5 9. My musical interests are extremely different from my parents.

0 1 2 3 4 5 10. In these days parents are too stringent with their kids that stunts the development of initiative.

0 1 2 3 4 5 11. When making important decisions, I seldom consider the positive and negative effects my decisions may have on my father.
12. Teenagers should listen to their parents’ advice on dating.

13. Even if the child won the Nobel Prize, the parents should not feel honored in any way.

14. It is reasonable for a son to continue his father’s business.

15. I would not share my ideas and newly acquired knowledge with my parents.

16. I practice the religion of my parents.

17. I would not let my needy mother use the money that I have saved by living a less than luxurious life.

18. I would not let my parents use my car, whether they are good drivers or not.

19. Children should not feel honored even if the father were highly praised and given an award by a government official for his contribution and service to the community.

20. Success and failure in my academic work and career are closely tied to the nurture provided by my parents.

21. Young people should take into consideration their parents’ advice when making education/career plans.

22. The bigger a family, the more family problems there are.

23. I have never told my parents the number of sons I want to have.

24. The number of sons my parents would like me to have differ by from the number I personally would like to have [0/ 1/ 2/ 3/ 4 or more/ I don’t know].

25. If a relative told me that he is in financial difficulty, I would help, within my means.
26. It I met a person whose last name was the same as mine, I would start wondering whether we were, at least remotely, related by blood.

27. Whether one spends income extravagantly or stingily is of no concern to one's relatives (cousins, uncles).

28. I would not let my cousin use my car.

29. When deciding what kind of work to do, I would definitely pay attention to the views of relatives of my generation.

30. When deciding what kind of education to have, I would pay absolutely no attention to my uncle's advice.

31. Each family has its own problems unique to itself. It does not help to tell relatives about one's problems.

32. I can count on my relatives for help if I find myself in any kind of trouble.

33. I have never chatted with my neighbors about the political future of this state.

34. I am often influenced by the moods of my neighbors.

35. My neighbors always tell me interesting stories that have happened around them.

36. I am not interested in knowing what my neighbors are really like.

37. One need not worry about what the neighbors say about whom one should marry.

38. I enjoy meeting and talking to my neighbors every day.

39. In the past, my neighbors have never borrowed anything from me or my family.

40. One needs to be cautious in talking with neighbors, otherwise others might think you are noisy.

41. I don't really know how to befriend my neighbors.
42. I feel uneasy when my neighbors do not agree with me when we come across each other.

43. I would rather struggle through a personal problem by myself than discuss it with my friends.

44. If possible, I would like co-owning a car with my close friends, so that it wouldn’t be necessary for them to spend much money to buy their own cars.

45. I like to live close to my good friends.

46. My good friends and I agree on the best places to shop.

47. I would pay absolutely no attention to my close friends’ views when deciding what kind of work to do.

48. To go on a trip with friends makes one less free and mobile. As a result, there is less fun.

49. It is a personal matter whether I worship money or not. Therefore it is not necessary for my friends to give any counsel.

50. The motto "sharing in both blessing and calamity" is still applicable even if one’s friend is clumsy, dumb, and causes a lot of trouble.

51. There are approximately [0/1/2/3/4/more than 4] of my friends who know how much my family as a whole earns each month.

52. On the average, my friends’ ideal number of children differs from my own ideal by [0/1/2/3/4 or more/ I don’t know my friends’ ideal].

53. It is inappropriate for a supervisor to ask subordinates about their personal life (such as where one plans to go for the next vacation).

54. When I am among my colleagues’ classmates, I do my own thing without minding about them.
55. One needs to return a favor if a colleague lends a helping hand.

56. I have never loaned my camera/coat to any colleagues/classmates.

57. We ought to develop the character of independence among students, so that they do not rely upon other students' help in their schoolwork.

58. A group of people at their workplace was discussing where to eat. A popular choice was a restaurant which had recently opened. However, someone in the group had discovered that the food there was unpalatable. Yet the group disregarded this person's objection, and insisted on trying it out. There were only two alternatives for the person who objected: either to go or not to go with the others. In this situation, not going with the others was a better choice.

59. There is everything to gain and nothing to lose for classmates to group themselves for study and discussion.

60. Classmates' assistance is indispensable to getting a good grade at school.

61. I would help if a colleague at work told me that he needed money to pay utility bills.

62. In most cases, to cooperate with someone whose ability is lower than one's own is not as desirable as doing the thing alone.

63. Do you agree with the proverb "Too many cooks spoil the broth"?

INSTRUCTIONS FOR PART A: [Sample Question]

On the left hand side check one of the spaces by each statement of a consideration. (For instance, if you think that statement A is not important in making a decision about buying a car, check the space on the right.)

DIFFERENCES

Great
Block
Same
Little
No

1. Whether the use of the car will be the same block to block.
   (Note that in this sample, the person setting the questionnaire did not think this was important in making a decision.)
   ✔

2. Would a used car be more economical in the long run than a new car? (Note that a check was put in the left space to indicate the opinion that this is an important factor in making a decision about buying a car.)
   ✔

3. Whether the color was green, Frank's favorite color.
   ✔

4. Whether the public was depicting was of least 20. (Note that if you are unsure about what "public depiction" means, then mark it "no importance.")
   ✔

5. Would it be a large, heavy car than a compact car.
   ✔

6. Whether the license plates were different, (Note that if a statement sounds like gibberish or nonsense to you, mark it "no importance.")
   ✔

INSTRUCTIONS FOR PART B: [Sample Question]

From the list of questions above, select the most important one of the whole group. For the number of the most important question on the top line below, be Blended for your 1st, 2nd and 3rd most important choices. (Note that the top choice in this case will come from the statements that were checked on the left hand side of statements A and B. Those thought to be very important, in deciding what is the most important, a person would choose A and B, and then pick one of them as the most important, then put the other one as "second most important," and so on.)

MOST IMPORTANT 2ND MOST IMPORTANT 3RD MOST IMPORTANT 4TH MOST IMPORTANT

If you were Frank Jones, how important would each of these questions be in deciding what car to buy?
### Story 1

**HEINZ AND THE DRUG**

In Europe, a woman was near death from a special kind of cancer. There was one drug that doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten dollars what the drug cost to make. He paid $100 for the radium and charged $1,000 for a small dose of the drug. The sick woman's husband, Hein, went to everyone he knew to borrow the money, but he could only get together about $1,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Hein gets desperate and begins to think about breaking into the man's store to steal the drug for his wife.

**Should Hein steal the drug? (Check one)**

- [ ] Should steal it
- [ ] Can't decide
- [ ] Should not steal it

**DIFFICULTY:**

<table>
<thead>
<tr>
<th>Great</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. Whether a community's life are going to be uphold</td>
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<td>2. Isn't it only immoral for a fellow to steal so much for his wife that he'd steal?</td>
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<tr>
<td>3. If Hein is willing to steal, what is the amount</td>
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<tr>
<td>4. Whether the drug is essential for Hein's wife</td>
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<tr>
<td>5. Whether the druggist's charge is too much</td>
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<tr>
<td>6. Whether the druggist is making too much</td>
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<tr>
<td>7. Whether Hein's wife is in any pain</td>
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<tr>
<td>8. Whether Hein's wife is in any pain</td>
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<tr>
<td>9. Whether the druggist is in any pain</td>
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<tr>
<td>10. Whether the druggist is following any law</td>
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<tr>
<td>11. Whether the druggist is making too much</td>
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<tr>
<td>12. Whether Hein's wife is in any pain</td>
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</tbody>
</table>

From the list of questions above, select the four most important:

- [ ] Most important
- [ ] Second most important
- [ ] Third most important
- [ ] Fourth most important

### Story 2

**STUDENT TAKE OVER**

At Harvard University, a group of students called the Students for a Democratic Society (SDS) believe that the University must be a center for radical ideas and activities. They believe that the University should have an army ROTC program. SDS demands that the University change its policy on ROTC. This means that Harvard students should have the right to hold a protest on campus as a group. The SDS students feel that the University administration should not interfere with the freedom of speech or to their demands.

As one step in their campaign, the SDS students took over the administration building and held everyone else to get out. They said they were doing this to force Harvard to get rid of the ROTC program as a force.

**Should the students have taken over the administration building? (Check one)**

- [ ] Yes, they should take it over
- [ ] Can't decide
- [ ] No, they shouldn't take it over

**DIFFICULTY:**

<table>
<thead>
<tr>
<th>Great</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. Are the students doing this to really help others?</td>
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<tr>
<td>2. Does the University have any right to take over property that doesn't belong to them?</td>
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<td>3. Do the students realize that they might be arrested and fined, and even expelled from school?</td>
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<td>4. Would taking over the building be in the long run in the interest of the students, or a greater good?</td>
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<tr>
<td>5. Whether the president stopped within the limits of his authority in depending the faculty vote.</td>
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<tr>
<td>6. Will the takeover anger the public and give all students a bad name?</td>
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<tr>
<td>7. In taking over a building consistent with principles of justice?</td>
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<tr>
<td>8. Would allowing one student take-over encourage many other students to take-over?</td>
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<tr>
<td>9. Did the president really misunderstand the students or his students?</td>
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<td>10. Whether the students are in any way in any way a greater good.</td>
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<tr>
<td>11. Are the students following principles which they believe are above the law?</td>
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<td>12. Whether or not university decisions ought to be respected by students.</td>
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</table>

From the list of questions above, select the four most important:

- [ ] Most important
- [ ] Second most important
- [ ] Third most important
- [ ] Fourth most important
Story 3

ESCAPED PRISONER

A man had been sentenced to prison for 10 years. After one year, however, he escaped from prison, moved to a new city in the country, and took the name of Thompson. For 8 years he worked hard, and gradually he saved enough money to buy his own business. He was kind to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day, Mr. Jones, an old neighbor, recognized him as the man who had escaped from prison 8 years before, and when the policemen were looking for him.

Should Mr. Jones report Mr. Thompson to the police and have him sent back to prison? (Check one)

___ Should report him  ___ Can't decide  ___ Should not report him

IMPORTANT:

<table>
<thead>
<tr>
<th>Great</th>
<th>Much</th>
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</thead>
<tbody>
<tr>
<td>1. Mr. Jones, who is a friend of Mr. Thompson, would want to prevent his escape.</td>
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<td>2. Mr. Thompson has not been in prison for 8 years.</td>
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<td>3. Mr. Thompson has been a good citizen for 8 years.</td>
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<td>4. Mr. Thompson has saved enough money to buy his own business.</td>
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<td>5. Mr. Thompson has given his employees top wages.</td>
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<td>6. Mr. Thompson has given most of his profits to charity.</td>
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<tr>
<td>7. Mr. Thompson has been kind to his customers.</td>
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<td>8. Mr. Thompson has been a model citizen.</td>
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<td>9. Mr. Thompson has been a hard worker.</td>
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<td>10. Mr. Thompson has been a faithful neighbor.</td>
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<td>11. The police are likely to be on his trail.</td>
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<tr>
<td>12. The police are likely to be looking for him.</td>
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From the list of questions above, select the four most important:

Most Important: ____________________  Second most Important: ____________________
Third most Important: ____________________  Fourth most Important: ____________________

Story 4

THE DOCTOR'S DILEMMA

A lady was dying of cancer which could not be cured, and she had only about 6 months to live. She was in terrible pain, but the surgeons were not sure that a good dose of pain-killers like morphine would make her life worse. She was delirious and almost every move would cause her pain. The doctors asked the surgeon to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway.

What should the doctor do? (Check one)

___ Should give the lady an overdose  ___ Can't decide  ___ Should not give the lady an overdose

IMPORTANT:

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<tr>
<th>Great</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>1. Whether the lady's family is in favor of giving her the overdose or not.</td>
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<tr>
<td>2. Whether the doctor's recommendation is made on the basis of the lady's health.</td>
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<td>3. Whether the doctor's recommendation is based on the knowledge of the lady's condition.</td>
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<td>4. Whether the doctor's recommendation is based on the knowledge of the lady's condition.</td>
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From the list of questions above, select the four most important:

Most Important: ____________________  Second most Important: ____________________
Third most Important: ____________________  Fourth most Important: ____________________
Story 5
WEBSTER

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

When Mr. Lee asked Mr. Webster if he could have the job, Mr. Webster told him that he had already hired somebody else. But Mr. Webster really hadn't hired anybody, because he could not find anybody who was a good mechanic besides Mr. Lee.

What should Mr. Webster have done? (Check one)

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

DIFFICULTY:
Great Much Some Little No

1. Does the owner of a business have the right to make his own business decisions as long as they are legal?
2. Whether there is a few that are identical to discrimination in hiring for jobs?
3. Whether Mr. Webster is prejudiced against Orientals or whether he means nothing personal in refusing the job?
4. Whether hiring a good mechanic or paying attention to his customers' wishes will be best for his business?
5. What believable difference would be relevant in deciding how society's rules are applied?
6. Whether the greedy and competitive capitalist system ought to be completely abandoned?
7. A majority of people in Mr. Webster's society feel that he customers or see a majority against prejudice?
8. Whether hiring capable men like Mr. Lee would be a waste of talent that would otherwise be lost to society?
9. Would refusing the job to Mr. Lee be consistent with Mr. Webster's own moral beliefs?
10. Could Mr. Webster be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?
11. Whether the Christian commandment to love your fellow man applies here?
12. If someone's need, shouldn't he be helped regardless of what you get back from him?

From the list of questions above, select the four most important:

Most Important   Second most Important
Third most Important   Fourth most Important

Story 6
NEWSMAKER

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

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

But the principal had not expected that Fred's newspaper would receive so much attention. Students were so excited by the paper that they began to agitate for a student newspaper. Angry parents objected to Fred's opinions. They planned the principal telling him that the newspaper was unprofessional and should not be published. As a result of the student protest, the principal ordered Fred to stop publishing. Fred gave as a reason that Fred's activities were disruptive to the operation of the school.

Should the principal stop the newspaper? (Check one)

_____ Should stop it
_____ Can't decide
_____ Should not stop it

DIFFICULTY:
Great Much Some Little No

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

From the list of questions above, select the four most important:

Most Important   Second most important
Third most important   Fourth most important
BIBLIOGRAPHY


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Major: Political Science
M.A. University of Alberta [1988]
Major: Political Science
M.A. Andrews University [1990]
Major: Religion
M.A. Andrews University [1992]
Major: Educational Psychology

SCHOLARSHIP:


WORK EXPERIENCE:

1994- Assistant Professor
La Sierra University
1992-1994 Adjunct Faculty
Lake Michigan College
1991-1994 Curatorial Assistant
Horn Archaeological Museum

PROFESSIONAL ORGANIZATION:

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The American Educational Research Association
PROFESSIONAL PAPER PRESENTATION:

