

MORAL COMMITMENT TO TAX COMPLIANCE AS
MEASURED BY THE DEVELOPMENT OF MORAL
REASONING AND ATTITUDES TOWARDS
THE FAIRNESS OF THE TAX LAWS

By

COLEEN S. TROUTMAN

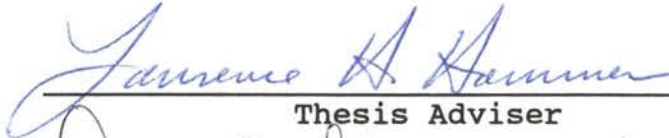
Bachelor of Science
Kansas State Teachers College
Emporia, Kansas
1970

Master of Science
Wichita State University
Wichita, Kansas
1976

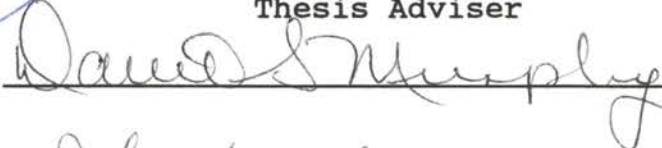
Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
May, 1993

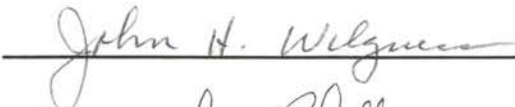
MORAL COMMITMENT TO TAX COMPLIANCE AS
MEASURED BY THE DEVELOPMENT OF MORAL
REASONING AND ATTITUDES TOWARDS
THE FAIRNESS OF THE TAX LAWS


Thesis Approved:

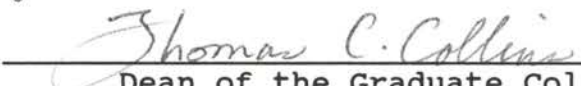


Thesis Adviser









Dean of the Graduate College

ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to Dr. Lawrence Hammer for his encouragement and advice throughout my graduate program. Many thanks also go to Dr. David Murphy, Dr. John Wilguess, and Dr. James Phillips for serving on my graduate committee. Their suggestions and support were very helpful throughout the study.

I would also like to thank Bambi Hora for her encouragement, support, and assistance throughout the development and administration of the survey instrument used in this study. In addition, thanks go to Dr. James Key, Dr. Katye Perry, Dr. Adrienne Hyle, Dr. Steve Katsinas, and Dr. Gary Bice for allowing me to come into their classrooms to administer the research instrument.

My deepest appreciation goes to my Mom, Faye C. Sigel, for her being there to bail me out when meeting deadlines and being a Mom were too much to handle and for her reminding me that I have always been successful in whatever I have attempted.

I also want to thank my children for their understanding and acceptance of the sacrifices we had to make for a better future.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Purpose of the Study	1
Objective of the Study	5
Overview of the Study.	6
Contribution of the Study.	7
Summary.	8
II. LITERATURE REVIEW	9
Introduction	9
Moral Commitment	9
Survey Research	9
Deterrence Research	10
Experimental Studies.	12
Moral Appeals Research.	13
Summary and Implications.	14
Fairness of the Tax Laws	15
Summary and Implications.	18
III. THEORETICAL FOUNDATION AND HYPOTHESIS DEVELOPMENT	19
Introduction	19
Theory of Moral Reasoning.	19
Development of Hypotheses.	22
Summary.	26
IV. RESEARCH METHODOLOGY.	28
Introduction	28
Subjects	29
Measurement of Variables	30
Dependent Variable	30
Independent Variables	31
Level of Moral Reasoning	31
Attitudes Towards the Fairness of Tax Laws	32
Mode of Evasion.	34
Research Instrument.	35
Data Analysis.	36
Summary.	38

Chapter	Page
V. RESULTS	39
Introduction	39
Subject Characteristics.	39
Dependent and Independent Variables.	43
Regression Analysis.	44
Hypothesis 1.	54
Hypothesis 2.	54
Hypothesis 3.	54
Hypothesis 4.	55
Summary.	58
VI. SUMMARY AND CONCLUSION.	60
Research Results and Discussion.	60
Limitations of the Study	62
Implications for Future Research	63
REFERENCES	65
APPENDIXES	71
APPENDIX A - STAGE OF MORAL REASONING.	72
APPENDIX B - ATTITUDE STATEMENTS	76
APPENDIX C - RESEARCH INSTRUMENT	79
APPENDIX D - DATA AND RESIDUALS PLOTS.	92
APPENDIX E - INSTITUTIONAL REVIEW BOARD APPROVAL FORM	96

LIST OF TABLES

Table	Page
I. Subject Characteristics.	41
II. Subject Characteristics - Mode of Evasion.	42
III. Descriptive Statistics for the Dependent and Independent Variables.	44
IV. Correlation of Independent Variables	46
V. Correlation of Independent Variables After Centering.	49
VI. Regression Analysis Results.	50
VII. Regression Results for the Reduced Model	56
VIII. Regression Coefficients for the Attitude Measure at Three Levels of Moral Reasoning	58

LIST OF FIGURES

Figure	Page
1. Normal Probability Plot.	52
2. Plot of Residuals and Predicted Values	53
3. Plot of Residuals with Moral	93
4. Plot of Residuals with Attitude.	93
5. Plot of Residuals with Moral*Attitude.	94
6. Plot of Dependent Variable with Moral.	94
7. Plot of Dependent Variable with Attitude	95
8. Plot of Dependent Variable with Moral*Attitude . . .	95

CHAPTER I

INTRODUCTION

Purpose of the Study

The Internal Revenue Service (IRS) projects a tax gap of \$113.4 billion by 1992 (IRS, 1988). Individual taxpayers account for \$82.6 billion (72.8%) of that total. The IRS defines the tax gap as the amount of income tax owed for a given year but not voluntarily paid. This amount includes the tax on unreported income, overstated deductions, credits and exemptions, and mathematical errors. The tax gap is caused both by intentional noncompliance (i.e., taxpayers who know how to comply with the law but do not do so) and by unintentional noncompliance (i.e., taxpayers who attempt to comply with the law but, because of misinformation or misunderstanding of the tax laws, fail to do so properly).

Understanding the causes of the tax gap and identifying alternative strategies to decrease the tax gap are primary concerns of the IRS. A General Accounting Office (GAO) report (1990) recommended procedures to increase detection and enforcement programs. The GAO also stated that the IRS should not rely solely on enforcement to increase compliance but should continue to use programs which provide taxpayer assistance and education regarding compliance responsibili-

ties. The American Bar Association Commission on Taxpayers Compliance (1987) recommended that, in addition to increasing taxpayer knowledge, the moral climate for compliance needs to be improved. In their report, the Commission (1987, p. 2) stated that "willful tax cheating reflects a weakness in public morality and a degree of public acceptance of such cheating." The Commission encouraged increased efforts to persuade the public that tax cheating is unacceptable. They called for influential individuals to speak out publicly against tax cheating and for business and professional groups, unions, civic organizations, and public officers to actively encourage compliance.

In their extensive review of the tax compliance research, Roth, Scholz, and Witte (1989) identified two primary considerations affecting compliance--self-interest and moral commitment. The economic models of tax evasion and conventional deterrence theory are based on the assumption that individuals report the amount of income that will maximize their own self-interests. Both the economic analyses and the deterrence research stress the importance of detection and penalties (sanctions) as the means to increase compliance. Some tax compliance research suggests that individuals comply not only because of the threat of detection and penalties but also because of a moral commitment to obey tax laws. Proponents of this view suggest that moral appeals to the taxpayer's conscience may be effective in increasing tax compliance. The GAO (1990) and the American

Bar Association (1987) emphasize that the IRS should not rely solely on enforcement procedures such as those suggested by the economic analyses and deterrence research to increase compliance. In fact, the American Bar Association (1987) stated that only approximately one-third of the individual tax gap could be collected through enforcement programs. This estimate suggests that alternative strategies to increase tax compliance are needed. Use of moral appeals to increase the taxpayer's sense of moral commitment to tax compliance is consistent with the American Bar Association's recommendations for alternative strategies.

Moral commitment refers to an individual's perceived moral obligation to obey tax laws based on internalized beliefs and attitudes (Roth, et.al., 1989). In tax compliance research to date, moral commitment is linked with tax compliance through the following assumptions:

1. Moral commitment occurs when an individual has internalized societal norms,
2. An individual who has internalized the norm to obey tax laws, should comply with the tax laws, and
3. An individual who violates an internalized norm, will feel guilty.

The degree of moral commitment is typically measured by having the subjects indicate agreement/disagreement with statements such as "It is morally wrong to evade taxes" or "I would feel guilty if I evaded taxes." This approach to measuring moral commitment elicits the subject's specific moral belief or the consequence of such moral belief.

However, research to date has not addressed the question of how individuals decide whether it is morally right to comply with the tax laws and what factors are important to that decision.

The cognitive-developmental theory of moral reasoning, as developed by Kohlberg (1969), emphasizes the structure of reasoning--the general organizing principles or patterns of thought--rather than specific moral beliefs (Colby and Kohlberg, 1987). In the framework of cognitive-developmental psychology, moral commitment occurs in the later stages of moral development and is distinct from an individual's concern with being punished or held in low esteem by others for breaking social norms (Roth, et.al., 1989). The term "moral development" refers to the individual's movement through six sequential stages of moral reasoning. Rest (1984, p. 31) describes moral development as

the subject's increased awareness of the kinds of cooperative arrangements that are possible. . . .The various schemes of cooperation (or "justice structures") are called "stages" of moral reasoning, each characterized in terms of its distinctive notion of justice, that is, progressive awareness of the possibilities and requirements for arranging cooperation among successively wider circles of participants.

Reasoning at the later "stages" of moral reasoning is characterized by consideration of principles rational people would adopt for establishing and governing a system of cooperation. The system of cooperation envisioned by users of principled reasoning would include (1) a fair law-making process that reflects the general will of the people and

protects basic human rights and (2) an equitable balance of interest among all members of society (Rest, 1979).

Individuals who rely on principled reasoning in making moral decisions typically will choose the "morally right" decision (Kohlberg, 1984), are more likely to carry moral decisions into action (Kohlberg, 1984), and are more likely to resist temptation when normative expectations are in conflict with their own interests (Kohlberg, 1984; Malinowski and Smith, 1985). In the context of tax compliance, the "morally right" decision (from the U.S. Government perspective) is to comply with the tax laws. Principled reasoning may not, however, assure moral commitment to comply with the tax laws. Evasion could occur if the individual believes that (1) the tax law-making process does not reflect the general will of the people and protect basic human rights and/or (2) the tax laws do not result in a fair allocation of resources. (The term "fairness of the tax laws" will be used to refer to these two beliefs in the remainder of this report.)

Objective of the Study

The purpose of this dissertation is to study the relationship between the development of moral reasoning and attitudes towards the fairness of the tax laws and the tax compliance decision. Specific research questions follow:

1. Are taxpayers that use relatively more principled reasoning in making moral decisions more compliant than other taxpayers?
2. Are taxpayers who have a positive attitude towards the fairness of the tax laws more compliant than taxpayers who have a negative attitude towards the fairness of tax laws?
3. Are taxpayers that use relatively more principled reasoning in making moral decisions and have a positive attitude towards the fairness of the tax laws more compliant than other taxpayers?

The IRS identifies possible modes of evasion as under-reporting income and overstating deductions, credits, and exemptions. In order to evaluate whether the proposed relationships are consistent across modes of evasion, a fourth research question will be addressed:

4. Are the relationships evaluated by research questions 1-3 consistent across modes of evasion?

Overview of the Study

A survey instrument was used to gather data from a sample of taxpayers. The subject's response to a hypothetical evasion scenario describing an opportunity for under-reporting income or overstating deductions served as a surrogate measure for actual tax compliance behavior. Moral reasoning was measured by a psychometric instrument (Defining Issues Test) available from The Center for the Study of Ethical Development at the University of Minnesota. Subjects' positive or negative attitudes towards the fairness of the tax laws were measured by an attitude scale constructed in the preliminary phase of this study. The modes of evasion (underreporting income and overstating deduc-

tions) were manipulated within the hypothetical evasion scenarios. Regression analysis was used to analyze the data.

Contribution of the Study

This study contributes to existing tax compliance research by using a theory-based approach to identifying factors to measure moral commitment and its relationship to the tax compliance decision. In the framework of the theory of moral reasoning, both the use of relatively more principled reasoning and positive attitudes towards the fairness of the tax laws may be necessary to assure moral commitment to compliance with the tax laws. If tax compliance is higher when both of these factors are present, then future research could focus on evaluating the process required to change the degree of development of moral reasoning and attitudes towards the fairness of the tax laws. In addition, future research could evaluate the effectiveness of moral appeals presenting "pro" arguments for tax compliance based on the structure of reasoning suggested by the theory of moral reasoning. Information programs could be designed to alter negative attitudes based on misinformation regarding tax laws and the tax laws could be changed to reduce negative attitudes that arise from the existence of real inequities.

If the results of this study do not support the hypothesized relationship, efforts to increase compliance by

changing moral commitment to comply (as defined in this study) would not appear to be worthwhile.

Summary

The remainder of this dissertation is organized as follows. Chapter II consists of a review of the literature related to moral commitment and the fairness of the tax laws. Chapter III discusses the theory of moral reasoning and develops research hypotheses. The research methodology used in this study is described in Chapter IV, and results are presented in Chapter V. Chapter VI discusses the implications and limitations of the study and suggests areas for future research.

CHAPTER II

LITERATURE REVIEW

Introduction

The literature review is divided into two parts. The first part discusses moral commitment research. The second part describes research addressing the relationship between tax compliance and perceptions of fairness of the tax laws.

Moral Commitment

Research linking moral commitment and tax compliance falls into four categories: surveys measuring taxpayers' opinions regarding the acceptability of tax evasion, deterrence research designed to determine the effectiveness of sanctions, experimental studies designed to test factors affecting tax compliance, and experimental studies testing the effectiveness of moral appeals.

Survey Research

Roth, et. al. (1989) interpret the results of studies using scales and indexes designed to measure the subject's opinion of the acceptability of tax evasion behavior as evidence of moral commitment. These scales/indexes require subjects to evaluate the acceptability of specific tax

transactions (i.e., not reporting cash income), indicate agreement/disagreement with attitude statements regarding tax evasion (i.e., it is not so wrong to underreport certain income since it does not really hurt anyone) or a combination of both. Although the scales/indexes were developed to serve as a surrogate measure of actual compliance behavior rather than to evaluate taxpayer attitudes, results of the studies provide evidence of the moral climate for compliance. Based on results of a survey conducted in a small city in North Carolina, Song and Yarbrough (1978, p. 445) concluded that the overall level of tax ethics was "barely passing" and "the typical taxpayer appears to consider tax evasion only slightly more serious than stealing a bicycle." The IRS-commissioned Yankelovich, et.al. (1984) study showed variation in commitment to obey different parts of the tax law. Only 24% of the respondents believed failure to report barter transactions was unacceptable, 60% thought underreporting cash transactions was unacceptable and 88% believed overstating medical deductions was unacceptable.

This research indicates that varying degrees of moral commitment exist; however, it does not identify the factors which affected the subjects' moral deliberations.

Deterrence Research

Deterrence research identifies three inhibitors to crime--threats of legal sanctions, informal sanctions, and guilt feelings. Legal sanctions refer to state-imposed

penalties while informal sanctions occur primarily in the form of embarrassment from the loss of respect or disapproval of significant others (Grasmick and Bursik, 1990). Guilt feelings are assumed to occur when individuals violate an internalized norm. When deciding whether or not to commit a particular act, individuals consider whether they would feel guilty and the effect that guilt might have on their self-image or self-esteem (Blake and Davis, 1964; Briar and Piliavin, 1965). Strong beliefs in the moral validity of rules (norms) make conformity more likely (Hirschi, 1969). Deterrence research typically measures moral commitment (the degree to which an individual has internalized the norm that one has a duty to obey tax laws) by asking if subjects believe tax evasion is morally wrong or if they would feel guilty if they evaded taxes. A consistent positive relationship has been found between moral commitment and compliance even after controlling for perceived threats of legal and informal sanctions (Grasmick and Green, 1980 and 1981; Grasmick and Scott, 1982; Scott and Grasmick, 1981; Thurman, St. John, and Riggs, 1984; Grasmick and Bursik, 1990).

Deterrence research is the most substantial body of research supporting the link between moral commitment and tax compliance. The measures of moral commitment used, however, do not identify factors that may affect an individual's moral commitment to tax compliance.

Experimental Studies

Experimental studies using hypothetical tax evasion scenarios to manipulate factors that may influence compliance (i.e. financial need, prevalence of evasion, etc.) found that a variable which measured agreement/disagreement with a statement that tax evasion is morally wrong was a significant covariate (Kaplan and Reckers, 1985; Kaplan, Reckers and Roark, 1988). Reckers, Roark, and Sanders (1992) identified not only a significant main effect for moral commitment but also a significant interactive effect between moral commitment and both the withholding frame (overwithheld or tax due) and tax rates (low or high). In a study experimentally manipulating the perceived certainty and severity of legal sanctions, Klepper and Nagin (1989b) found that the average evasion amount was close to zero for respondents identifying moral concerns as their primary consideration in making their compliance decision.

The results of these studies suggest that moral commitment is an important factor that influences the tax compliance decision and that moral commitment may interact with other factors that are related to tax compliance. These studies, however, do not provide insight into the factors that affect a taxpayer's decision of whether tax evasion is morally wrong.

Moral Appeals Research

Researchers testing the effectiveness of moral appeals argue that many individuals comply because of a moral commitment to the norm of tax compliance. They posit that moral appeals may increase compliance by reaffirming that tax compliance is a valid norm or by increasing the threat of guilt feelings associated with deviation from a valued norm (Jackson and Jaoeun, 1989).

In cooperation with the IRS, Schwartz and Orleans (1967) were able to use actual tax return data to measure the effectiveness of communications regarding moral appeals and legal sanctions. The moral appeal was operationalized by including questionnaire items addressing issues regarding the obligation to pay taxes, fairness of the tax system, use of tax revenues and respect for law and government. Both the moral appeals and legal sanctions groups reported higher average income than the control group, but only the moral appeals group's reported average income was significantly higher.

Jackson and Jaoeun (1989) used Spicer's (1974) Tax Resistance Scale as the dependent variable in their investigation of the effectiveness of communications of legal sanctions and moral appeals in changing taxpayer attitudes towards tax evasion. The moral appeal contained primarily statements regarding uses of tax revenues. The results showed no differential effect of the communication on the responses to the Tax Resistance Scale.

Hite and McGill (1990) studied the relative effectiveness of three alternative forms of an appeal--(1) an appeal developed from the Schwartz and Orleans (1967) study, (2) rebuttals to excuses that taxpayers may use to justify tax evasion suggested by Thurman, Et.al. (1984), and (3) a combination of 1 and 2. The subject's response to a statement regarding the likelihood of future tax evasion was used as the dependent variable. Results indicate that the combined appeal would be the most effective in enhancing compliance.

The mixed results of the studies discussed above suggest that the content of the moral appeal may influence its effectiveness. The mixed results also suggest that research identifying factors affecting moral commitment could potentially lead to the development of more effective moral appeals.

Summary and Implications

Evidence of a relationship between moral commitment and tax compliance is consistently found regardless of the research objective or methodology. Because of the relationship between moral commitment and tax compliance, some researchers argue that tax compliance could be increased by using moral appeals. The mixed results as to the effectiveness of moral appeals may be in part due to the content of the appeals. The content of the moral appeals appears to be based primarily on "ad hoc" decisions of the researcher.

No research to date has addressed the question of how individuals decide whether it is morally right to comply with tax laws and what factors are important to that decision. Kohlberg's (1969) theory of moral reasoning identifies the structure of reasoning used in making moral decisions. Using this theory and a psychometric instrument designed to measure development of moral reasoning can potentially provide information regarding the factors affecting moral commitment to tax compliance. Such information could then be used to guide further research on changing moral commitment and tax compliance through moral appeals and/or other communications.

Fairness of Tax Laws

"Fairness" in the context of existing tax compliance research refers to three different types of perceived tax equity--exchange, vertical, and horizontal equity. Exchange equity refers to the relationship between taxes paid and benefits received. Spicer and Lundstedt (1976) argued that the payment of taxes can be viewed as an exchange of an individual's purchasing power in the private market for government benefits made possible by tax revenues. When taxpayers perceive that benefits received are not equal to the taxes paid, they may be motivated to restore equity by reducing taxes through evasion (Spicer, 1974; Spicer and Lundstedt, 1976; Scott and Grasmick, 1981; Arrington and Reckers, 1985). Vertical equity refers to the distribution

of the tax burden based on the ability to pay. Due to loopholes in the tax laws and the opportunities for tax avoidance available to higher income individuals, some taxpayers may perceive that the tax system lacks vertical equity. Horizontal equity exists when taxpayers at the same income level are taxed equally. Dissatisfaction with provisions such as the deductibility of taxes and interest by homeowners and different rate schedules based on marital status may influence a taxpayer's perceptions of horizontal equity.

Research results on the relationship between perceptions of fairness and compliance are mixed. In a lab experiment conducted by Spicer and Becker (1980), all subjects participating in a tax game used tax tables based on a tax rate of 40%. The subjects were told that the average tax rate of the other participants in the study was 65%, 15%, or 40%. The amount of taxes evaded was higher for victims of fiscal inequity (40% vs. 15% average tax rate) and lower for beneficiaries of fiscal inequity (40% vs. 65% average tax rate). Spicer and Lundstedt (1976) found an index measuring perceptions of exchange equity to be significantly related to both self-reported compliance behavior and an attitude scale measuring propensity to evade (Spicer's [1974] Tax Resistance Scale). In a nationwide survey, Yankelovich, et.al. (1984) did not find a significant relationship between exchange, horizontal or vertical equity measures, and attitudes towards compliance or self-reported compliance

behavior. Other studies finding measures of fairness not to be significantly related to compliance include surveys of Oregon residents by Mason and Calvin (1978 and 1984) and quasi-experimental studies by Arrington and Reckers (1985) and Kaplan and Reckers (1985).

Scott and Grasmick (1981) used a regression approach to study the interaction between exchange equity and the three inhibitors of crime identified in deterrence research. They hypothesized that perceptions of exchange equity affect the compliance decision more when the threat of guilt feelings is low than when it is high. The regression coefficients were in the hypothesized direction but were not significantly different from zero. Two weaknesses in the study that could have biased the results are the choice of the dependent variable and the construction of the scale to measure perceptions of exchange equity. First, correlating self-reported past involvement in tax evasion with current perceptions of the threat of guilt feelings may be measuring an "experiential effect" rather than a "deterrent effect." The subject's perceptions of the lack of equity in the exchange may be justification for the self-reported past behavior rather than motivation for present or future evasion. Second, the scale to measure the perceptions of exchange equity was constructed using the same subjects as were used in the remainder of the study. For an attitude scale to be valid and not just a description of the people who construct the scale, different subjects should be used

for construction and application of the scale (Thurstone, 1967).

Summary and Implications

Although (intuitively) one would expect perceptions of the fairness of the tax laws to influence the tax compliance decision, research results reviewed above do not consistently support the existence of such a relationship. Restricting the measure of perceptions of fairness to only one type of equity and/or use of single statements to measure perceptions of fairness may contribute to the inconsistencies found in studies to date. In addition, no research to date has included measures of whether the subjects believe the tax laws reflect the general will of the people and/or infringe upon any basic human rights. This dissertation study attempts to address these issues by developing a multiple-item scale to measure attitudes towards the fairness of the tax laws. The resulting measure will potentially provide information that can be used in determining the content of moral appeals and information programs to change taxpayer perceptions of fairness and suggest areas where tax law changes may be necessary to eliminate inequities.

CHAPTER III

THEORETICAL FOUNDATION AND HYPOTHESIS DEVELOPMENT

Introduction

This chapter discusses Kohlberg's (1969) theory of moral reasoning and applies the theory to the tax compliance decision. The chapter concludes with the development of hypotheses to be tested.

Theory of Moral Reasoning

When faced with a moral dilemma, an individual must judge what "ought" to be done in the situation. Kohlberg (1969), guided by Piaget's (1932) pioneering investigation of the development of moral judgment in children, derived a cognitive-developmental theory of moral reasoning based on stages. According to Kohlberg's theory of moral reasoning, individuals move through six sequential stages of moral reasoning. Kohlberg (1984) and Rest (1979 and 1986) provide summaries of the results of numerous studies supporting the stage-sequence model of moral development. Each stage of moral reasoning is "characterized in terms of its distinct notion of justice, that is, progressive awareness of the possibilities and requirements for arranging cooperation

among successively wider circles of participants" (Rest, 1984, p. 31). The following paragraphs briefly paraphrase Rest's (1979) descriptions of the characteristics of each stage of moral reasoning. Users of Stage 1 and Stage 2 reasoning see rules and social expectations as external to the self. Moral dilemmas are resolved by considering only the costs and/or benefits of an action to the self.

As an individual's moral reasoning develops, the circle of participants expands to include primary group relationships such as family and peers (Stage 3) and society as a whole (Stage 4). Users of Stage 3 reasoning resolve moral dilemmas by considering the feelings, needs, and expectations of family and peers. Stage 4 reasoning involves determining the "right" action by referring to rules and laws established by the existing social order.

Individuals using principled reasoning (Stage 5 and 6) resolve moral dilemmas by considering the principles rational people would adopt for establishing and governing a system of cooperation. The system of cooperation envisioned by users of Stage 5 reasoning would include a fair law-making process that reflects the general will of the people and protects basic human rights. Users of Stage 6 reasoning consider not only the law-making process but whether the resulting laws provide an equitable balance of interest among all members of society. Appendix A provides a more detailed discussion of the stage characteristics summarized in the preceding paragraphs.

In their analysis of research relating moral judgments to moral actions, Kohlberg and Candee (1984) found that individuals using principled reasoning typically choose the "morally right" decision and are more likely to carry such moral decision into action. Results of several lab experiments studying cheating behavior indicate that individuals using principled reasoning are more likely to resist temptation when normative expectations are in conflict with their own interests (Kohlberg, 1984; Malinowski and Smith, 1985).

Rest's (1979) Defining Issues Test (DIT)¹ is commonly used to measure development of moral reasoning. The DIT requires that subjects evaluate and resolve six moral dilemmas. Each dilemma is followed by 12 issues that are based on the stage characteristics described in Appendix A. After rating the importance of the 12 issues, subjects rank the four issues that were most important in making their decision. Responses are categorized by stage, weighed from 1 through 4 according to the rankings with "most important" assigned a weight of 4, and totaled. Points assigned to Stage 5 and 6 are summed and converted to a percentage of

¹Another commonly-used instrument is Kohlberg's Moral Judgment Interview (MJI). In the MJI, subjects are required to respond to a series of standardized probe questions regarding nine dilemmas designed to elicit justifications, elaborations and clarifications of the subject's moral judgments (Colby and Kohlberg, 1987). The responses are then analyzed by trained and experienced scorers to determine the stage of moral reasoning. Although differences exist between the DIT and the MJI, studies using the measures show similar longitudinal trends, correlation patterns and responsiveness to education interventions (Rest, 1973 and 1986).

the grand total points. This scoring system results in a summary score (P-score) expressed in terms of a continuous index. The P-score is interpreted as the "relative importance a subject gives to principled moral considerations in making a decision about moral dilemmas" (Rest, 1990, p. 4.2).

Development of Hypotheses

When presented with an opportunity to evade taxes, a taxpayer must make a choice between obeying the tax laws or maximizing his/her own financial interests. In the framework of the theory of moral reasoning, two factors may affect such a compliance decision: the development of moral reasoning and attitudes towards the fairness of the tax laws. Four hypotheses relating to these two factors are developed in the following paragraphs. The first two hypotheses are proposed to test the relationship between each of the two factors and the tax compliance decision. The third hypothesis is proposed to test the effect of the interaction of the two factors on the tax compliance decision. The fourth hypothesis is proposed to determine if hypotheses 1-3 are consistent across modes of evasion.

Development of moral reasoning is measured as a continuous variable. Subjects' scores are interpreted as the "relative importance a subject gives to principled moral considerations in making a decision about moral dilemmas" (Rest, 1990, p. 4.2). Individuals that use relatively more

principled reasoning in making moral decisions are assumed to possess a societal perspective and use reasoning that would result in the internalization of norms such that a sense of moral commitment to obey tax laws could exist. Since individuals using relatively more principled reasoning typically will choose the "morally right" decision and are more likely to resist temptation when an opportunity for evasion exists, such individuals are expected to comply with the tax laws. Individuals that use relatively less principled reasoning in making moral decisions do not choose to comply out of a sense of moral commitment. They are aware of the societal norm to obey tax laws but make their compliance decision primarily because of threats of detection/sanctions and/or expectations of family/peers. When tax compliance is in conflict with their own financial self-interest and the threat of detection/sanctions is low, individuals using relatively less principled reasoning are expected to evade.² The following hypothesis is proposed to test the relationship between moral reasoning and tax compliance:

H1: Taxpayers using relatively more principled reasoning in making moral decisions are more compliant than other taxpayers.

²Some individuals using relatively less principled reasoning in making moral decisions may decide to comply because they believe compliance is expected by their family/peers. Omission of this possibility could bias the results but the bias would be against finding the hypothesized relationship.

The theory of moral reasoning suggests that two considerations are part of the moral decision-making process of individuals relying on principled reasoning: (1) whether the law-making process reflects the general will of the people and protects basic human rights, and (2) whether the laws result in an equitable balance of interests among the members of society (Appendix A). Results of tax compliance research indicate that perceptions of the fairness (equity) of the existing tax laws may be a variable affecting compliance (Chapter II). In addition to concerns for equity in the existing tax laws, some individuals contend that the 16th Amendment establishing an income tax is unconstitutional (Carpenter, 1991). Such individuals argue that the ratification procedures established in the constitution were not followed since the 16th Amendment was not ratified by three-fourths of the states. Income tax laws are also viewed by some as a violation of an individual's right to property (Carpenter, 1991). Individuals that question the legitimacy and equity of the tax laws may conclude that the norm of compliance with the tax laws is not a valid norm and decide to evade taxes. The following hypothesis is proposed to test the relationship between attitudes towards the fairness of the tax laws and tax compliance.

H2₁: Taxpayers with a positive attitude towards the fairness of the tax laws are more compliant than taxpayers with a negative attitude towards the fairness of the tax laws.

The theory of moral reasoning suggests that an interactive effect may exist between the development of moral reasoning and attitudes towards the fairness of tax laws. Although individuals using relatively less principled reasoning in making moral decisions would be expected to have positive or negative attitudes towards the fairness of the tax laws, consideration of the fairness of the tax laws would not be a key characteristic of the structure of their reasoning (see Appendix A). Individuals using relatively less principled reasoning are expected to evade when an opportunity for evasion exists regardless of their attitudes towards the fairness of the tax laws. Consideration of the fairness of the tax laws should be part of the moral decision-making process for individuals using relatively more principled reasoning. Individuals using relatively more principled reasoning in making moral decisions who have a positive attitude towards the fairness of tax laws are expected to be morally committed to compliance. Individuals using relatively more principled reasoning who have a negative attitude towards the fairness of the tax laws may be morally committed to evasion. The following hypothesis is proposed to test the relationship between compliance behavior of individuals using relatively more principled reasoning who have a positive attitude towards the fairness of the tax laws and all other taxpayers:

H3_a: Taxpayers using relatively more principled reasoning in making moral decisions who have a positive attitude towards the fairness of the tax laws are more compliant than all other taxpayers.

There is some research evidence that individuals view underreporting income and overstating deductions differently. Underreporting income appears to be more acceptable (Yankelovich, et.al., 1984) and subject to a lower threat of guilt feelings (Thurman, 1990) than overstating deductions. Thurman (1990) uses an analogy of "sin of omission" versus "sin of commission" and argues that taxpayers may find that overstating deductions requires a conscious willingness and intent to break the law that results in a greater threat of guilt feelings than underreporting income. There appears to be no theoretical support for this perceptual difference within the framework of this study. In light of the evidence that an interaction may exist, the following hypothesis is proposed to determine if the relationships tested by H1-H3 are different between the two modes of evasion (i.e. underreporting income versus overstating deductions).

H4_o: There is no interaction between the mode of evasion (underreporting income versus overstating deductions) and moral reasoning and/or attitudes towards the fairness of the tax laws.

Summary

Three hypotheses were developed in this Chapter to evaluate the relationship between the tax compliance decision and the development of moral reasoning, attitudes towards the fairness of the tax laws, and the interaction of

moral reasoning and attitudes. A fourth hypothesis was proposed to evaluate whether such relationships are consistent across modes of evasion. The research methodology to be used to test these hypotheses is discussed in Chapter IV.

CHAPTER IV

RESEARCH METHODOLOGY

Introduction

In this research study, a survey instrument was administered to a sample of taxpayers to gather data regarding their development of moral reasoning and attitude towards the fairness of the tax laws. The subject's response to a hypothetical evasion scenario provided a measure of compliance behavior to be used as the dependent variable. The independent variables were moral reasoning, attitudes towards the fairness of tax laws, and mode of evasion. Moral reasoning was measured by a psychometric instrument (Defining Issues Test) available from The Center for the Study of Ethical Development at the University of Minnesota. Subjects' positive or negative attitudes towards the fairness of tax laws were measured by an attitude scale constructed in the preliminary phase of this study. The modes of evasion (underreporting income and overstating deductions) were manipulated within the hypothetical evasion scenarios. This chapter discusses subjects, measurement of variables, research instrument development, and data analysis.

Subjects

Requirements for subject selection were as follows:

1. Adults that have been or are currently employed full-time.
2. Moral reasoning measure (P-score) reasonably distributed within the range expected for adults.
3. Environment that would allow the researcher to be present while the instrument was being completed.

The requirement of an employment history was necessary since it was believed that subjects are more likely to have developed positive or negative attitudes towards the fairness of the tax laws if they have been required to file a tax return. The second requirement was necessary to adequately test the relationship between development of moral reasoning and the tax compliance decision. Since the research instrument was relatively complex to complete and required a substantial time investment, the third requirement was implemented to provide control over the completion of the instrument and increase the likelihood that the instrument would be completed.

To meet these requirements, students enrolled in undergraduate and graduate classes at the University of Central Oklahoma and Oklahoma State University were used as subjects. Only those subjects that indicated that they had been, or were currently, employed or self-employed full-time were retained in the final sample.

Measurement of Variables

Dependent Variable

Behavioral research on tax compliance must rely upon a surrogate measure of actual compliance behavior since measures of actual compliance behavior cannot be obtained at the individual level. Discussions of possible measurement strategies and problems in tax compliance research are provided by Elffers, et.al. (1987), Hite (1988b), Hessing, et.al. (1988), Roth, et.al. (1989), and Long and Swingen (1991). Alternative measures used in survey research include self-reported past evasion, future intentions to comply, attitudes towards tax cheating, responses to hypothetical tax transactions, and responses to hypothetical tax evasion scenarios. Criticisms of the use of self-reported past evasion and future intentions to comply include the concern that respondents may be reluctant to reveal true behavior or may not be able to envision situations that would provide an opportunity for evasion. Kaplan, Reckers and Roark (1988) suggest that subjects are more likely to provide truthful responses to hypothetical scenarios involving tax evasion than direct questions focusing on actual behavior. A second advantage of hypothetical evasion scenarios is that the scenario can provide enough detail to enable the subject to envision the opportunity for evasion and assess the level of risk. Several studies have used this approach to measure compliance (Kaplan and Reckers,

1985; Hite, 1988a; Klepper and Nagin, 1989a and b; Violette, 1989; Hanno and Violette, 1990). The hypotheses proposed in Chapter III were intended to determine whether, when the opportunity is present, moral commitment would be effective in assuring compliance. A hypothetical scenario allowed for the presentation of an opportunity for evasion with such a low probability of detection that the subject's response should have been influenced by his/her moral commitment to comply with tax laws.

Two different measures of compliance were obtained. Subjects read a hypothetical evasion scenario that required them to indicate (1) the likelihood that they would report any of the \$1,000 of income or deduction described, and (2) the amount of income or deduction they would report if they were in a similar situation (Appendix C). Although two measures of compliance behavior were obtained, only the likelihood measure is used in the data analysis. The dollar amount measure served as a consistency check. Instruments with inconsistent responses between the two measures were omitted from the analysis.

Independent Variables

Moral Reasoning. The Defining Issues Test (DIT) developed by Rest (1979) was used to measure development of moral reasoning. Extensive tests of the reliability and validity of the DIT have been performed and are discussed in Rest (1979) and the Manual for the Defining Issues Test (1990).

The test-retest reliability generally is in the high .70s or .80s and Cronbach's Alpha index of internal consistency is generally in the high .70s. These scores indicate that the DIT provides a reliable measure of development of moral reasoning.

Attitudes Towards the Fairness of Tax Laws. A Likert-type scale was developed to measure attitudes towards the fairness of the tax laws. Both validity and reliability of the scale were of particular concern in developing the scale.

Validity refers to the extent to which the item or items selected really measure the variable under consideration rather than some other variable. To increase the face validity of the scale, statements that appeared to represent reasonable attitudes towards fairness of the tax laws were selected and written as unambiguously as possible. The literature relating to fairness of tax laws reviewed in Chapter II and issues identified by Kohlberg's theory of moral reasoning were the sources used for development of the statements to be used in the scale (Appendix B). Statements included addressed issues raised with Stage 5 reasoning (i.e., constitutionality, government's right to tax income, and the need for and purposes of taxation) and Stage 6 reasoning (i.e., exchange equity, vertical equity, and horizontal equity). The statements were written such that individuals could indicate their agreement/disagreement on a 5-point scale.

Reliability of the scale refers to the extent that repeated measurements can be expected to yield similar results. To assess the reliability of the scale, a survey instrument of the 35 statements was prepared and completed by volunteers from various civic, social, religious, and business organizations. A total of 205 subjects participated; however, 17 were eliminated due to missing variables. A minimum of five subjects per statement is recommended to adequately assess the reliability of a scale (Crano and Brewer, 1986). The remaining 188 usable responses exceeded this minimum.

Seventeen of the thirty-five statements were written such that agreement with the statement reflected a negative rather than positive attitude towards the fairness of tax laws to control for potential acquiescence bias. Acquiescence bias refers to the tendency of some individuals to agree with positively worded statements (Crano and Brewer, 1986). Prior to evaluating the reliability of the scale, the responses to these seventeen statements were reversed to allow for summation of the scores. After recoding the responses, positive attitudes towards the fairness of the tax laws is reflected by high scores (agreement) on positively worded statements and high scores (disagreement) on negatively worded statements.

Cronbach's coefficient alpha was used to evaluate internal consistency (reliability) and provide evidence that the scale measures a single underlying construct, attitude

towards the fairness of the tax law. Cronbach's coefficient alpha for all 35 items was .88. Each item's correlation with the total of all items was computed. Items with low item-total correlations reduce the overall reliability of the scale. Nine items with item-total correlation of below .3 that reduced the overall coefficient alpha were eliminated from the scale. The final scale consisting of 26 items has a coefficient alpha of .91 which is well above the recommended .75 to provide adequate reliability. The coefficient alpha supports the decision to sum each subject's item scores to provide a single measure of attitude to be used in the regression analysis.

Mode of Evasion. The IRS identifies two primary modes of evasion (GAO, 1990): (1) underreporting income and (2) overstating deductions, credits, and exemptions. To address numerous forms of evasion would require an extremely large sample size. Use of only one mode of evasion would not allow for any judgment as to whether the relationships studied may apply to other modes of evasion. Therefore, one hypothetical scenario was developed for underreporting income and one for overstating deductions.

Many taxpayers have opportunities for evasion through not reporting occasional cash or barter income or overstating itemized deductions. However, perceptions of detection between those types of income and deductions may be different. To assure a similar perception of opportunity for evasion with very low probability of detection, both scenar-

ios stated that the taxpayer was self-employed. One scenario required the subject to decide whether to report cash income. In the other scenario, the subject decided whether to include a non-deductible personal expenditure as a business deduction.

Each instrument could have included both scenarios. However, subjects may answer the two scenarios in a similar fashion to be consistent when in reality they may view the two modes of evasion differently. Harsha and Knapp (1990) caution that in situations where a "transparent" repeated measures (within-subjects) design is used, subjects may readily determine the variable being manipulated and respond in a manner that would support the research hypothesis. To avoid this problem, only one scenario was included in each instrument.

Research Instrument

The research instrument was a four-part questionnaire: (1) hypothetical evasion scenario, (2) attitude statements, (3) Defining Issues Test, and (4) questions eliciting the subject's age, sex, education, years worked full-time, income level, source of income and occupation (Appendix C).

The instrument was pretested using 80 undergraduate accounting students. The primary purpose of the pretest was to ensure that the instrument was understandable. Based on the feedback from the pretest, instructions for the DIT were expanded. Analysis of the pretest responses relating to the

hypothetical evasion scenarios revealed inconsistencies due to the wording of the questions. The evasion scenarios, as revised, were given to 40 additional undergraduate accounting students. The students indicated they understood the directions and there were no inconsistent responses between the likelihood and dollar amount measures.

Data Analysis

The compliance decision measure was designed to elicit responses that would result in a continuous dependent variable. The measure of development of moral reasoning and attitudes towards the fairness of the tax laws are also continuous measures; therefore, regression analysis was selected to analyze the data. The interaction terms were formed by multiplying the appropriate individual terms. Mode of evasion was entered into the model as an indicator variable.

The full model is (Neter, et.al., 1990):

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i1} X_{i2} + \beta_5 X_{i1} X_{i3} + \beta_6 X_{i2} X_{i3} + \beta_7 X_{i1} X_{i2} X_{i3} + \epsilon_i$$

Where:

Y_i = value of the response variable of the i th subject
 $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ are regression parameters

X_{i1} = value of moral reasoning of the i th subject

X_{i2} = value of attitudes of the i th subject

X_{i3} = 1 if income
 0 otherwise (deduction)

$X_{i1} X_{i2}$ = value of interaction of moral reasoning and attitudes of the i th subject

$X_{i1} X_{i3}$ = value of interaction of moral reasoning and mode of the i th subject

$X_{i2} X_{i3}$ = value of the interaction of attitudes and mode of the i th subject

$X_{i1} X_{i2} X_{i3}$ = value of the interaction of moral reasoning, attitudes and mode of the i th subject

ϵ_i are independent $N(0, \sigma^2)$
 $i = 1, \dots, n$

The hypotheses developed in Chapter III are restated below to reflect the form of the dependent variable measure:

H1₀: There is no difference in the likelihood of compliance for taxpayers using relatively more principled reasoning in making moral decisions and other taxpayers.

H1_a: Taxpayers using relatively more principled reasoning in making moral decisions are more likely to comply than other taxpayers.

$$H1_0: \beta_1 = 0$$

$$H1_a: \beta_1 > 0$$

H2₀: There is no difference in the likelihood of compliance for taxpayers with a positive attitude towards the fairness of the tax laws and taxpayers with a negative attitude towards the fairness of the tax laws.

H2₁: Taxpayers with a positive attitude towards the fairness of the tax laws are more likely to comply than taxpayers with a negative attitude towards the fairness of the tax laws.

$$H2_0: \beta_2 = 0$$

$$H2_1: \beta_2 > 0$$

H3₀: There is no difference in the likelihood of compliance for taxpayers using relatively more principled reasoning in making moral decisions who have a positive attitude towards the fairness of the tax laws and all other taxpayers.

H3₁: Taxpayers using relatively more principled reasoning in making moral decisions who have a positive attitude towards the fairness of the tax laws are more likely to comply than all other taxpayers.

$$H3_0: \beta_4 = 0$$

$$H3_1: \beta_4 > 0$$

H4₀: There is no interaction between the mode of evasion (underreporting income versus overstating deductions) and moral reasoning and/or attitudes towards the fairness of the tax laws.

H4₁: There is interaction between the mode of evasion and moral reasoning and/or attitudes towards the fairness of the tax laws.

$$H4_0: \beta_3 = \beta_5 = \beta_6 = \beta_7 = 0$$

$$H4_1: \text{not all } \beta_3 = \beta_5 = \beta_6 = \beta_7 = 0$$

Summary

This chapter described the subjects, measurement of variables, research instrument and data analysis used. The results are presented in Chapter V.

CHAPTER V

RESULTS

Introduction

This chapter of the dissertation presents the results of the data analysis. Subject characteristics are discussed in the first section of the chapter followed by a discussion of the dependent and independent variables. The regression results are presented next with a discussion of each of the four hypotheses.

Subject Characteristics

The research instrument was administered to 158 subjects. A total of 56 instruments were initially omitted from the analysis for the following reasons:

lack of full-time work experience	4
incomplete or inconsistent DIT	37
incomplete Section I (dependent variable)	11
inconsistent responses in Section I	1
incomplete Section 4 (demographics)	3

Diagnostic procedures assessing the fit of the regression model identified four influential outliers. After examining the four instruments, one was discarded due to inconsistencies in responses. Descriptive data for the 101 subjects retained are presented in Table I. Panel A provides descriptive statistics for open-ended questions requiring a

numeric response. Panel B presents frequency counts for all other variables.

The primary requirement for subjects was that they needed to have been in the work force on a full-time basis so that they would have experienced paying income taxes. Subjects indicated they had worked full-time 1-40 years with a mean of 12.7 years.

The use of college classes to obtain subjects influenced the level of education, primary source of income, and occupation. The sample consisted primarily of professional/semiprofessional wage earners returning to school for continuing education. The sample was also predominately female. The effect of the limitations relating to sample selection are discussed in Chapter VI.

The research instruments with the underreporting income and overstating deductions scenarios were interspersed such that an approximately equal number of subjects would respond to each mode of evasion. Characteristics of the subjects assigned to each mode of evasion were compared. Since the underlying variable being measured can be viewed as continuous for age, education, years worked, and income, t-tests were performed to determine if there was a difference in means of those subjects receiving each mode of evasion. Frequency counts were compared using a Chi-Square test for sex, source of income, and occupation since these variables are categorical. Occupation designations with low frequency counts were combined for purposes of the tests. Table II

TABLE I
SUBJECT CHARACTERISTICS

Panel A - Means	Mean	SD	Range
Age	33.8	8.2	21-58
Years worked full-time	12.7	7.9	1-40

Panel B - Frequency counts	
Sex	
Male	40
Female	61
Education	
Under high school education	0
High school diploma	9
2-year college degree	18
Bachelor degree	30
Master degree	36
Doctoral degree	8
Average annual income	
less than \$10,000	7
\$10,000 - 19,999	25
\$20,000 - 29,999	35
\$30,000 - 39,999	12
\$40,000 - 49,999	12
\$50,000 or more	10
Primary source of income	
Wage/salary	94
Self-employed	4
Other	3
Occupation	
skilled/semiskilled laborer	2
clerical/secretarial	20
professional/semiprofessional	50
owner/proprietor	3
manager/administrator	18
service	2
student/graduate assistant	6

reports the results of these comparisons and shows that subjects assigned to each mode of evasion were not significantly different on any of the characteristics evaluated.

TABLE II
SUBJECT CHARACTERISTICS BY MODE OF EVASION

Panel A - Means			
Variable	Income	Deduction	Pr >t
N	48	53	
Age	35.13	32.68	.133
Education	4.19	4.13	.801
Years worked	13.83	11.64	.163
Income	3.29	3.25	.869
Panel B - Frequencies			
Variable	Income	Deduction	Chi-sq.
Sex			
Male	18	22	.681
Female	30	31	
Source			
Wage/salary	44	50	.479
Self-employed	3	1	
Other	1	2	
Occupation			
Clerical/secretarial	9	11	.378
Professional/ semiprofessional	23	27	
Manager/administrator	7	11	
Other	9	4	

Dependent and Independent Variables

Descriptive statistics for the dependent and independent variables are presented in Table III. The dependent variable on the research instrument was phrased in terms of the likelihood the subject would omit income or deduct a nonbusiness expense. This wording evolved in the pretesting process as the least ambiguous alternative wording. Hypotheses are, however, stated in terms of compliance. To code responses, the line for the likelihood measure was divided into 16 equal intervals. For example, if the line were marked directly above "Yes", the response would be coded "1". If the line were marked directly above "No", the response would be coded "16". Therefore, the range was 1-16 with "1" being least compliant and "16" most compliant.

The range (11.7 - 70.0) and mean (40.28) of the scores on the moral reasoning measure are consistent with those suggested as typical by Rest (1990). Attitude scores also appear to be reasonably dispersed with a range of 44-105 and a mean of 74.09. Cronbach's coefficient alpha for the attitude scale with this set of subjects is .90.

TABLE III
 DESCRIPTIVE STATISTICS FOR THE DEPENDENT
 AND INDEPENDENT VARIABLES

	Mean	Std. Dev.	Range
Dependent Variable	9.93	5.52	1-16
Independent Variables			
Moral reasoning	40.28	13.30	11.7-70.0
Attitude	74.09	14.24	44-105

Regression Analysis

For ease of reading the tables and discussion of the results, the regression equation is restated as follows:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i1} X_{i2} + \beta_5 X_{i1} X_{i3} \\ + \beta_6 X_{i2} X_{i3} + \beta_7 X_{i1} X_{i2} X_{i3} + \epsilon_i$$

Where: Y_i = Likelihood of compliance
 X_{i1} = Moral
 X_{i2} = Attitude
 X_{i3} = Mode
 β_{ij} = regression coefficient for X_{ij}

The interactive terms included in the model were formed by multiplying the appropriate independent variables. Use of multiplicative terms in regression analysis typically results in high correlation between the multiplicative term and its component parts.

Some key problems caused by multicollinearity are

(Neter et.al, 1990):

1. unstable regression coefficients
2. large estimated standard deviations of the regression coefficients
3. individual regression coefficients that may not be statistically significant even when a definite statistical relationship exists between the dependent variable and the set of independent variables

An informal test for multicollinearity is correlation analysis. Results in Table IV indicate high correlations between the independent variables. Although Mode interaction terms show high correlation, they do not pose a multicollinearity problem since Mode is an indicator variable with a value of either 1 or 0 (Neter, et.al., 1990).

TABLE IV
CORRELATIONS OF INDEPENDENT VARIABLES

	Moral	Att.	Moral* Att.	Mode	Moral* Mode	Att.* Mode	Moral* Att.* Mode
Moral	1.000						
Attitude (Att.)	.218	1.000					
Moral*Att.	.890	.617	1.000				
Mode	-.080	-.262	-.191	1.000			
Moral*Mode	.178	-.198	.033	.919	1.000		
Att.*Mode	-.051	-.118	-.105	.973	.910	1.000	
Moral*Att.*Mode	.194	-.068	.108	.884	.977	.924	1.000

A formal test for detecting the presence of multicollinearity, variance inflation factors (VIF), was also performed. Variance inflation factors measure how much the variances of the estimated regression coefficients are inflated as compared to when the independent variables are not linearly related. A maximum VIF value in excess of 10 is used as an indication that the multicollinearity is influencing the least squares estimates (Neter, et.al., 1990). The larger the VIF, the more severe the multicollinearity. The VIF's for this set of data ranged from 15 to 380.

A recommended procedure to control for multicollinearity is to center the variables prior to forming the interactive terms (Neter, et.al., 1990; Cronbach, 1987; Jaccard et.al., 1990). Moral (variable X_1) and Attitude (variable X_2) were centered by computing the deviation of each variable value from the mean. The full model becomes:

$$Y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 X_{i3} + \beta_4 x_{i1} x_{i2} + \beta_5 x_{i1} X_{i3} + \beta_6 x_{i2} X_{i3} + \beta_7 x_{i1} x_{i2} X_{i3} + \epsilon_i$$

Where $x_i = X_i - \bar{X}$ and $\bar{X} = \Sigma X_i / n$

The correlation matrix in Table V shows the primary independent variables (Moral and Attitude) and the interaction term (Moral*Attitude) are not highly correlated after centering. Multicollinearity diagnostics performed after centering the variables resulted in VIF's of less than two which indicates multicollinearity is no longer unduly influ-

which indicates multicollinearity is no longer unduly influencing the least squares estimates.

TABLE V.
CORRELATION OF INDEPENDENT VARIABLES
AFTER CENTERING

	Moral	Att.	Moral* Att.	Mode	Moral* Mode	Att.* Mode	Moral* Att.* Mode
Moral	1.000						
Attitude (Att.)	.218	1.000					
Moral*Att.	-.015	-.112	1.000				
Mode	-.080	-.262	-.049	1.000			
Moral*Mode	.639	.126	-.170	-.066	1.000		
Att.*Mode	.132	.635	-.080	-.227	.193	1.000	
Moral*Att.*Mode	-.208	-.138	.541	.154	-.318	-.197	1.000

Regression results with the centered variables appear in Table VI. The overall test of the linear association between the dependent variable and the set of independent variables resulted in an F-value of 2.057. The probability of a greater F-value is .056. The adjusted r-squared indicates that the approximate reduction in variation of the compliance measure associated with the set of independent variables is 6.9%.

TABLE VI
REGRESSION ANALYSIS RESULTS

	DF	Regression Coefficient	t-Value	Prob>t
Intercept		9.432	12.147	.000
Moral	1	-.071	-1.307	.194
Attitude	1	.143	2.325	.006*
Mode	1	.524	.465	.643
Moral*Attitude	1	.000	.010	.992
Moral*Mode	1	.080	.933	.353
Attitude*Mode	1	-.062	-.749	.456
Moral*Attitude*Mode	<u>1</u>	.012	1.797	.076
Regression Model	7			
Residual	93			
R-square	.134			
Adjusted R-square	.069			
F-Value	2.057			
Prob>F	.056			
*Highly Significant				

Although the linear regression model is robust against some types of departures from the model's basic assumptions, the appropriateness of the model for the data should be examined to detect serious departures (Neter, et.al., 1990).

The model assumes that error terms:

1. are independent
2. are normally distributed
3. have constant variance.

The effect of lack of independence in error terms is relatively unimportant and can be ignored unless the sample size is small relative to the number of parameters or data is collected in a time sequence (Neter, et.al., 1990). The Durbin-Watson test for lack of randomness in least squares residuals resulted in a value of 2.02 which indicates that the null hypothesis that the error terms are independent cannot be rejected.

A normal probability plot of the residuals was examined to assess the normality of the error terms (Figure 1). A straight line indicates that the error terms are normally distributed. Unless departures from normality are serious, actual regression coefficients and risks of errors will be close to levels of exact normality (Neter, et.al., 1990). The plotted line shows some curvature but does not appear to be extreme.

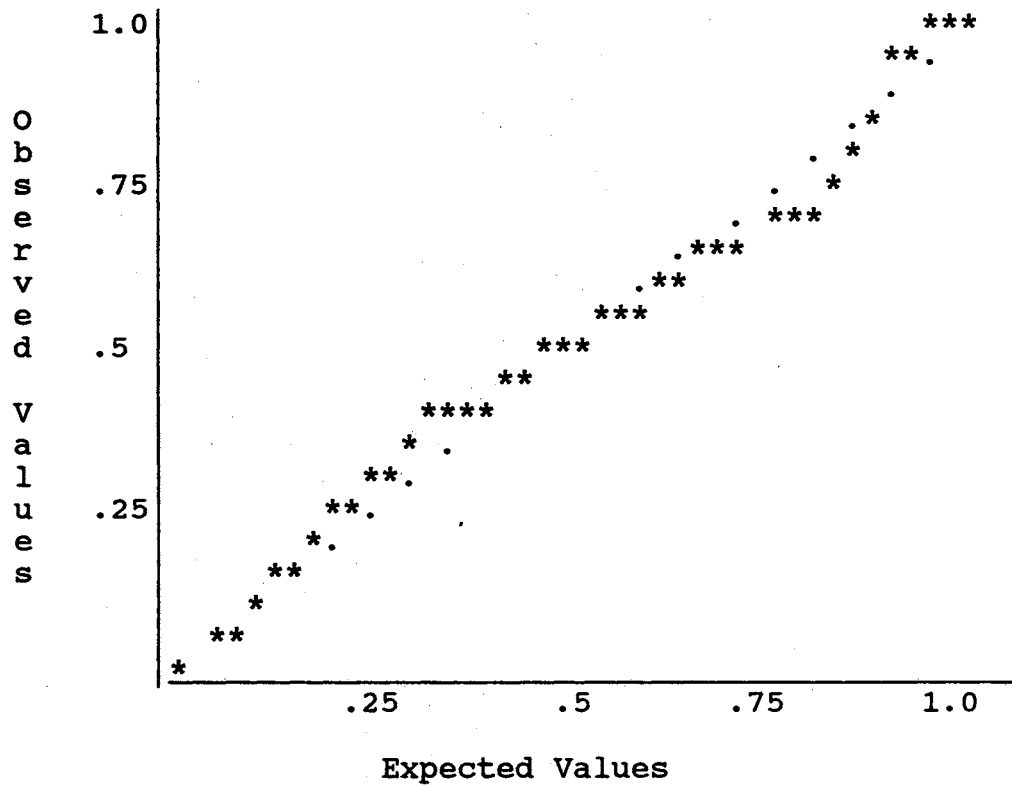


Figure 1. Normal Probability Plot

A plot of the residuals against the fitted values shows a scatter of points around 0 and no defined pattern (Figure 2). The plot supports the assumption that the error variance is constant.³

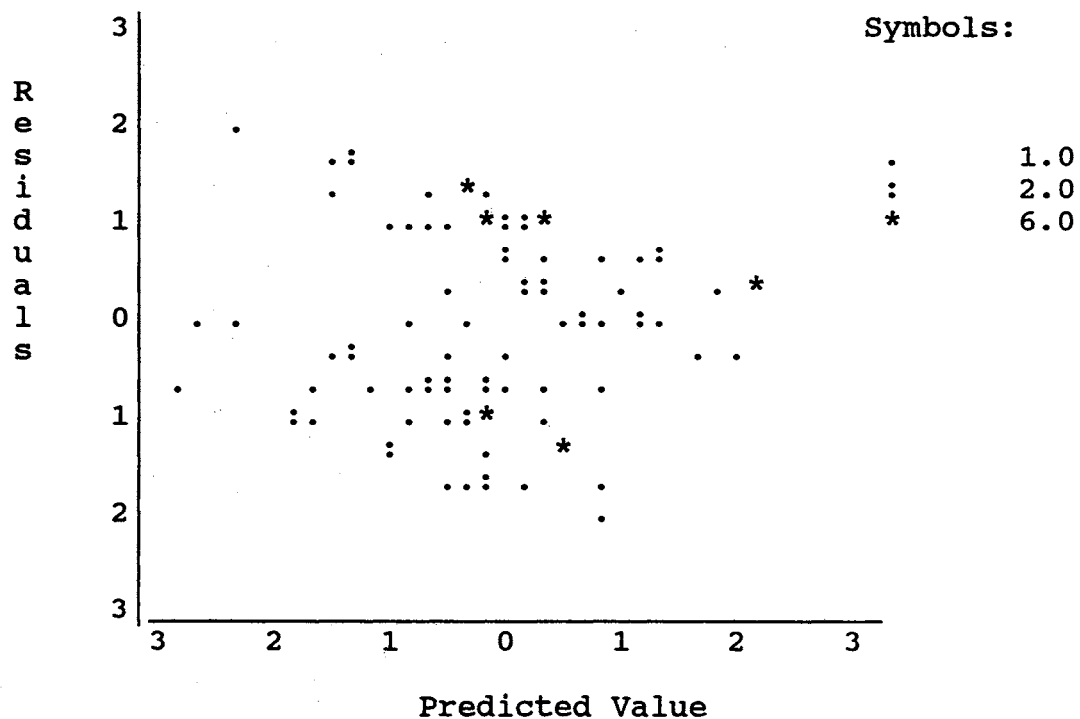


Figure 2. Plot of Residuals and Predicted Values

³Additional plots of the residuals with the independent variables and the dependent variable with the independent variables are in Appendix D.

Results relating to each of the four hypotheses are discussed in the following sections.

Hypothesis 1. The relationship between development of moral reasoning (Moral) and the likelihood of compliance is tested by Hypothesis 1:

$$\begin{aligned} H1_o: & \beta_1 = 0 \\ H1_a: & \beta_1 > 0 \end{aligned}$$

The t-value for the moral reasoning term in the regression equation is not significant indicating that the null hypothesis of no difference in compliance due to development of moral reasoning cannot be rejected.

Hypothesis 2. Hypothesis 2 tests the relationship between attitudes towards the fairness of the tax laws (Attitude) and the likelihood of compliance.

$$\begin{aligned} H2_o: & \beta_2 = 0 \\ H2_a: & \beta_2 > 0 \end{aligned}$$

Results in Table VI indicate a highly significant ($< .01$) regression coefficient for Attitude. The null form of Hypothesis 2 of no difference in likelihood of compliance due to attitudes towards the fairness of the tax laws is not supported. The positive sign on the regression coefficient provides support for the alternate form of Hypothesis 2. Individuals with higher scores on the attitude measure (positive attitudes) showed greater likelihood of compliance than individuals with lower scores (negative attitudes).

Hypothesis 3. The alternate form of Hypothesis 3 postulates that individuals that use relatively more principled reasoning in making moral decisions with positive

attitudes towards the fairness of the tax laws are more likely to comply than other individuals. The null and alternate forms of Hypothesis 3 are:

$$\begin{aligned} H3_0: \beta_4 &= 0 \\ H3_a: \beta_4 &> 0 \end{aligned}$$

Table VII shows that the regression coefficient for the Moral*Attitude interactive term is not significant, therefore, the null hypothesis cannot be rejected.

Hypothesis 4. Hypothesis 4 was proposed to test whether mode of evasion influenced the relationships tested in Hypotheses 1-3. Mode of evasion (X_3) was coded as a "1" for underreporting income and "0" for overstating deductions. When mode of evasion is underreporting income, the expected value of the dependent measure is:

$$\begin{aligned} E(Y) = & (\beta_0 + \beta_3) + (\beta_1 + \beta_5)x_{i1} + (\beta_2 + \beta_6)x_{i2} + \\ & (\beta_4 + \beta_7)x_{i1}x_{i2} \end{aligned}$$

The expected value of the dependent measure when mode of evasion is overstating deductions is:

$$E(Y) = \beta_0 + \beta_1x_{i1} + \beta_2x_{i2} + \beta_4x_{i1}x_{i2}$$

The response functions for the two modes of evasion are the same if the regression coefficients for the Mode terms are not significantly different from zero. The hypothesis to test is:

$$\begin{aligned} H4_0: \beta_3 = \beta_5 = \beta_6 = \beta_7 = 0 \\ H4_a: \text{not all } \beta_3 = \beta_5 = \beta_6 = \beta_7 = 0 \end{aligned}$$

Neter, et.al. (1990) recommend fitting a reduced model and computing an F-statistic to test the hypothesis for the equality of two response functions. Results of the reduced regression model appear in Table VII.

TABLE VII
REGRESSION RESULTS FOR THE REDUCED MODEL

	DF	Regression Coefficients	t-Value	Prob>t
Intercept		9.813	17.950	.000
Moral	1	-.056	-1.350	.180
Attitude	1	.110	2.835	.006*
Moral*Attitude	1	.003	.983	.328
Regression Model	3			
Residual	97			
R-Square	.085			
Adjusted R-Square	.057			
F-Value	3.022			
Prob>F	.033			

*Highly Significant

The test statistic is

$$F^* = \frac{SSE(R) - SSE(F)/df_R - df_F}{SSE(F)/df_F}$$

$$F^* = \frac{2786.093 - 2638.025/97-93}{2638.025/93} = 1.30$$

The F-value of 1.30 is not significant ($>.05$); therefore, the null hypothesis cannot be rejected. This same result is supported by the lack of significant t-values ($>.05$) for all terms containing mode in the full model shown in Table VI.

The regression coefficient in Table VI for the Moral*Attitude*Mode interaction is, however, marginally significant (.076) and warrants investigation to determine if the nature of the interaction is consistent with theory.

$$Y = 9.432 - .071x_1 + .143x_2 + .524X_3 + .000x_1x_2 \\ + .080x_1X_3 - .062x_2X_3 + .012x_1x_2X_3$$

Entering values for Mode (X_3) of "1" for underreporting income and "0" for overstating deductions and rearranging terms results in the two regression equations:

$$Y = 9.956 + .009x_1 + .081x_2 + .012x_1x_2 \quad \text{Where } X_3=1$$

$$Y = 9.432 - .071x_1 + .143x_2 \quad \text{Where } X_3=0$$

These equations indicate that there is no interaction between development of moral reasoning and attitudes towards the fairness of the tax laws when the mode of evasion is overstating deductions while interaction is present when mode of evasion is underreporting income. To evaluate the nature of the interaction, a regression coefficient for Attitude was computed at a "low" level, "average" level, and "high" level of moral reasoning (Jaccard, et.al., 1990 and Cohen and Cohen, 1983). "Low" is defined as one standard deviation below the mean and "high" is defined as one stand-

ard deviation above the mean. The regression coefficient and t-values for Attitude appear in Table VIII.

TABLE VIII
REGRESSION COEFFICIENTS FOR THE ATTITUDE MEASURE
AT THREE LEVELS OF MORAL REASONING

Moral Level	Moral Value	Attitude Regression Coefficient	t-value
Low	-13.33	$.081 + .012(-13.33) = -.079$	-0.861
Average	0	$.081 + .012(0) = .081$	1.620
High	13.33	$.081 + .012(13.33) = .241$	2.334

These results show that when the level of Moral is "low," the slope for Attitude is not significantly different from zero. As Moral increases, the slope for Attitude becomes more steep with the regression coefficient of .241 at the "high" Moral level being significant ($<.05$).

Summary

This chapter presented a description of subjects and the regression results. Hypothesis 1 is not supported. Development of moral reasoning does not appear to be associated with the tax compliance decision. Research results

support the existence of a relationship between attitudes towards the fairness of the tax laws and the tax compliance decision as proposed by Hypothesis 2. Individuals with positive attitudes towards the fairness of the tax laws indicated a greater likelihood of compliance than individuals with negative attitudes. The null form of Hypothesis 3 that no interaction between development of moral reasoning and attitudes towards the fairness of the tax laws could not be rejected. However, investigation of a moderately significant regression coefficient for the interaction of the Moral*Attitude*Mode term revealed the presence of an interaction when the mode of evasion was underreporting income. Chapter VI presents a discussion of these results and the limitations and implications of this study.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This chapter presents a discussion of the results of the study followed by limitations of the findings and implications for future research.

Research Results and Discussion

This study examined the relationship between the development of moral reasoning, attitudes towards the fairness of the tax laws, and the tax compliance decision. Four research hypotheses were developed and tested:

1. Taxpayers using relatively more principled reasoning in making moral decisions are more compliant than other taxpayers.
2. Taxpayers with a positive attitude towards the fairness of the tax laws are more compliant than taxpayers with a negative attitude towards the fairness of the tax laws.
3. Taxpayers using relatively more principled reasoning in making moral decisions who have a positive attitude towards the fairness of the tax laws are more compliant than all other taxpayers.
4. There is no interaction between the mode of evasion (underreporting income versus overstating deductions) and moral reasoning and/or attitudes towards the fairness of the tax laws.

One hundred and one undergraduate and graduate students completed a four-part questionnaire designed to elicit data

required to test these hypotheses. The data obtained were analyzed using regression analysis.

Research results indicated that individuals with positive attitudes towards the fairness of the tax laws were more likely to comply.

Based on the results presented in Chapter V, development of moral reasoning does not appear to be associated with the tax compliance decision. Lack of support for the hypothesized relationships could possibly indicate that, while the theory of moral reasoning applies to general moral decisions, it does not apply to the tax compliance decision. Another explanation for lack of support is possible misspecification of the model to study the relationship among the variables. The model may require the inclusion of variables measuring peer influence and the perception of harm caused by evasion. The theory of moral reasoning in the context of tax compliance suggests that moral decisions are influenced primarily by threat of sanctions at the low level of moral reasoning, peer expectations at the moderate level, and issues of fairness at the high level. The threat of sanctions was controlled for in the hypothetical evasion scenarios by describing opportunities for evasion with very low probability of detection. Peer influence was not measured but may moderate the relationship between development of moral reasoning and the tax compliance decision. In addition, Roth, et. al. (1989) suggest that Schwartz's (1977) theory, that awareness of potential harm mediates the rela-

tionship between an individual's commitment and altruist behavior, may apply to the tax compliance decision. Individuals with the same level of moral commitment but different perceptions of harm may act differently. Individuals that believe tax evasion does not materially hurt anyone may be more likely to evade than individuals who perceive harm to society from evasion.

The results did not provide strong statistical support for the existence of an interaction between development of moral reasoning and attitudes towards the fairness of the tax laws. The hypothesized relationship assumed that when development in moral reasoning is low, attitudes would have little influence and that when development in moral reasoning is high, attitudes would significantly influence the tax compliance decision. Results show this relationship only when the mode of evasion is underreporting income. This result may be due to a real perceptual difference between underreporting income and overstating deductions or due to the choice of evasion scenarios.

Limitations of the Study

Several potential limitations of this study are discussed in the following paragraphs.

The compliance measure is a judgment based on a hypothetical situation. Actual behavior of the subjects may be different from the response given. In addition, even with a scenario describing the opportunity for evasion, subject

responses may be influenced by the lack of experience with such opportunity. Almost all subjects were employees and the scenarios described opportunities for evasion by a self-employed taxpayer.

The degree of concentration necessary and the length of time needed to complete the instrument (approximately 30 minutes) made it necessary to obtain subjects in "captive" groups. Even though subjects were informed that participation was voluntary, they may have felt pressure to participate since the instructor was typically present and encouraged their participation.

The use of subjects with full-time work experience increases the external validity of the study; however, the generalizability of the results is limited since a random sample of U.S. taxpayers was not obtained.

A potential threat to internal validity is the use of different administrative sessions that spanned a several month period. The mean likelihood of compliance was not significantly different for the different administrative sessions which indicates that this issue probably is not a problem.

Implications for Future Research

Due to the limitations of the sample involved, the study should be replicated using a wider geographic sample which includes more self-employed individuals. Although the attitude scale provided a single, summary measure of atti-

tudes towards the fairness of the tax laws, the content of the scale is rich with potential issues to explore. The scale includes issues of

1. constitutionality
2. government's right to tax income
3. purpose of taxation
4. uses of tax revenues
5. efficiency of government programs or expenditures
6. exchange equity
7. horizontal equity

If attitudes towards the fairness of the tax laws is significant in a replication, future studies could explore what shapes attitudes relating to these issues and how such attitudes could be changed through education programs and/or moral appeals.

A future study could consider additional evasion scenarios to evaluate whether the mode of evasion results found in this study can be replicated or if the result is due to wording of the particular scenarios used.

The issues identified above regarding the relationship between development of moral reasoning and the tax compliance decision and the need for additional variables warrant further consideration. Re-evaluation of the theory of moral reasoning in the context of the tax compliance decision, and inclusion of moderating or mediating variables could lead to a more descriptive model of the relationship that could be used in a future study.

REFERENCES

- Arrington, C.E. and Reckers, P.M.J. "A Social-Psychological Investigation into Perceptions of Tax Evasion." Accounting and Business Research (Summer 1985): 163-176.
- American Bar Association Commission on Taxpayer Compliance. Report and Recommendations, 1987.
- Blake, J. and Davis, K. "Norms, Values and Sanctions." In Handbook on Modern Sociology, edited by R. Faris. Chicago: Rand-McNally, 1964: 456-484.
- Briar, S. and Piliavin, S. "Delinquency, Situational Inducements, and Commitment to Conformity." Social Problems 13 (1965): 35-45.
- Carpenter, J. A moderate proposal for Restoring Prosperity. Tulsa, OK: PRS Nutshells, 1991.
- Cohen, J. and Cohen, P. Applied Multiple Regression/Correlation Analysis for Behavioral Sciences. Hillsdale, N.J.: Lawrence Erlbaum Associates, Publishers, 1983.
- Colby, A and Kohlberg, L. The Measurement of Moral Judgment, Vol. 1. New York: Cambridge University Press, 1987.
- Crano, W.D. and Brewer, M.B. Principles and Methods of Social Research. Boston: Allyn and Bacon, Inc., 1986.
- Cronbach, L. "Statistical Tests for Moderator variables: Flaws in Analysis Recently Proposed." Psychological Bulletin 102 (1987): 414-417.
- Elffers, H., Weigel, R.H. and Hessing, D.J. "The Consequences of Different Strategies for Measuring Tax Evasion Behavior." Journal of Economic Psychology 8 (1987): 311-337.
- Frankena, W. K. Ethics. Englewood Cliffs, NJ: Prentice-Hall, 1973.
- General Accounting Office. Profiles of Major Components of the Tax Gap, April, 1990.

Grasmick, H.G. and Bursik, R. J. "Conscience, Significant Others and Rational Choice: Extending the Deterrence Model." Law and Society Review 24 (1990): 837-861.

Grasmick, H.G., and Green, D.E. "Legal Punishment, Social Disapproval and Internalization of Inhibitors of Illegal Behavior." Journal of Criminal Law and Criminology 71 (1980): 325-335.

_____. "Deterrence of the Morally Committed." The Sociological Quarterly 22 (1981):1-14.

Grasmick, H.G., and Scott, W.J. "Tax Evasion and Mechanisms of Social Control: A Comparison with Grand and Petty Theft." Journal of Economic Psychology 2 (1982): 213-230.

Hanno, D.M. and Violette, G.R. "The Cognitive Foundations of Taxpayer Compliance Decision." Paper present at the 1990 Internal Revenue Service Research Conference (November, 15-16), 1990, Washington, D.C.

Harsha, P.D. and Knapp, J.C. "The Use of Within- and Between-Subjects Experimental Designs in Behavioral Accounting Research: A Methodological Note." Behavioral Research in Accounting 2 (1990): 50-62.

Hessing, D.J., Kinsey, K.A., Elffers, H. and Weigel, R.H. "Tax Evasion Research: Measurement Strategies and Theoretical Models." In Handbook of Economic Psychology, edited by W.F. VanRaaij, G.M. VanVelhoer and K. Warnayrd. New York: North Holland/Elsevier, 1988: 516-537.

Hessing, D.J., Elffers, H., and Weigel, R.H. "Exploring the Limits of Self-Reports and Reasoned Action: An Investigation of the Psychology of Tax Evasion Behavior." Journal of Personality and Social Psychology 54, 1988: 405-413.

Hirschi, R. Causes of Delinquency. Berkeley: University of California Press, 1969.

Hite, P.A. "An Examination of the Impact of Subject Selection on Hypothetical and Self-Reported Taxpayer Noncompliance." Journal of Economic Psychology 9 (1988a): 445-466.

_____. "The Effect of Peer Reporting Behavior on Taxpayer Compliance." The Journal of the American Taxation Association (1988b): 47-63.

- Hite, P.A. and McGill, G.A. "Moral Appeal and Neutralization Strategies: Effects on Social Control of Taxpayer Compliance." Paper presented at the 1990 Internal Revenue Service Research Conference (November 15-16), 1990, Washington, D.C.
- Internal Revenue Service. Gross Tax Gap Estimates and Projections for 1973-1992. Publication 7285, 1988.
- Jaccard, J., Turris, R., and Wan, C.K. Interaction Effects in Multiple Regression. Newbury Park, CA: Sage Publications, Inc., 1990.
- Jackson, B.R. and Jaouen, P.R. "Influencing Taxpayer Compliance Through Sanction Threat or Appeal to Conscience." Advances in Taxation 2 (1989): 131- 147.
- Jackson, B.R., and Milliron, V.C. "Tax Compliance Research: Findings, Problems, and Prospects." Journal of Accounting Literature 5 (1986): 125-165.
- Johnson, R.A., and Wichern, D.W. Applied Multivariate Statistical Analysis. New Jersey: Prentice-Hall, 1988.
- Kaplan, S.E., and Reckers, P.M.J. "A Study of Tax Evasion Judgments." National Tax Journal 38 (1985): 97-102.
- Kaplan, S.E., Reckers, P.M.J., and Roark, S.J. "An Attribution Theory Analysis of Tax Evasion Related Judgments." Accounting Organization and Society 13 (1988): 371-379.
- Kerlinger, F.N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, Inc., 1973.
- Klepper, S., and Nagin, D. "Tax Compliance and Perceptions of the Risk of Detection and Criminal Prosecution." Law and Society Review 23 (1989a): 209-240.
- _____. "The Deterrent Effect of Perceived Certainty and Severity of Punishment Revisited." Criminology 27 (1989b): 721-746.
- Kohlberg, L. Essays on Moral Development, Vol. 2: The Psychology of Moral Development: The Nature and Validity of Moral Stages. New York: Harper and Row, 1984.
- _____. "Stage and Sequence: The Cognitive-Developmental Approach to Socialization." In Handbook of Socialization Theory and Research, edited by D. Goslin. Chicago: Rand McNally, 1969: 345-480.

- _____. "Moral Stages and Moralization: The Cognitive-Developmental Approach." In Moral Development and Behavior: Theory, Research, and Social Issues, edited by T. Lickona. New York: Holt, Rinehart & Winston, 1976: 31-53.
- Kohlberg, L. and Candee, D. "The Relationship of Moral Judgment to Moral Action." In Essays on Moral Development, Vol. 2: The Psychology of Moral Development, edited by L. Kohlberg. New York: Harper & Row, 1984: 498-581.
- Likert, R. "The Method of Constructing an Attitude Scale." In Readings in Attitude Theory and Measurement, edited by M. Fishbein. New York: Wiley and Sons, Inc., 1967: 90-95.
- Long, S.B. and Swingen, J.A. "Taxpayer Compliance: Setting New Agendas for Research." Forthcoming in Law and Society Review.
- Malinowski, C. I. and Smith, C. P. "Moral Reasoning and Moral Conduct: An Investigation Prompted by Kohlberg's Theory." Journal of Personality and Social Psychology 49 (1985): 1016-1027.
- Mason, R. and Calvin, L.D. "A Study of Admitted Income Tax Evasion." Law and Society Review 13 (1978): 73-89.
- Mason, R. and Calvin, L.D. "Public Confidence and Admitted Tax Evasion." National Tax Journal 37 (1984): 489-496.
- Neter, J., Wasserman, W. and Kutner, M.H. Applied Linear Statistical Models. Homewood, IL: Irwin, Inc., 1990.
- Piaget, J. The Moral Judgment of the Child. Trans. by M. Gabain. New York: Free Press, 1965. (Originally published, 1932).
- Reckers, P.M.J., Roark, S.J., and Sanders, D.L. "The Influence of Ethical Attitudes on Taxpayer Compliance." Working paper.
- Rest, J., Turiel, E. and Kohlberg, L. "Level of Moral Development as a Determinant of Preference and Comprehension of Moral Judgments Made by Others." Journal of Personality 37 (1969): 225-252.
- Rest, J.R. "New Approaches in the Assessment of Moral Judgment." In Moral Development and Behavior, edited by T. Lickona. New York: Holt, Rinehart & Winston, 1976: 198-220.

- _____. Development in Judging Moral Issues.
Minneapolis, MN: University of Minnesota Press, 1979.
- _____. "Morality." In Manual of Child Psychology,
edited by P. Mussen. Vol. 3: Cognitive Development,
edited by J. Flavell and E. Markham. New York: Wiley,
1983: 556-629.
- _____. "The Major Components of Morality." In
Morality, Moral Behavior, and Moral Development, edited
by W. Kurtines and J. Gewirtz. New York: Wiley, 1984:
24-40.
- _____. Moral Development: Advances in Research and
Theory. New York: Praeger, 1986.
- _____. Manual for the Defining Issues Test.
University of Minnesota, 1990.
- Roth, J.A., Scholz, J.T. and Witte, A.D. (eds.) Taxpayer
Compliance, Volume 1: An Agenda for Research.
Philadelphia: University of Pennsylvania Press, 1989.
- Roth, J.A. and Scholz, J.T. (eds.) Taxpayer Compliance,
Volume 2: Social Science Perspectives. Philadelphia:
University of Pennsylvania Press, 1989.
- Schwartz, R.D., and Orleans, S. "On Legal Sanctions."
University of Chicago Law Review 34 (1967): 274-300.
- Schwartz, S.H. "Normative Influences on Altruism." In
Advances in Experimental Social Psychology, Vol. 10,
edited by L. Berkowitz. New York: Academic Press,
1977.
- Scott, W.J., and Grasmick, H.G. "Deterrence and Income Tax
Cheating: Testing Interaction Hypotheses in Utilitarian
Theories." Journal of Applied Behavioral Science 17
(1981): 395-408.
- Song, Y.D. and Yarbrough, T. "Tax Ethics and Taxpayer
Attitudes: A Survey." Public Administration Review 38
(Sept/Oct 1978): 442-452.
- Spicer, M.W. "A Behavioral Model of Income Tax Evasion."
Doctoral Dissertation, Ohio State University, 1974.
- Spicer, M.W., and Becker, L.A. "Fiscal Inequity and Tax
Evasion: An Experimental Approach." National Tax
Journal 33 (1980): 171-175.
- Spicer, M.W., and Lundstedt, S.B. "Understanding Tax
Evasion." Public Finance 32 (1976): 295-305.

- Steenbergen, J., McGraw, K. and Scholz, J. "Taxpayer Adaptation to the 1986 Tax Reform Act: Do New Tax Laws Affect the Way Taxpayers Think About Taxes?" Paper presented at the Conference on Tax Compliance and Tax Law Enforcement, University of Michigan, Dec. 7-8, 1990.
- Thurman, Q.C. "General Prevention of Noncompliance: Expanding the Deterrence Model to Predict Taxpaying." Paper presented at the 1990 Internal Revenue Service Research Conference (November, 15-16), 1990, Washington, D.C.
- Thurman, Q.C., St. John, C., and Riggs, L. "Neutralization and Tax Evasion: How Effective Would a Moral Appeal Be in Improving Compliance to Tax Law." Law and Policy 6 (1984): 309-327.
- Thurstone, L. L. "Attitudes Can Be Measured." In Readings in Attitude Theory and Measurement, edited by M. Fishbein. New York: Wiley and Sons, Inc., 1967: 77-89.
- Tittle, C.R., and Rowe, A.R. "Moral Appeal, Sanction Threat, and Deviance: An Experimental Test." Social Problems 20 (1973): 488- 498.
- Turiel, E. "An Experimental Test of the Sequentiality of Developmental Stages in the Child's Moral Judgments." Journal of Personality and Social Psychology 3 (1966): 611-618.
- Violette, G.R. "Effects of Communicating Sanctions on Taxpayer Compliance." The Journal of the American Taxation Association (1989): 92-104.
- Vogel, J. "Taxation and Public Opinion in Sweden: An Interpretation of Recent Survey Data." National Tax Journal 27 (December 1974): 499-513.
- Yankelovich, Skelly, and White, Inc. "Taxpayer Attitudes Study: Final Report." Prepared for the Internal Revenue Service, 1984.

APPENDIX A

STAGE OF MORAL REASONING

Stage 1

The "morality" of an action is defined by the authority rather than by cooperation among equals at this stage. An individual has a responsibility to obey externally defined rules, but an individual's only right is freedom from punishment if he/she is obedient.

Stage 2

An act is "morally right" if it does "good" for the actor. The objective at Stage 2 is to maximize the satisfaction of one's needs and desires while minimizing negative consequences to oneself. Rights and responsibilities are determined by "one shot" exchanges of favor for favor; everyone "does their own thing" when no deal is made. The Stage 2 individual deals only with positive and negative consequences of breaking the law (i.e. getting caught, fined, etc.) but does not deal with the "rightness" of breaking the law.

Stage 3

A general inner disposition of being a "good person" is more important than occasional deviant acts. Each individual determines rights and responsibilities by anticipating the feelings, needs, and expectations of others (reciprocal role taking) which allows for a cooperative reciprocity of enduring friendship rather than "favor for favor" as at Stage 2. An act is considered "morally right" when it is based on a prosocial motive. However, one deficiency of Stage 3 is the ability to justify an action based on good intentions toward one party while disregarding other parties. The Stage 3 individual seeks approval and is concerned with conforming to expectations of "significant" others.

Stage 4

"Right" is defined by categorical rules established by the social order. At Stage 3, the view of the cooperative system was limited to primary group relations. At Stage 4, the cooperative system extends to the society as a whole. "Laws establish norms for behavior that are publicly set, knowable by all members of society, categorically and impartially applied, and impersonally enforced as a society-wide concern" (Rest 1979). Each individual's rights and responsibilities are determined by his/her role as a citizen, and no personal consideration or circumstance can supersede the law.

Stage 5

Rational people can reach agreement about their laws if (1) the law-making process reflects the general will of the people, and (2) if certain basic rights such as "life, liberty, and the pursuit of happiness" are guaranteed. Even when one's own interests are contrary to the law, one is obligated to abide by the law since the law reflects the general will of the people. "Laws must be nonoptional and binding on all. . . .If a person has been allowed to cast his vote, to have his day in court (with all due process), to have his basic rights protected, then there are no grounds for complaint" (Rest, 1979, p. 35). Stage 5 is considered "principled" because of the emphasis placed on drawing on principles such as consensus government and basic human rights for establishing a system of social cooperation.

Stage 6

One must consider not only what the rational person would accept for the law-making process, but also what principle(s) a rational society would choose for governing its system of cooperation. Even though laws may reflect the will of the people, inequities can still exist. Social consensus alone is not the ultimate test of morality. Moral judgments are ultimately justified by drawing on abstract principles of ideal cooperation such as Rawl's Principles of Justice or other principles offered by moral philosophers

APPENDIX B

ATTITUDE STATEMENTS

The following statements reflect some people's opinions regarding income tax laws. Please indicate your agreement or disagreement with each of these statements by circling the appropriate number. If you

strongly agree SA circle a 5
 agree A circle a 4
 neutral or undecided U circle a 3
 disagree D circle a 2
 strongly disagree SD circle a 1

	<u>SA</u>	<u>A</u>	<u>U</u>	<u>D</u>	<u>SD</u>
1. All things considered, I feel that the amount of income tax I am asked to pay is about right.	5	4	3	2	1
2. The government is using my tax money to support programs I don't approve of.	5	4	3	2	1
3. Income tax laws reflect the general will of the people.	5	4	3	2	1
4. The tax system benefits the rich.	5	4	3	2	1
5. I get the same tax breaks as others making the same income.	5	4	3	2	1
6. The government has the right to tax my income.	5	4	3	2	1
7. Generally, I get a reasonable level of service from the government for the amount of taxes I pay.	5	4	3	2	1
8. I don't seem to use government services and programs as much as other people do.	5	4	3	2	1
9. Current tax laws require me to pay more than my fair share of income taxes.	5	4	3	2	1
10. Taxes are just theft by the government.	5	4	3	2	1

	<u>SA</u>	<u>A</u>	<u>U</u>	<u>D</u>	<u>SD</u>
11. There are a number of government services and programs for which I am very thankful.	5	4	3	2	1
12. Income tax laws do not violate any basic human rights.	5	4	3	2	1
13. Very few tax dollars are spent by the government on things which are useful to a person like me.	5	4	3	2	1
14. The tax system is fair to the ordinary working man or woman.	5	4	3	2	1
15. Income taxes violate an individual's right of property.	5	4	3	2	1
16. I pay about the same amount of taxes as others making the same income.	5	4	3	2	1
17. The poor pay too much in taxes.	5	4	3	2	1
18. The government wastes too much money.	5	4	3	2	1
19. Income tax laws are unconstitutional.	5	4	3	2	1
20. My income taxes are too high for what I get from the federal government.	5	4	3	2	1
21. The government spends a reasonable amount of tax dollars on welfare.	5	4	3	2	1
22. There are too many tax laws that favor some taxpayers more than others making the same income.	5	4	3	2	1
23. Income taxes are used by the government to provide essential services and programs.	5	4	3	2	1
24. The level of taxation nowadays is about right in light of services provided.	5	4	3	2	1
25. The tax burden is fairly distributed.	5	4	3	2	1
26. I get fair value for my tax dollars.	5	4	3	2	1
27. Compared to other taxpayers, I pay more than my fair share.	5	4	3	2	1
28. Taxes are something which are taken away from me.	5	4	3	2	1

	<u>SA</u>	<u>A</u>	<u>U</u>	<u>D</u>	<u>SD</u>
29. It is fair that high income earners pay proportionally more taxes.	5	4	3	2	1
30. There are too many tax laws that treat people at the same income level differently.	5	4	3	2	1
31. Taxes are necessary to pay for essential services for the common good.	5	4	3	2	1
32. Paying income taxes is part of a citizen's contract with the government.	5	4	3	2	1
33. A large part of tax revenues is used for meaningless purposes.	5	4	3	2	1
34. The same tax rate should apply to everyone.	5	4	3	2	1
35. The tax system is fair to the ordinary working man or woman.	5	4	3	2	1

APPENDIX C

RESEARCH INSTRUMENT

There are no "right" answers to the questions and problems presented. Please select responses that best describe your opinions. The confidentiality of your responses is guaranteed. The questionnaire does not include your name or any identifying number; therefore, your responses cannot be traced to you in any manner. Each section of the questionnaire contains directions that explain procedures for completing that section. Please fully complete all sections.

Section I—Directions:

Please read the following paragraph and answer the two questions pertaining to the paragraph. Your responses are confidential and cannot be traced to you.

Joe Smith has taxable income of \$40,000 from his sole-proprietorship for the current tax year. During the year, Joe purchased computer equipment to use at home for personal use. The total cost was \$1,000 and included a central processing unit for \$500, a monitor for \$200 and a printer for \$300. If he had purchased the computer equipment for use in his business, the full \$1,000 would be a deduction on his individual income tax return. He could really use the tax dollars he would save by including the cost of the computer equipment as a business deduction. He is sure there is no way the IRS could detect that he deducted the personal expenditure since he could easily transfer the computer equipment to his place of business if he were audited. Joe has come to you and asked you what you would do if you were in his situation.

1. If faced with an identical situation, would you deduct any of the \$1,000 computer equipment cost on your tax return? Indicate your response by placing a mark anywhere on the line below.

Yes
Probably
Unsure
Probably
No

Not

2. How much of the \$1,000 computer equipment cost would you deduct on your tax return if you were faced with an identical situation? Respond by entering the amount you would deduct (from \$0 through \$1,000) in the space provided below.

\$ _____

Section II—Directions:

The following statements reflect some people's opinions regarding income tax laws. Please indicate your agreement or disagreement with each of these statements by circling the appropriate number. If you

- strongly agree SA circle a 5
- agree A circle a 4
- neutral or undecided U circle a 3
- disagree D circle a 2
- strongly disagree SD circle a 1

	<u>SA</u>	<u>A</u>	<u>U</u>	<u>D</u>	<u>SD</u>
1. All things considered, I feel that the amount of tax I am asked to pay is about right.	5	4	3	2	1
2. Income tax laws reflect the general will of the people.	5	4	3	2	1
3. I get the same tax breaks as others making the same income.	5	4	3	2	1
4. Generally, I get a reasonable level of service from the government for the amount of taxes I pay.	5	4	3	2	1

There are no "right" answers to the questions and problems presented. Please select responses that best describe your opinions. The confidentiality of your responses is guaranteed. The questionnaire does not include your name or any identifying number; therefore, your responses cannot be traced to you in any manner. Each section of the questionnaire contains directions that explain procedures for completing that section. Please fully complete all sections.

Section I—Directions:

Please read the following paragraph and answer the two questions pertaining to the paragraph. Your responses are confidential and cannot be traced to you.

Joe Smith has taxable income of \$40,000 from his sole-proprietorship for the current tax year. Most of Joe's customers pay by check but a few pay in cash. Joe received \$1,000 cash from customers during the year that he did not deposit in his bank account. Joe is debating whether to omit the \$1,000 cash receipts from his taxable income. Although the cash receipts are technically includable in taxable income, he could really use the tax dollars he would save by not reporting the \$1,000. He is sure there is no way the IRS could detect that he omitted the amount since there is no record of the cash receipts. Joe has come to you and asked you what you would do if you were in his situation.

1. If faced with an identical situation, would you omit any of the \$1,000 cash receipts from your tax return? Indicate your response by placing a mark anywhere on the line below.

Yes ----- Probably ----- Unsure ----- Probably ----- No
Not

2. How much of the \$1,000 cash receipts would you omit from your tax return if you were faced with an identical situation? Respond by entering the amount you would omit (from \$0 through \$1,000) in the space provided below.

\$ _____

Section II—Directions:

The following statements reflect some people's opinions regarding income tax laws. Please indicate your agreement or disagreement with each of these statements by circling the appropriate number. If you

strongly agree	SA	circle a 5
agree	A	circle a 4
neutral or undecided	U	circle a 3
disagree	D	circle a 2
strongly disagree	SD	circle a 1

- | | <u>SA</u> | <u>A</u> | <u>U</u> | <u>D</u> | <u>SD</u> |
|--|-----------|----------|----------|----------|-----------|
| 1. All things considered, I feel that the amount of tax I am asked to pay is about right. | 5 | 4 | 3 | 2 | 1 |
| 2. Income tax laws reflect the general will of the people. | 5 | 4 | 3 | 2 | 1 |
| 3. I get the same tax breaks as others making the same income. | 5 | 4 | 3 | 2 | 1 |
| 4. Generally, I get a reasonable level of service from the government for the amount of taxes I pay. | 5 | 4 | 3 | 2 | 1 |

	<u>SA</u>	<u>A</u>	<u>U</u>	<u>D</u>	<u>SD</u>
5. The government spends a reasonable amount of tax dollars on welfare.	5	4	3	2	1
6. The tax system is fair to the ordinary working man or woman.	5	4	3	2	1
7. There are a number of government services and programs for which I am very thankful.	5	4	3	2	1
8. Taxes are just theft by the government.	5	4	3	2	1
9. The government wastes too much money.	5	4	3	2	1
10. Income tax laws do not violate any basic human rights.	5	4	3	2	1
11. I get fair value for my tax dollars.	5	4	3	2	1
12. Income tax laws are unconstitutional.	5	4	3	2	1
13. Income taxes are used by the government to provide essential services and programs.	5	4	3	2	1
14. I pay about the same amount of taxes as others making the same income.	5	4	3	2	1
15. The same tax rate should apply to everyone.	5	4	3	2	1
16. The government has the right to tax my income.	5	4	3	2	1
17. The level of taxation nowadays is about right in light of services provided.	5	4	3	2	1
18. Very few tax dollars are spent by the government on things which are useful to a person like me.	5	4	3	2	1
19. Compared to other taxpayers, I pay more than my fair share.	5	4	3	2	1
20. Taxes are something which are taken away from me.	5	4	3	2	1
21. There are too many tax laws that treat people at the same income level differently.	5	4	3	2	1
22. Income taxes violate an individual's right of property.	5	4	3	2	1
23. Taxes are necessary to pay for essential services for the common good.	5	4	3	2	1
24. Paying income taxes is part of a citizen's contract with the government.	5	4	3	2	1
25. A large part of tax revenues is used for meaningless purposes.	5	4	3	2	1
26. My income taxes are too high for what I get from the federal government.	5	4	3	2	1

Section III—Directions: Please read the following instructions carefully and then complete the remainder of the section.

This section of the questionnaire is aimed at understanding how people think about social problems. Different people often have different opinions about controversial social problems. There are no "right" answers in the way that there are right answers to math problems. We would like you to tell us what you think about several problem stories. After reading each story, you will be asked to complete three tasks.

First, indicate your recommendation for what a person should do. If you tend to favor one action or another (even if you are not completely sure), indicate which one.

Second, read and rate the importance of each of the 12 items listed. The items represent issues that a person might consider when trying to make a decision. The five possible alternative ratings are

- Great --Check if the item concerns something that makes a big, crucial difference one way or the other in making a decision about the problem.
- Much --Check if the item concerns something that a person should clearly be aware of in making a decision and that would make a difference in your decision, but not a big, crucial difference.
- Some --Check if the item concerns something you generally care about, but something that is not of crucial importance in deciding about this problem.
- Little --Check if the item concerns something that is not very important to consider in this case.
- No --Check if the item is about something that has no importance in making a decision about the problem, if you are unsure about the meaning of the item, or if the item seems foolish or sounds like "gibberish."

Third, consider the set of 12 items and rank the four most important items. Items checked "great importance" should be considered first in the ranking process, followed by items checked "much importance" and so on.

The example story appearing on the next page is not really a social problem but it will illustrate the procedures for responding. Explanations to help you to understand the procedures are included in parentheses.

EXAMPLE STORY

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

What should Frank do? (Check one)

_____ Buy new car _____ Can't decide _____ Buy used car

IMPORTANCE: (Rate the importance of each item by checking one of the spaces provided)

Great Much Some Little No

Great	Much	Some	Little	No	
			✓		1. Whether the car dealer was in the same block as where Frank lives. (Note that in this sample, the person taking the questionnaire thought this was not very important to consider in this case.)
✓					2. Would a used car be more economical in the long run than a new car. (Note that a check was put in the far left space to indicate the opinion that this is a big, crucial issue in making a decision about buying a car.)
		✓			3. Whether the color was green, Frank's favorite color.
				✓	4. Whether the cubic inch displacement was at least 200. (Note that if you are unsure about what "cubic inch displacement means, then mark it "no importance.")
✓					5. Would a large, roomy car be better than a compact car.
					6. Whether the front connibilies were differential. (Note that if a statement sounds like gibberish or nonsense to you, mark it "no importance.")
	✓				7. Whether the car has any rust.
		✓			8. Whether the car has a vinyl top.

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

Most important 5 Second most important 2

Third most important 7 Fourth most important 3

(Note that the top choices in this example should come from the items that were checked on the far left-hand side--items #2 and #5 were thought to be of "great importance." In deciding what is the most important, a person would re-read #2 and #5, and pick one of them as the most important, then put the other one as "second most important." Only one item (#7) was thought to be of "much importance" so it should be ranked as "third most important." Items #3 and #8 were thought to be of "some importance." A person would re-read #3 and #8 to pick one of them as "fourth most important.")

THE DOCTOR'S DILEMMA

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

What should the doctor do? (Check one)

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

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Whether the woman's family is in favor of giving her the overdose or not.
					2. Is the doctor obligated by the same laws as everybody else if giving her an overdose would be the same as killing her?
					3. Whether people would be much better off without society regimenting their lives and even their deaths.
					4. Whether the doctor could make it appear like an accident.
					5. Does the state have the right to force continued existence on those who don't want to live?
					6. What is the value of death prior to society's perspective on personal values?
					7. Whether the doctor has sympathy for the woman's suffering or cares more about what society might think.
					8. Is helping to end another's life ever a responsible act of cooperation.
					9. Whether only God should decide when a person's life should end.
					10. What values the doctor has set for himself in his own personal code of behavior.
					11. Can society afford to let everybody end their lives when they want to?
					12. Can society allow suicides or mercy killing and still protect the lives of individuals who want to live?

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

Most important _____ Second most important _____

Third most important _____ Fourth most important _____

HEINZ AND THE DRUG

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

Should Heinz steal the drug? (Check one)

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

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Whether a community's laws are going to be upheld.
					2. Isn't it only natural for a loving husband to care so much for his wife that he'd steal?
					3. Is Heinz willing to risk getting shot as a burglar or going to jail for the chance that stealing the drug might help?
					4. Whether Heinz is a professional wrestler, or has considerable influence with professional wrestlers.
					5. Whether Heinz is stealing for himself or doing this solely to help someone else.
					6. Whether the druggist's rights to his invention have to be respected.
					7. Whether the essence of living is more encompassing than the termination of dying, socially and individually.
					8. What values are going to be the basis for governing how people act towards each other.
					9. Whether the druggist is going to be allowed to hide behind a worthless law which only protects the rich anyhow.
					10. Whether the law in this case is getting in the way of the most basic claim of any member of society.
					11. Whether the druggist deserves to be robbed for being so greedy and cruel.
					12. Would stealing in such a case bring about more total good for the whole society or not?

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

Most important _____ Second most important _____

Third most important _____ Fourth most important _____

NEWSPAPER

Fred, a senior in high school, wanted to publish a mimeographed newspaper for students so that he could express many of his opinions. He wanted to speak out against the use of the military in international disputes and to speak out against some 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 principals' approval. Fred agreed and turned in several articles for approval. The principal approved all of them and Fred published two issues of the paper in the next two weeks.

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

Should the principal stop the newspaper? (Check one)

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

IMPORTANCE:

Great Much Some Little No

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

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

Most important _____ Second most important _____

Third most important _____ Fourth most important _____

STUDENT TAKE-OVER

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

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

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

Were the students right to take over the administration building?

_____ Take it over _____ Can't decide _____ Not take it over

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Are the students doing this to really help other people or are they doing it just for kicks?
					2. Do the students have any right to take over property that doesn't belong to them?
					3. Do the students realize that they might be arrested and fined, and even expelled from school?
					4. Would taking over the building in the long run benefit more people to a greater extent?
					5. Whether the president stayed within the limits of his authority in ignoring the faculty vote.
					6. Will the takeover anger the public and give all students a bad name?
					7. Is taking over a building consistent with principles of justice?
					8. Would allowing one student take-over encourage many other student take-overs?
					9. Did the president bring this misunderstanding on himself by being so unreasonable and uncooperative.
					10. Whether running the university ought to be in the hands of a few administrators or in the hands of all the people.
					11. Are the students following principles which they believe are above the law?
					12. Whether or not university decisions ought to be respected by students.

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

Most important _____ Second most important _____

Third most important _____ Fourth most important _____

ESCAPED PRISONER

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

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

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

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?
					2. Every time someone escapes punishment for a crime, doesn't that just encourage more crime?
					3. Wouldn't we be better off without prisons and the oppression of our legal systems?
					4. Has Mr. Thompson really paid his debt to society?
					5. Would society be failing what Mr. Thompson should fairly expect?
					6. What benefits would prisons be apart from society, especially for a charitable man?
					7. How could anyone be so cruel and heartless as to send Mr. Thompson to prison?
					8. Would it be fair to all the prisoners who had to serve out their full sentences if Mr. Thompson was let off?
					9. Was Mrs. Jones a good friend of Mr. Thompson?
					10. Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?
					11. How would the will of the people and the public good best be served?
					12. Would going to prison do any good for Mr. Thompson or protect anybody?

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

Most important _____ Second most important _____

Third most important _____ Fourth most important _____

WEBSTER

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

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

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

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

IMPORTANCE:

Great Much Some Little No

Great	Much	Some	Little	No	
					1. Does the owner of a business have the right to make his own business decisions or not?
					2. Whether there is a law that forbids racial discrimination in hiring for jobs.
					3. Whether Mr. Webster is prejudiced against orientals himself or whether he means nothing personal in refusing the job.
					4. Whether hiring a good mechanic or paying attention to his customers' wishes would be best for his business.
					5. What individual differences ought to be relevant in deciding how society's roles are filled?
					6. Whether the greedy and competitive capitalistic system ought to be completely abandoned.
					7. Do a majority of people in Mr. Webster's society feel like his customers or are a majority against prejudice?
					8. Whether hiring capable men like Mr. Lee would use talents that would otherwise be lost to society.
					9. Would refusing the job to Mr. Lee be consistent with Mr. Webster's own moral beliefs?
					10. Could Mr. Webster be so hard-hearted as to refuse the job, knowing how much it means to Mr. Lee?
					11. Whether the Christian commandment to love your fellow man applies in this case.
					12. If someone's in need, shouldn't he be helped regardless of what you get back from him?

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

Most important _____ Second most important _____

Third most important _____ Fourth most important _____

Section IV—Directions:

Please respond to the following questions by writing the appropriate response in the blank provided or by circling the choice that best answers each question.

1. What is your age? _____
2. What is your sex? _____
3. What is your educational background? (Circle one)
 1. Under high school education
 2. High school diploma
 3. 2-year college degree
 4. Bachelor degree
 5. Master degree
 6. Doctoral degree
4. How many years have you worked full-time? _____
5. What is your average annual income? (Circle one)
 1. less than \$10,000
 2. \$10,000 - 19,999
 3. \$20,000 - 29,999
 4. \$30,000 - 39,999
 5. \$40,000 - 49,999
 6. \$50,000 or more
6. What is your primary source of income? (Circle one)
 1. Wage/Salary
 2. Dividends/Interest
 3. Rents/Royalties
 4. Self-employed
 5. Other, specify _____
7. What is your job title? _____

APPENDIX D

DATA AND RESIDUALS PLOTS

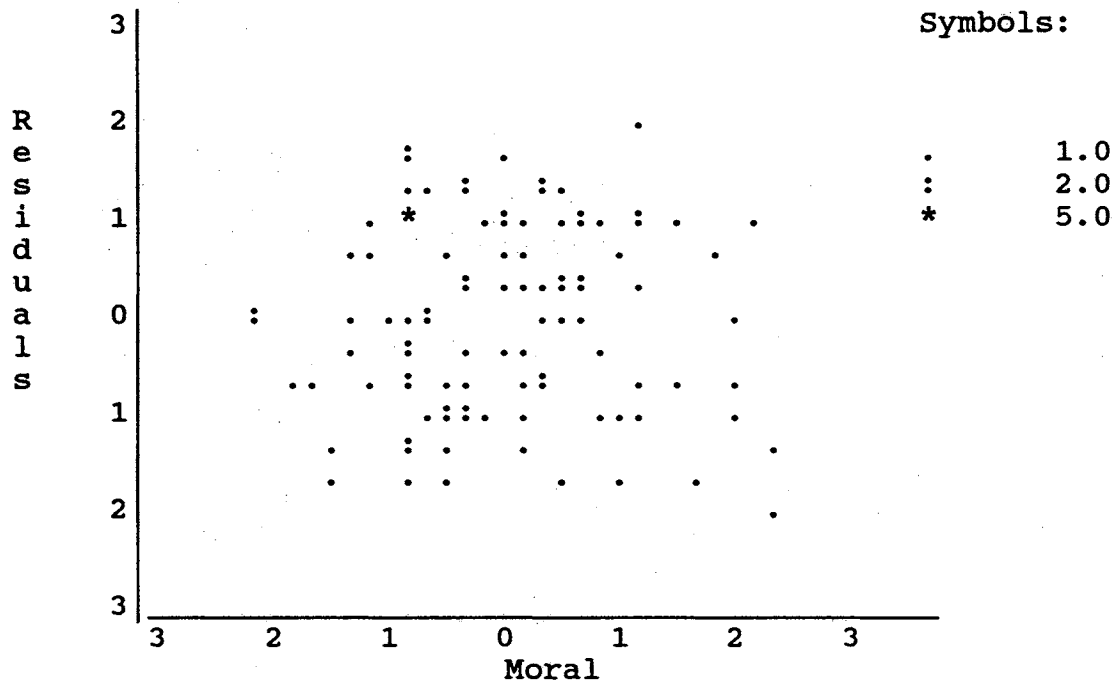


Figure 3. Plot of Residuals with Moral

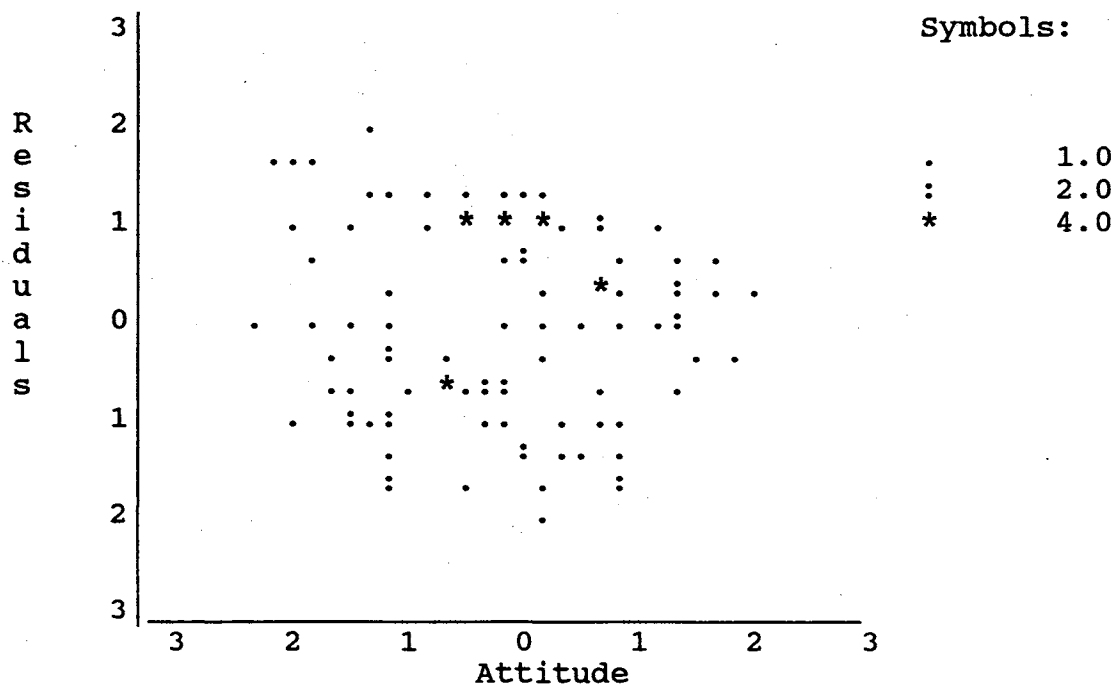


Figure 4. Plot of Residuals with Attitude

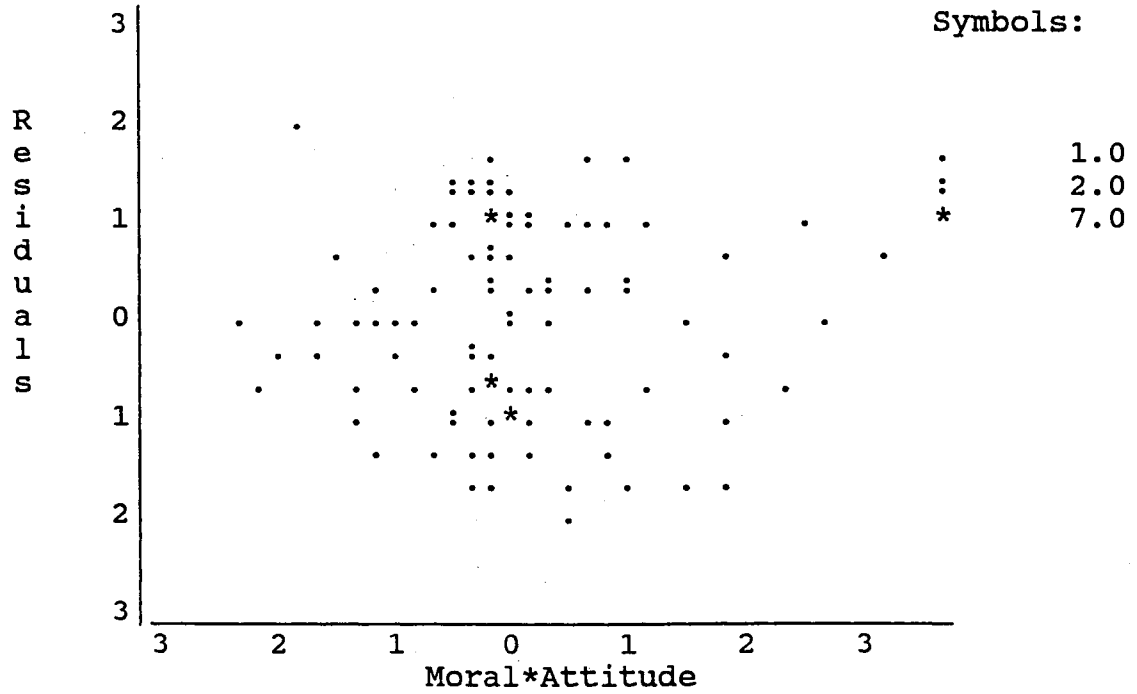


Figure 5. Plot of Residuals with Moral*Attitude

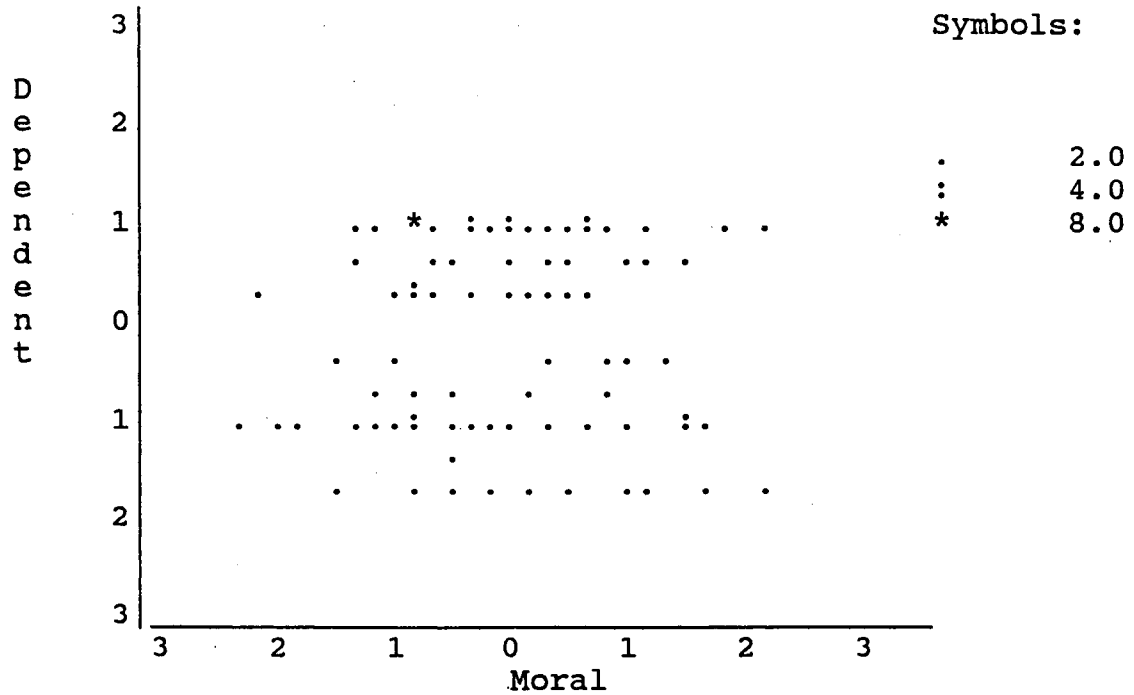


Figure 6. Dependent Variable with Moral

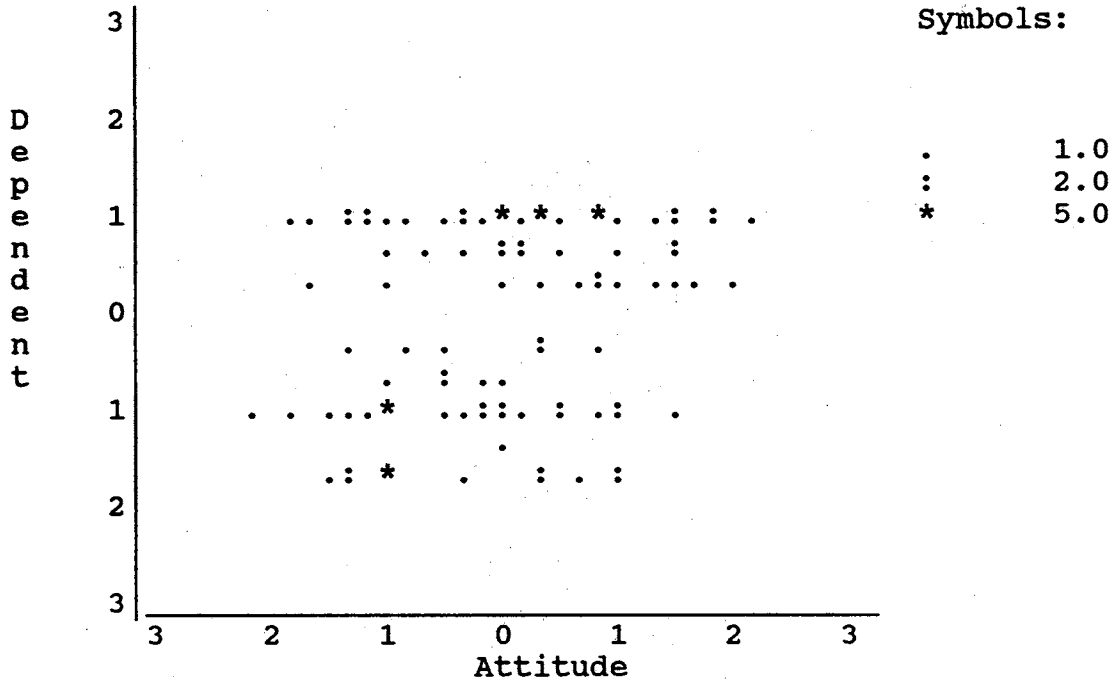


Figure 7. Plot of the Dependent Variable with Attitude

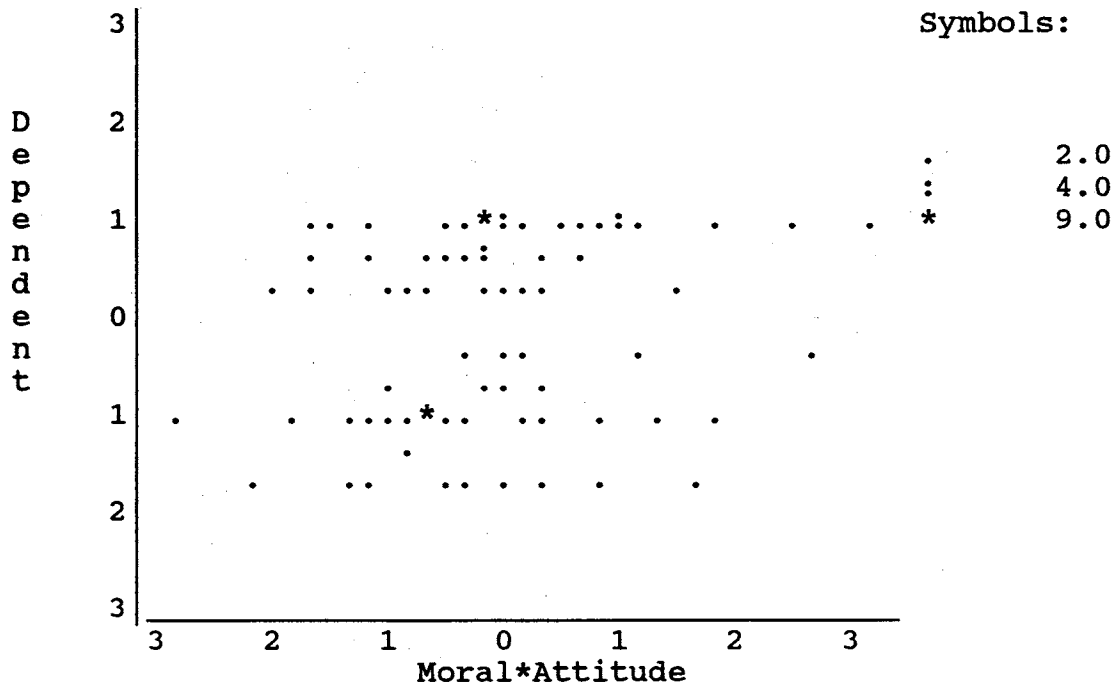


Figure 8. Plot of the Dependent Variable with Moral*Attitude

APPENDIX E

INSTITUTIONAL REVIEW BOARD APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
 INSTITUTIONAL REVIEW BOARD
 FOR HUMAN SUBJECTS RESEARCH

Proposal Title: Moral Commitment to Tax Compliance as Measured by the
Level of Development of Moral Reasoning and Attitudes Towards the Fairness
of the Tax Laws

Principal Investigator: _____

Date: 2-26-92 IRB # BU-92-008

 This application has been reviewed by the IRB and

Processed as: Exempt Expedite Full Board Review

Renewal or Continuation

Approval Status Recommended by Reviewer(s):

Approved

Deferred for Revision

Approved with Provision

Disapproved

Approval status subject to review by full Institutional Review Board at
 next meeting, 2nd and 4th Thursday of each month.

 Comments, Modifications/Conditions for Approval or Reason for Deferral or
 Disapproval:

Comments:

Hypotheticals---no admissions except reopinions.

Signature: _____

Marci S. Tilley
 Chair of Institutional Review Board

Date: 2-26-92

VITA

Coleen S. Troutman

Candidate for the Degree of
Doctor of Philosophy

Thesis: MORAL COMMITMENT TO TAX COMPLIANCE AS MEASURED BY
THE DEVELOPMENT OF MORAL REASONING AND ATTITUDES
TOWARDS THE FAIRNESS OF TAX LAWS

Major Field: Business Administration

Biographical:

Education: Received a Bachelor of Science Degree in Education from Kansas State Teachers College at Emporia, Kansas in May, 1970; received a Master of Science in Accounting from Wichita State University at Wichita, Kansas in December, 1976; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in May, 1993.

Professional Experience: Certified Public Accountant at Mayer Hoffman McCann in Kansas City, Missouri from January, 1977 to June, 1981; Assistant Professor of Accounting at Emporia State University in Emporia, Kansas from August, 1981 to June, 1988; Graduate Assistant at Oklahoma State University in Stillwater, Oklahoma from August, 1988 to June, 1992; Assistant Professor of Accounting at Bradley University in Peoria, Illinois from August, 1992 to present.

Professional Organizations: Member of the American Institute of Certified Public Accountants and the American Accounting Association.