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Locus of Control in Relationship to Moral Judgement, Ethical Behavior, and Religious Motivation

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LOCUS OF CONTROL IN RELATIONSHIP TO MORAL JUDGMENT, ETHICAL BEHAVIOR, AND RELIGIOUS MOTIVATION

by

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VITA

The author, Simcha Goldman, is the son of Rabbi Irving L. and Toby (Reichman) Goldman. He was born February 4, 1946, in New Orleans, Louisiana.

His elementary education was obtained in the public schools of South Bend, Indiana. He attended junior high school at Arie Crown Hebrew Day School and senior high at Ida Crown Jewish Academy, both of Chicago, Illinois. He was graduated with a High School Diploma in June, 1963.

A Bachelor of Arts in English Literature was conferred upon him in September, 1967, by Yeshiva University, New York, New York. Upon graduation, he enrolled simultaneously at the Rabbi Isaac Elchanaan Theological Seminary and Bernard Revel Graduate School of Yeshiva University as well as City College of New York. In June, 1970, he was granted the degree of Master of Arts in English Literature from the City College of New York. The title of his thesis was "Prometheus Unbound Interpreted." In September, 1970, he was ordained as a Rabbi by the seminary and awarded concurrently a Master of Science, with a major in Jewish philosophy, by the Bernard Revel Graduate School. During the years 1972 and 1973 he continued undergraduate studies in psychology at University of South Carolina, University of Detroit, and Wayne State University. Admission to the Graduate School of Loyola University of Chicago was granted in September, 1973.

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CHAPTER I

INTRODUCTION

Early psychological theorists considered moral behavior to be a reflection of moral character. Freud, for example, viewed the superego as an integrated, unitary system which tended to produce behavior consistent with its standards (Graham, 1972, p. 39-40). Superego strength has been operationalized in many studies as "resistance to temptation." The classic studies by Hartshorne and May (1928-1930), using this paradigm, established that honesty is largely situation-specific and unstable over time. Burton's (1963) reanalysis of the Hartshorne and May data lead to a similar conclusion, albeit with a different emphasis. Although much of the variance was due to specific situational stimuli, there was nevertheless a moderate correlation across situations indicative of an underlying trait of honesty. Nelsen, Grinder, and Mutterer's (1969) investigation supported Burton's restatement of the Hartshorne and May findings.

In the last 30 years cognitive-developmental (CD) and social learning (SL) theories of human development have attempted to explain moral development and ethical behavior. Cognitive-developmental theory, as exemplified by Kohlberg (1969) assumes that the basic structure of intellectual functioning develops out of the interaction between certain intrinsic structuring qualities of the human organism and the structure of the environment. This interaction leads to an invariant

succession of cognitive stages in which cognitive operations become increasingly more sophisticated. Building on the earlier work of Piaget (1948), Kohlberg (1958) identified six stages in the development of moral judgment. Maturity of moral judgment was considered an important determinant of ethical behavior when there were significant differences in the way a moral dilemma was defined (Kohlberg, 1969). Following the symbolic interactionist school of social psychology, he also held that the situational definition directly determined the moral emotion which the situation evoked.

Social learning theorists, on the other hand, hold that early social development, of which moral development is a part, may be explained by principles similar to those governing other forms of learning at other stages of life. Many of the social learning analyses in this area have their conceptual roots in the learning theories of Hull and Skinner (Gewirtz, 1969; vide p. 59 for a selection of studies investigating situational influences on ethical behavior).

Gewirtz (1969) criticized the CD approach for not providing operational definitions of its key constructs which were independent of the phenomena these constructs purported to explain. He rejected the cognitive, intrinsic-reinforcement, motivational, and observational learning concepts employed and argued that conditioning constructs were more parsimonious.

Kohlberg (1969) rejected Gewirtz's (1969) conceptualization of the socialization process as response generalization based on extrinsic reinforcement. He argued instead that the effect of extrinsic reinforcement is due to its informational value. Reward signifies that the child has acted correctly or in conformity to the adult's standards.

Cognitive-developmental and SL theories also differ in their use of motivational concepts to explain moral behavior. According to Kohlberg (1969) the development of both cognition and affect are parallel, based on the intrinsic structural properties of human intellectual activity. Furthermore, "while motives and affects are involved in moral development, the development of these motives and affects is largely mediated by changes in thought patterns." (1969, p. 390) Gewirtz argued against the use of motivational or drive concepts to explain social behavior, preferring more parsimonious learning concepts (1969, pp. 182-194). Other SL theorists do make use of motivational or drive concepts (e.g., Dollard & Miller, 1950; Sears, Maccoby, & Levin, 1957).

Taking Kohlberg and Gewirtz as examples of their respective schools of thought, it might appear difficult to find a potential common ground. Essentially, Kohlberg has argued that the individual's definition of a situation, which depends ultimately on the structural characteristics of cognitive activity, will influence how the person behaves. Gewirtz has argued that the individual's reinforcement history in a given situation will influence his behavior.

In recent years there have been some attempts to integrate CD and SL theories of moral development (Dienstbier, Hillman, Lehnoff, Hillman, & Valkinaar, 1975; LaVoie, 1974; Mischel & Mischel, 1976). Dienstbier et al. (1975) used an emotion attribution approach to explain resistance to temptation behavior. Negative emotional states such as anxiety, fear, guilt, and shame have a potentially important impact on moral behavioral choices. It was considered likely that such affects could be associated with specific behaviors through learning

mechanisms. However, "these associations depend heavily on the causal attributions that are made about the source of the negative emotions during socialization experiences." (p. 300) Socialization techniques differ in that an internally-orienting process associates the child's emotional arousal to his own misconduct while an externally-orienting process associates the arousal to a fear of punishment. There was some empirical support for the hypothesis that external orientations are less effective in inhibiting violations in temptation situations with low risk of detection than are internal emotion attribution patterns.

Dienstbier et al. theorized that level of moral judgment maturity will influence how the individual will interpret his emotional arousal which will influence, in turn, his behavioral choices. They downplayed the importance of the symbolic interactionist approach, i.e., cognition will influence the perception of the situation and the nature of the consequent emotional arousal experienced.

Mischel and Mischel (1976) distinguished between the capacity to form mature moral judgments and the knowledge of moral standards, on the one hand, and the actual performance of ethical behavior. The former may depend on CD factors while the latter is influenced by motivational and performance factors specific to a given situation. Self-regulatory systems link judgments and behaviors. These systems include:

(1) The rules that specify goals or performance standards in particular situations;

(2) The consequences of achieving or failing to achieve those criteria;

(3) The self-instructions and cognitive stimulus transformations required to achieve the self-control necessary for goal attainment; and

(4) The organizing rules (plans) for the sequencing and termination of complex behavioral patterns in the absence of external supports and in the presence of external hindrances (p. 94).

Mischel and Mischel accounted for the low correlations of moral behavior across situations by man's ability to discriminate the different contingencies contained in the multitude of moral situations with which he must deal. Very specific expectancies tend to be developed which would result in highly varied response patterns.

A potentially fruitful area for the investigation of the relationship between moral judgment and ethical behavior is Rotter's (1954) social learning theory and his locus of control (LOC) concept (1965). Rotter (1966) asserts that the effectiveness of social reinforcements depends on whether or not the individual perceives a causal connection between his prior behavior and subsequent reinforcement. A person with an internal LOC tends to perceive such a connection; one with an external LOC tends not. Furthermore, reinforcement acts to create an expectancy that future performance of the behavior will elicit a similar reward. This expectancy can vary in strength.

Rotter's theory has been described as an attempt to integrate reinforcement theories with cognitive or field theories (Rotter, Chance, & Phares, 1972, p. 1). Rotter acknowledged the role that cognition plays in determining behavior: "The simple cognitions regarding the properties of objects determine, in part, expectancies for behavior-reinforcement sequences by defining the gradients along which generalizations take place." (Rotter et al., 1972, p. 337-338) Fur-

thermore, both expectancies and reinforcement values can be changed by cognitive processes (Rotter et al., 1972, p. 19).

An empirical law of effect is the basic motivational concept in Rotter's theory. That is, any stimulus is said to have reinforcement value to the extent that it facilitates or inhibits behavior (Rotter et al., 1972, pp. 8-9). Phares' survey of the literature regarding the differential behavior of internally and externally controlled individuals in skill and chance situations led him to suggest that the LOC variable had a motivational aspect to it. That is, internals have a greater need to succeed in skill situations and externals have a greater need in chance situations (1976, p. 76). Similar suggestions about the motivational aspect of the LOC variable have been made (Rotter & Mulry, 1965; Midlarsky & Midlarsky, 1973).

Although there are some theoretical bases for integrating CD and SL theories of moral development and ethical behavior, empirical research in the areas of moral judgment, LOC, moral behavior, and religious motivation presents conflicting evidence of the validity of attempting such an integration.

Rubin and Schneider (1973) found a significant correlation (r=.57) between level of moral judgment and a measure of altruistic behavior. Their study involved children and used an adaptation of Kohlberg's (1968) Moral Judgment Interview. Midlarsky (1968) studied antecedent factors of altruistic behavior in a college population. A significant positive correlation of .54 was found between internality, as measured by Rotter's Locus of Control Scale (1966) and helping behavior. One might infer from this that there might be a positive relationship between level of moral judgment and LOC. Indeed, Bloomberg (1974) did find a

significantly higher use by internals of the highest level of moral reasoning than externals. However, the overall correlation between all six stages of moral reasoning and LOC was nonsignificant. Arbuthnot (1973) studied structural and non-structural aspects of cognitive abilities as they related to maturity of moral judgment. He found a non-significant, negative correlation between LOC and moral judgment and concluded that moral judgment was a cognitive-developmental, rather than a social learning, phenomenon.

Bloomberg (1974) suggested that the relationship between moral judgment and LOC may have been attenuated by shortcomings in Rotter's scale. This is an important methodological issue affecting the interpretation of extant research. Mirels' (1970) factor analysis of Rotter's scale yielded two factors: 1) belief in one's ability to control one's personal life, and 2) belief in one's ability to influence socio-political systems. Collins (1974) identified four factors, two of which conformed very closely to those identified by Mirels. Other investigators have also questioned the assumed unidimensional characteristic of the scale (Gurin, Gurin, Lao, & Beattie, 1969; Lao, 1970; Thomas, 1970). Phares (1976) responded to such findings by acknowledging that the scale is by its very nature a multidimensional measure since it samples LOC attitudes in a variety of situations. He argued furthermore that there is little evidence that such separate sub-factors produce empirically different predictions.

Rettig amd Rawson (1963) developed a Behavior Prediction Scale (BPS) based on Rotter's theory. The BPS requires the subject to predict whether or not the protagonist in a series of moral dilemmas will steal money. The expectancy of receiving a particular reinforcement

and the value of the reinforcement to the individual are postulated to be independent constructs. The BPS measures, therefore, the expectancy of gain (Egn) to be obtained by stealing and its reinforcement value (RVgn) as well as the expectancy of censure (Ecs) and its reinforcement value (RVcs). According to Rettig and Rawson's ethical risk hypothesis "unethical behavior varies as a function of the perceived risk incurred by such conduct." (1963, p. 243) This study revealed that RVcs accounted for more of the variance in predictive judgments of unethical behavior than any other source, although all sources had significant effects.

Responses to the BPS might be considered an indication of the subject's response if he were in the given situations. The RVcs factor has been shown to differentiate successfully between cheating and non-cheating subjects in a one year follow-up study (Rettig & Pasamanick, 1964) and in another study of deceptive behavior (Rettig & Sinha, 1965). Cheaters predicted significantly more stealing would occur in the low RVcs condition than in the high RVcs condition as compared to non-cheaters' prediction for the same circumstances. The investigators suggested that the honest subjects were not as sensitive as cheaters to conditions of low and high risk of censure because such considerations do not affect their behavior. The behavior of cheaters was apparently influenced by external circumstances.

Although the BPS is constructed on Rotter's theory and has successfully differentiated between honest and dishonest subjects, Kraus and Blanchard (1970) found no significant correlation between Rotter's Locus of Control Scale and the BPS.

Thus far we have reviewed studies dealing with three variables:

moral judgment, ethical behavior and LOC. A theoretical basis for attempting to integrate CD and SL theories of moral development by Rotter's LOC construct has been outlined. However, the above studies, none of which included all three variables in the same investigation, yielded conflicting evidence about the empirical validity of such an integration.

Another important difference between CD and SL theories, as noted above, is their use of motivational concepts. One motivational factor which might be presumed to have a bearing on the relationship between moral reasoning and conduct is religious motivation. Allport and Ross (1967) defined two different orientations to religion. Extrinsically motivated people tend "to use religion for their own ends. . .may find religion useful in a variety of ways--to provide security and solace, sociability. . . . The embraced creed is lightly held or else selectively shaped to fit more primary needs." (p. 434) People with an intrinsic orientation:

> find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought into harmony with the religious beliefs and prescriptions. Having embraced a creed the individual endeavors to internalize it and follow it fully. (p. 434)

Hunt and King's (1971) review of the literature measuring intrinsic and extrinsic religious behavior led them to suggest that such religious orientations may, in fact, be a reflection of a basic personality variable. They had little doubt that religious behavior was influenced by the personality structure. In this, Hoge (1972) and Dittes (1969) concurred.

Although there would appear to be a logical relationship between

internal-external locus of control and intrinsic-extrinsic religious motivation (Strickland and Shaffer, 1971), Hunt and King's (1971) review of the intrinsic-extrinsic concept and Dittes' (1969) more comprehensive review of the psychology of religion made no mention of Rotter's SL theory. The first empirical investigation, known to this author, of the relationship between religious motivation and LOC was that of Strickland and Shaffer (1971). They found a significant, positive correlation ($r=.30$) between the Religious Orientation Scale (Allport and Ross, 1967) and the Internal-External Locus of Control Scale (Rotter, 1966). They concluded that persons for whom religious belief was an important part of their lifestyle and decision-making process tended to believe that they had a significant degree of control over their lives. People for whom religious behavior was a social tool with little significance for their daily lives, tended to feel that external forces had more influence in their lives.

There is conflicting empirical evidence about the relationship of LOC to moral judgment and ethical behavior. There is also very limited evidence concerning the motivational aspect of LOC. However, a review of various theories of moral development suggested that LOC might be a relevant personality variable moderating the relationship between moral judgment and behavior. Accordingly, it is hypothesized: 1) Internal LOC is positively correlated with higher levels of moral reasoning and externality is positively correlated with lower levels of moral reasoning; 2) Internal LOC is significantly correlated with intrinsic religious motivation and external LOC is similarly correlated with extrinsic religious motivation; 3) A significant portion of the correlation between moral judgment and ethical behavior is accounted for by locus of

control; and 4) Religious motivation accounts for a significant portion of the correlation between moral judgment and ethical behavior.

CHAPTER II

METHOD

Subjects

Subjects were obtained from the Loyola University Psychology Department subject pool. Participation in the experiment partially fulfilled requirements for the Introductory Psychology course. A total of 40 subjects participated (28 males and 12 females). Seven males and four females were either Black or Latino. Average age for the sample was 19.2 years (males=19.4, females=18.7).

Instruments

A battery of seven tests and questionnaires was administered in a 1½ to 2 hour session. The measures employed were: 1) Rotter's Locus of Control Scale (1966), 2) Intellectual Achievement Responsibility Questionnaire (IARQ) (Crandall, Katkovsky, & Crandall, 1965), 3) Intrinsic-Extrinsic Religious Orientation Inventory (ROI) (Feagin, 1964), 4) Defining Issues Test (DIT) (Rest, Cooper, Coder, Masanz, & Anderson, 1974), and 5) Behavior Prediction Scale (BPS) (Rettig & Rawson, 1963). Two other measures were also included.

The Northwestern University Personality Inventory (Youkelis & Ravelle, 1975) is a 20-item locus of control scale (See Appendix A). These items can be combined into a variety of subscales. The two used in this study were the Good Events and Bad Events subscales, each containing 10 items. The Good Events subscale measures LOC orientation

regarding the quality of one's life and one's ability to improve it. Sample items are: 1) "I have a good chance to change the unpleasant things in my life if I work at it," 2) "The quality of my life is unrelated to how much effort I make," and 3) "The good things that happen to me are a matter of fate." The Bad Events subscale measures attitudes towards various kinds of disappointments. Typical items are: 1) "When my work turns out poorly it was not because it was doomed from the start," 2) "There is very little that I can do to change the way people feel about me," and 3) "Bad luck accounts for the bad things that happen to most people."

Subjects are asked to indicate whether they "agree," "sometimes agree," "sometimes disagree," or "disagree" with the test items. All items are scored with the external answers receiving a score of 1 or 2; internal responses, 4 or 5; unanswered item, 3. For example, a subject agreeing with Bad Events item number one above would receive a score of five. A subject agreeing with Bad Events item number two above would receive a score of one. In the first instance agreement signifies an internal orientation while in the latter example, an external one. The potential range of subscale scores is from 10 (most external) to 50 (most internal). The subscales are combined to form a Total Score.

A six week test-retest reliability coefficient of .63 and a Pearson correlation with the Rotter LOC Scale of .71 were reported (Youkelis & Ravelle, 1975).

The other measure was a Volunteerism Questionnaire devised for the present study by the investigator (See Appendix B). The questionnaire is designed to obtain information on some factors which are assumed to either facilitate or prevent a college student's participation in vol-

unteer activities. A volunteer activity was defined as any work done without pay for a charitable, religious, educational, or other non-profit organization. The questionnaire is divided into two parts: Previous Volunteer Activity and Current Volunteer Activity. The first section deals with the period from age 17 to the beginning of the current academic year. The second section deals with the current academic year. The same information is requested in both sections: 1) a description of the volunteer activity, if any, 2) academic status at the time, 3) employment situation, 4) open-ended questions about other factors which the subject feels may have facilitated or prevented participation in volunteer activities, 5) an open-ended question about the subject's motivation for volunteering. Each subject is interviewed by the investigator to complete and clarify subject's responses to the questionnaire.

The IARQ is a test measuring LOC, designed specifically for elementary and high school children, which focuses exclusively on an academic setting. Its two subscales measure assumption of responsibility for academic success and failure. Each subscale score is the sum of answers indicating an internal orientation. Thus, potential scores range from 0 (very external) to 17 (very internal) and a Total Scale of 0-34.

Moderately high test-retest reliability coefficients for a two-month period, ranging from .47 to .74, were reported in the studies accompanying publication of the IARQ (Crandall et al., 1965). The data suggested that the belief in personal responsibility for failure might be more stable than that for success. The authors of the IARQ provided evidence for the validity of their scale by correlating it with measures

of achievement, e.g., standardized achievement tests and report card grades. The IARQ predicted most consistently to grades.

Inasmuch as the IARQ was given to a college population, the following additional instructions were given:

> This is a questionnaire prepared to measure elementary and junior high school students' attitudes towards academic success and failure. The purpose in giving this unmodified survey to a college population is to see whether or not it may be used without extensive modifications. Some of the situations described and the language used may not be appropriate or relevant for use with college students. Please answer all questions despite these possible drawbacks.

All other tests were given with their standard instructions.

Scoring methods for the other tests are as follows. The Rotter LOC Scale score is the sum of answers indicating an internal orientation (highest possible score equals 23). This was done so that if any positive correlation were to be found between this scale and other LOC scales, the relationship would be expressed in positive, rather than negative, numbers.

In his 1966 monograph, Rotter reported test-retest reliability coefficients ranging from .49 to .83 for one and two month periods. Joe (1971) concluded from his literature review that evidence for Rotter's LOC construct although not entirely favorable is generally supportive of the construct's validity.

The Intrinsic and Extrinsic scales of the Religious Orientation Inventory are both scored so that higher scores indicate a more external attitude on each scale. Scores on the scales can range from 9-45 and 12-60, respectively. These scale scores are not combined because they measure two separate dimensions. The ROI is able to identify three types of individuals. The intrinsic type tends to agree with items on

the Intrinsic Scale and disagree with those on the Extrinsic. The converse is true for the extrinsic individual. The indiscriminately pro-religious (InPR) person tends to agree with anything that sounds favorable to religion. Therefore, he tends to agree with items on both scales. Allport and Ross (1967) classified as this type any subject scoring at least 12 points less on the intrinsic scale than on the extrinsic scale.

Answers to the Defining Issues Test are classified according to their stage of moral reasoning and weighted according to the importance the subject attributes to it in making his decision. Scores for each level of moral reasoning reflect the frequency with which the subject uses each level of reasoning. Rest (1974b) recommended that a P, or Principled Morality, score rather than individual stage scores be used for statistical analysis. The P score is the sum of stage scores for the three highest stages of moral reasoning. It is interpreted as "the relative importance a subject gives to principled moral considerations in making a decision about moral dilemmas." (Rest, 1974b, p. 4-3)

A correlation of .68 with Kohlberg's Moral Judgment Interview is provided as evidence for the construct validity of the DIT as do the correlations with other tests (Rest, et al., 1974). Two year reliability coefficients of .68 for 16-17 year olds and .54 for 18-20 year olds were reported (Rest, 1975).

The Behavior Prediction Scale measures the influence of four variables--Expectancy of Gain, Reinforcement Value of Gain, Expectancy of Censure, and Reinforcement Value of Censure--on a subject in making behavioral predictions. Each variable is measured under high and low conditions. The degree of sensitivity to a change in conditions is the

magnitude of the difference in prediction scores for each condition. Scoring for each item ranges from 0 (story character will definitely not steal) to 6 (will definitely steal). Potential range of scores for each condition is 0-48.

Procedure

Prior to distributing the battery of questionnaires, the investigator obtained a behavioral measure of each subject's willingness to participate in volunteer activities. The experimenter explained that he did volunteer work for Campus Ministry, a university-sponsored religious organization, and was taking the opportunity of meeting a large group of new people to solicit volunteers for the organization's projects. A form, printed on official stationery, was distributed which listed several projects Campus Ministry was sponsoring that semester which needed volunteer help. Subjects were requested to indicate which project(s), if any, they were willing and able to volunteer for and for how many hours that semester. Projects varied from making weekly visits to local nursing homes to hosting an occasional Student-Faculty Coffee Hour. It was explained that this request was totally unrelated to the experiment and that volunteering for these projects was not necessary in order to get course credit for participating in the experiment.

The test battery was then administered in one session of approximately 1½-2 hours. All the tests were administered in a random order to each subject with these two exceptions: 1) The Northwestern Personality Inventory was always given last because the experimenter was uncertain whether or not subjects would have sufficient time to complete it in the time allotted to the experiment. The test was incorporated into the battery as a courtesy to its originators and was not necessary

for the basic aims of the experiment. 2) The Volunteerism Questionnaire was always given next to last in order to preclude any hint that the other tests might have some bearing on altruistic behavior.

It had been originally intended to use subjects' responses to the Campus Ministry request for volunteers as a behavioral measure of altruistic behavior, with the Volunteerism Questionnaire providing some quantitative and qualitative self-report information. However, difficulties were encountered in obtaining subjects. The comparability of the Campus Ministry request for volunteers during the current semester was severely compromised inasmuch as the testing period extended over eight weeks (from two weeks before mid-term examinations to two weeks before final examinations).

The Volunteerism Questionnaire data and the responses to the Campus Ministry request were combined by rating the subjects on their degree of interest in volunteer activities.

Three advanced graduate students in clinical psychology were asked to rate each subject for his interest in volunteer activities. A five point scale was used, with 1 signifying low interest and 5, high. These raters all taught classes of emotionally-disturbed children and relied heavily on undergraduate volunteers to conduct classes.

The raters were provided with a paragraph describing circumstances and behaviors which would presumably reflect and/or provide opportunity for the expression of a high interest in volunteer activities. Similarly, a paragraph describing an individual with low interest in volunteer activities was also provided. These descriptions are given in their entirety in Appendix D.

The average rating for each subject was substituted for the Campus

Ministry request and the Volunteerism Questionnaire as a measure of altruistic behavior. An inter-rater reliability of .90 was obtained using the intraclass correlation (Guilford, 1956, p. 281).

CHAPTER III

RESULTS

Table 1 shows the sample means and standard deviations on the six measures comprising the test battery as well as the Volunteerism Rating.

There are many studies demonstrating that white, middle-class subjects tend to score more internally on the Rotter scale than do members of ethnic minorities and the lower socio-economic classes (see Joe, 1971, for a review of the evidence). Some sex differences in performance on the IAR scales were reported by Crandall *et al.* (1965) and Messer (1972). Accordingly, the sample was broken down into subgroups according to sex and race. Table 2 contains the *M*, *SD*, and significance level for comparisons of whites and racial minorities.

No significant differences were found between races on any of the three LOC measures. However, whites scored significantly higher on the DIT, *i.e.*, they used higher levels of moral reasoning more frequently than did minority subjects. This finding had an important bearing on further analyses of the data. Table 3 contains similar comparisons according to sex.

No significant differences between groups were found. Additional analyses were performed by classifying subjects according to both sex and race. Table 4 shows that white males scored significantly higher than black males on the DIT. Table 5, containing results of a similar analysis for females, shows that female whites were significantly more

TABLE 1

Sample Means and Standard Deviations on Measures of Locus of Control, Religious Motivation, Level of Moral Judgment, and Ethical Behavior

MEASURE	M	SD
Intellectual Achievement Responsibility Questionnaire (Positive Events)	12.98	2.24
Intellectual Achievement Responsibility Questionnaire (Negative Events)	12.73	1.89
Intellectual Achievement Responsibility Questionnaire (Total Score)	25.70	3.23
Internal-External Locus of Control Scale	10.80	4.08
Northwestern Personality Inventory (Good Events Scale)	39.75	6.36
Northwestern Personality Inventory (Bad Events Scale)	36.98	7.33
Northwestern Personality Inventory (Total Score)	76.73	12.23
Religious Orientation Inventory (Intrinsic Scale)	27.63	7.19
Religious Orientation Inventory (Extrinsic Scale)	32.10	6.50
Defining Issues Test - "P" Score	22.80	9.44
Expectancy of Gain - Difference Score	8.10	5.43
Reinforcement Value of Gain - Difference Score	8.83	7.03
Expectancy of Censure - Difference Score	9.50	6.01
Reinforcement Value of Censure - Difference Score	10.50	5.34
Volunteerism Rating	2.80	1.19

Note. In all subsequent tables as well as the body of the text, the following abbreviations will be substituted. These abbreviations correspond sequentially to the measures listed above: IAR+, IAR-, IAR Total, Rotter, NPI-Good, NPI-Bad, NPI-Total, RMIN, RMEX, DITP, EGND, RVGND, ECSD, RVCSD, and VOLRAT.

TABLE 2

Test Performance Comparisons of Subjects Classified According to Race

Measure	White (N=29) M	SD	Minority (N=11) M	SD	t[a]	p
IAR+	12.97	2.37	13.00	1.95	0.04	
IAR-	13.00	1.89	12.00	1.79	1.52	
IAR Total	25.97	3.27	25.00	3.16	0.84	
Rotter	10.90	4.20	10.55	3.96	0.24	
NPI - Good	39.21	6.93	41.18	4.49	0.87	
NPI - Bad	38.03	7.74	34.18	5.47	1.51	
NPI Total	77.24	13.65	75.36	7.65	0.43	
RMIN	27.07	7.38	29.09	6.75	0.79	
RMEX	31.10	6.62	34.73	5.62	1.61	
DITP	25.21	9.14	16.46	7.24	2.85	.007
EGND	7.41	5.04	9.91	6.22	1.31	
RVGND	9.17	7.07	7.91	7.18	0.50	
RCSD	9.35	5.53	9.91	7.42	0.26	
RVCSD	10.03	5.59	11.73	4.63	0.89	
VOLRAT	2.94	1.12	2.42	1.33	1.24	

[a] df = 38 for all measures

TABLE 3

Test Performance Comparisons of Subjects Classified According to Sex

Measure	Male (N = 28) M	SD	Female (N = 12) M	SD	t[a]	p
IAR+	12.82	2.58	13.33	1.07	0.66	
IAR-	12.43	1.85	13.42	1.88	1.54	
IAR Total	25.25	3.44	26.75	2.49	1.36	
Rotter	10.93	4.17	10.50	4.03	0.30	
NPI - Good	38.64	6.16	42.33	6.30	1.72	
NPI - Bad	37.00	7.28	36.92	7.78	0.03	
NPI Total	75.64	12.24	79.25	12.36	0.85	
RMIN	28.71	6.47	25.08	8.38	1.49	
RMEX	32.71	6.72	30.67	5.99	0.91	
DITP	21.50	8.88	25.83	10.39	1.34	
EGND	7.39	5.34	9.75	5.48	1.27	
RVGND	9.57	7.49	7.08	5.73	1.03	
ECSD	10.54	6.09	7.08	5.30	1.70	
RVCSD	9.61	5.13	12.58	5.45	1.65	
VOLRAT	2.69	1.29	3.05	0.91	0.89	

[a] *df* = 38 for all measures

TABLE 4

Test Performance Comparisons of Males Classified According to Race

Measure	White (N = 21) M	SD	Minority (N = 7) M	SD	t[a]	p
IAR+	12.76	2.70	13.00	2.38	0.21	
IAR-	12.52	1.81	12.14	2.12	0.46	
IAR Total	25.28	3.36	25.14	3.93	0.09	
Rotter	10.67	4.37	11.71	3.68	0.57	
NPI - Good	38.10	6.71	40.29	4.07	0.81	
NPI - Bad	37.52	7.69	35.43	6.11	0.65	
NPI Total	75.62	13.47	75.72	8.32	0.02	
RMIN	27.62	6.59	32.00	5.16	1.60	
RMEX	31.91	6.85	35.14	6.12	1.11	
DITP	23.67	8.29	15.00	7.77	2.43	.02
EGND	6.57	4.30	9.86	7.58	1.44	
RVGND	9.19	7.61	10.71	7.54	0.46	
ECSD	10.10	5.51	11.86	7.93	0.66	
RVCSD	9.14	4.99	11.00	5.69	0.82	
VOLRAT	2.81	1.26	2.33	1.42	0.84	

[a] *df* = 26 for all variables

TABLE 5

Test Performance Comparisons of Females Grouped According to Race

Measures	White (N = 8) M	SD	Minority (N = 4) M	SD	t[a]	p
IAR+	13.50	1.07	13.00	1.16	0.75	
IAR-	14.25	1.58	11.75	1.26	2.74	.02
IAR Total	27.75	2.32	24.75	1.50	2.33	.04
Rotter	11.50	3.89	8.50	4.04	1.24	
NPI - Good	42.13	7.06	42.75	5.38	0.15	
NPI - Bad	39.38	8.23	32.00	3.92	1.67	
NPI Total	81.51	14.10	74.75	7.46	0.88	
RMIN	26.63	9.52	24.00	6.63	0.30	
RMEX	29.00	5.86	34.00	5.42	1.43	
DITP	29.25	10.59	19.00	6.38	1.76	
EGND	9.63	6.41	10.00	3.74	0.11	
RVGND	9.13	5.84	3.00	2.71	1.96	
ECSD	7.38	5.42	6.50	5.80	0.26	
RVCSD	12.38	6.72	13.00	1.83	0.18	
VOLRAT	3.29	0.58	2.58	1.34	1.32	

[a] df = 10 for all measures

internal on the IAR- subscale and the IAR Total score than were female minorities.

Sex comparisons were made within each race with the following results. Female whites accepted responsibility for academic failure to a significantly greater degree than did white males (t = 2.37, df = 27, p <.03). Male minority subjects were significantly less intrinsically motivated on the ROI Intrinsic scale than female minority subjects (t = 2.24, df = 9, p <.05). A completed comparison of sexes within racial membership is contained in Table 6. The means and standard deviations upon which the t tests were based are found in Tables 4 and 5.

The first hypothesis was that lower levels of moral reasoning are positively correlated with an external locus of control and higher levels are similarly correlated with internality. Rest (1974) gave two methods for scoring the DIT: the P score, described above, and the stage score, which involves typing the subject according to his exceptional usage of one or more stages. Although Rest recommended usage of the P score, he acknowledged in a personal communication to Bloomberg (1974) that the stage scoring method might have some unrecognized advantages. The data were analyzed using both methods.

Pearson correlations were computed for the complete sample between P scores and the LOC measures. Level of moral judgment was found to be moderately and positively correlated with the following measures: IAR- (r = .28, p <.04), IAR Total (r = .26, p <.05), NPI - Good (r = .30, p <.03), and NPI - Total (r = .27, p <.05). These findings support the first hypothesis, i.e., that an internal LOC is associated with higher levels of moral reasoning. Standardized stage scores were then

TABLE 6

Sex Differences on Test Performance Within Racial Groups

Measures	Whites		Minority	
	t[a]	p	t	p
IAR+	0.74		0.00	
IAR-	2.37	.03	0.33	
IAR Total	1.90		0.19	
Rotter	0.47		1.35	
NPI - Good	1.43		0.86	
NPI - Bad	0.57		1.00	
NPI Total	1.04		0.19	
RMIN	0.64		2.24	.05
RMEX	1.06		0.31	
DITP	1.50		0.87	
EGND	1.49		0.03	
RVGND	0.02		1.94	
ECSD	1.19		1.17	
RVCSD	1.42		0.67	
VOLRAT	1.04		0.28	

[a]All comparisons were made by subtracting the M of females from the M of males. df = 27 for Whites and 9 for Minorities.

obtained for each subject by converting their raw stage scores to *z* scores with a conversion formula based on the DIT's normative sample. Using Rest's criteria, those subjects whose stage scores were at least 1 *SD* above the mean were included in the following correlational analysis of the DIT and LOC measures. The results are given in Table 7.

Internality on the Rotter and IARQ were inversely related to exceptional usage of Stage 2 moral reasoning. Internality had a positive relationship to Stages 5B and 6. Although there was not a strictly linear progression from negative to positive correlations as the table shifts from lower to higher stages, there is support at the highest and lowest levels of moral reasoning for the stated hypothesis.

The second hypothesis was that LOC and intrinsic-extrinsic religious motivation are positively related. To test this hypothesis the ROI intrinsic and extrinsic scales were correlated with the LOC measures. Inasmuch as the scoring rules for the ROI produce higher scores for subjects who are *less* intrinsically motivated on *both* intrinsic and extrinsic scales, the predicted relationship between LOC and religious motivation, if true, would appear as a negative correlation.

Table 8 gives the correlations and significance levels for the ROI intrinsic comparisons. The relationships are generally significant or near significance. The relationship appears strongest when the ROI is correlated to the IARQ and when the sample analyzed does not include racial minorities. Thus the data tend to support the hypothesized relationship between internal LOC and intrinsic religious motivation.

The results of correlating the ROI extrinsic scale with LOC measures, given in Table 9, indicate that the hypothesized relationship also held true for extrinsic motivation. However, overall, the correlations

TABLE 7

Correlations Between Defining Issues Test Standardized Stage Scores (Where $z \geq 1.0$) and Measures of Locus of Control

Measure	Stage 2 (N=16)	3 (N=23)	4 (N=22)	5A (N=19)	5B (N=12)	6 (N=13)
IAR+	-.34*	.11	-.01	-.01	.45*	.07
IAR-	-.38*	-.31*	.06	-.07	.29	.25
IAR Total	-.49**	-.10	.02	-.04	.40*	.20
Rotter	-.49**	.07	-.22	-.10	-.04	.60**
NPI - Good	-.18	-.02	-.07	-.16	.62**	.48**
NPI - Bad	-.37*	.09	-.18	.19	.44*	.21
NPI Total	-.32	.04	-.14	.03	.58**	.36

*$p < .10$ **$p < .05$

TABLE 8

Correlations Between Intrinsic Religious Motivation and Locus of Control Measures

Measure	Pearson r				Significance			
	Full Sample		Whites Only		Full Sample		Whites	
	(N=40)	(N=32)	(N=17)	(N=6)				
	In[a]	Out[b]	Male Out[b]	Female Out[b]	In	Out	Male Out	Female Out
IAR+	-.29	-.34	-.56	-.89	.04	.03	.01	.009
IAR-	-.34	-.35	-.56	-.75	.02	.03	.009	.05
IAR Total	-.40	-.42	-.72	-.93	.005	.008	.001	.003
Rotter	-.24	-.26	-.52	-.28	.07	.07	.02	---
NPI - Good	-.31	-.34	-.39	-.51	.02	.03	.06	---
NPI - Bad	-.25	-.21	-.20	-.74	.06	---	---	.05
NPI Total	-.31	-.30	-.30	-.69	.03	.05	---	.07

[a]In = Indiscriminately pro-religious subjects included in sample.

[b]Out= Indiscriminately pro-religious subjects excluded from sample.

TABLE 9

Correlations Between Extrinsic Religious Motivation and Locus of Control Measures

Measure	Pearson r				Significance			
	Full Sample		Whites Only		Full Sample		Whites Only	
	(N=40) In[a]	(N=32) Out[b]	(N=17) Male Out[b]	(N=6) Female Out[b]	In	Out	Male Out	Female Out
IAR+	-.15	-.14	-.04	-.58	---	---	---	---
IAR-	-.33	-.40	-.55	-.35	.02	.01	.01	---
IAR Total	-.30	-.31	-.31	-.51	.03	.04	---	---
Rotter	-.15	-.25	-.30	-.64	---	.08	---	.08
NPI - Good	-.24	-.24	-.30	-.60	.07	.09	---	---
NPI - Bad	-.13	-.10	-.07	-.32	---	---	---	---
NPI Total	-.20	-.18	-.19	-.47	---	---	---	---

[a]In = Indiscriminately pro-religious subjects included in sample.

[b]Out= Indiscriminately pro-religious subjects excluded from sample.

weren't as strong and they were generally strongest for the sub-samples including minorities. The strongest relationship was, once again, between religious motivation and IAR-.

The third and fourth hypothesized relationships investigated were that LOC and religious motivation each accounted for a significant amount of the correlation between moral judgment and ethical behavior. The first step in analyzing the data pertaining to the third and fourth hypotheses was the factor analysis of the measures employed in this study. The IAR and NPI Total scores were excluded from the analysis inasmuch as they were completely determined by the sub-scale scores. Five factors were identified. Table 10 gives the eigenvalues and variance percentages for these factors. Factor loadings for these measures, after a varimax rotation, are listed in Table 11. The table indicates that four measures of locus of control and one of ethical behavior have their highest loadings on the first factor. The fourth factor contains a cluster of five measures with their highest loadings on it. This factor incorporates at least one measure of each of the variables studied in this investigation: locus of control, religious motivation, level of moral judgment, and ethical behavior.

Allport and Ross (1967) reported that the inclusion of subjects who were indiscriminately pro-religious (i.e., scored at least 12 points less on the ROI Intrinsic scale than on the Extrinsic scale) obscured the trends or diminished the statistical significance of their data. Twenty percent of the subjects in the present study were classifiable as InPR. To see what effect, if any, these subjects had on the first factor analysis, another analysis was done with these eight subjects excluded. Five factors were again identified. Their eigenvalues and

TABLE 10

Eigenvalues and Amount of Variance Accounted for by Five Factors Underlying Test Battery

Factor	Eigenvalue	Variance %
1	3.10	46.9
2	1.27	19.2
3	1.00	15.2
4	0.74	11.2
5	0.49	7.5

TABLE 11

Factor Loadings of Tests on Five Factors

Underlying Test Battery

Measure	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
IAR+	.68	.01	.03	.02	.13
IAR-	.23	.21	.04	.42	.12
Rotter	.73	.06	.09	.13	.02
NPI - Good	.80	.09	.00	.15	.02
NPI - Bad	.69	.04	.00	.26	.02
RMIN	.24	.13	.44	.70	.20
RMEX	.13	.77	.03	.21	.03
DITP	.15	.11	.02	.43	.13
EGND	.46	.41	.07	.02	.18
RVGND	.09	.13	.77	.09	.21
ECSD	.09	.10	.36	.39	.00
RVCSD	.08	.02	.16	.03	.84
VOLRAT	.08	.05	.05	.46	.04

variance percentages are listed in Table 12. The results of the exclusion of these subjects from the factor analysis, with varimax rotation, are shown in Table 13. The effects of this exclusion were several. First, four of the five measures loading highest on Factor 1 in the first analysis had their loadings increased on Factor 1, second analysis. Second, the theoretical significance of the cluster of factors on Factor 2, second analysis, is similar to the factor cluster on Factor 4, first analysis. The effect of the exclusion was to double the eigenvalue and increase the amount of variance accounted for from 11.2 to 20.1% for what are essentially similar factors. Third, in the second analysis, intrinsic religious motivation and volunteerism were differentiated from the variables in Factor 2.

Inasmuch as white subjects scored significantly higher than minority subjects on the DIT (see Table 2) and the DIT scores would have an important role in subsequent analyses, a third and fourth factor analyses were done. The third analysis included all white subjects. Table 14 gives the eigenvalues and variance percentage for the four factors identified in this analysis. The factor loadings, after a varimax rotation, are given in Table 15.

A comparison of Tables 10, 11, 14, and 15 showed that the elimination of minority subjects from the sample had the following effects: 1) The largest factor continued to be the LOC factor. The loadings for intrinsic and extrinsic religious motivation and volunteerism have all increased in their original directions. 2) The level of moral judgment measure (DITP) now loaded highest on the LOC factor. 3) The amount of variance accounted for by this factor increased from 46.9 to 55.3%, an absolute increase of 8.4% corresponding to an increase of 17.9% relative

TABLE 12

Eigenvalues and Amount of Variance Accounted for by Five Factors Underlying Test Battery with Indiscriminately Pro-Religious Subjects Excluded

Factor	Eigenvalue	Percentage of Variance
1	3.38	44.2
2	1.53	20.1
3	1.09	14.3
4	0.95	12.5
5	0.69	9.0

TABLE 13

Factor Loadings on Five Factors Underlying Test Battery with Indiscriminately Pro-Religious Subjects Excluded

Measure	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
IAR+	.73	-.06	.11	.21	.13
IAR-	.26	-.38	.04	.13	.26
Rotter	.76	-.19	.18	-.04	-.08
NPI - Good	.74	-.14	.04	.10	.00
NPI - Bad	.80	-.10	.07	.00	-.08
RMIN	-.29	.45	.26	-.71	.07
RMEX	-.07	.92	-.12	-.02	.03
DITP	.22	-.27	.00	.07	.09
EGND	.56	.33	-.01	.12	.28
RVGND	.15	.38	.36	-.11	-.26
ECSD	-.19	.14	-.89	-.16	-.05
RVCSD	.02	-.10	-.00	-.16	.84
VOLRAT	.04	.01	.19	.65	-.08

TABLE 14

Eigenvalues and Amount of Variance Accounted for by Four Factors Underlying Test Battery, Using White Subjects' Data Only

Factor	Eigenvalue	Percentage of Variance
1	3.80	55.3
2	1.24	18.1
3	1.01	14.7
4	0.82	11.9

TABLE 15

Factor Loadings on Four Factors Underlying

Test Battery, Using White Subjects' Data Only

Measure	Factor 1	Factor 2	Factor 3	Factor 4
IAR+	.67	.22	-.01	.05
IAR-	.17	.64	.24	-.33
Rotter	.74	.19	-.05	-.15
NPI - Good	.97	.06	-.17	-.15
NPI - Bad	.75	.20	.18	.05
RMIN	-.43	-.69	-.16	.00
RMEX	-.24	-.04	-.04	.65
DITP	.35	.24	.06	-.05
EGND	.36	.08	.16	.41
RVGND	.05	-.18	-.65	.18
ECSD	-.12	-.42	.67	.16
RVCSD	.08	.05	.39	.06
VOLRAT	.19	.63	-.17	.22

to the original variances. 4) The cluster of variables on Factor 4, first analysis, was similar to Factor 2, third analysis. Table 15 shows that on reanalysis Factor 2 loadings for IAR-, ECSD, and VOLRAT increased, while RMIN remained the same and DITP declined. 5) With minority subjects excluded the second factor now accounted for 18.1% of the variance rather than 11.2% accounted for by Factor 4, first analysis. This represented an absolute increase of 6.9% corresponding to an increase of 61.5% relative to the original variance.

The results of the fourth factor analysis, excluding InPR white subjects, are given in Tables 16, eigenvalues and variance percentages, and 17, factor loadings.

A comparison of Tables 10, 11, 16, and 17 showed that this subsample differed from the full sample in the following ways: 1) The LOC factor accounted for 51.4% versus 46.9% of the variance in the full sample, an absolute increase of 4.6% corresponding to an increase of 9.6% relative to the original variance. 2) The moral judgment measure (DITP) now loaded highest on the LOC factor. 3) The cluster of factors loading highest on Factor 4, first analysis, was similar to those loading highest on Factor 2, fourth analysis. 4) This latter factor accounted for 18.8% of the variance versus only 11.2% by the former factor, an absolute increase of 7.6% corresponding to an increase of 67.9% relative to the original variance.

One purpose of these factor analyses was to ascertain whether or not measures of LOC, moral judgment, religious motivation, and ethical behavior shared some common underlying factor. These initial results indicate that they do. In the introduction to this study it was suggested that LOC and religious motivation are intervening variables

TABLE 16

Eigenvalues and Amount of Variance Accounted for by Four Factors Underlying Test Battery, Using Data Provided by White Subjects Who Are Not Indiscriminately Pro-Religious

Factor	Eigenvalue	Percentage of Variance
1	3.96	51.4
2	1.45	18.8
3	1.25	16.2
4	1.04	13.6

TABLE 17

Factor Loadings on Four Factors Underlying Test Battery, With Data of Racial Minorities and Indiscriminately Pro-Religious Subjects Excluded

Measure	Factor 1	Factor 2	Factor 3	Factor 4
IAR+	.68	.29	-.09	.13
IAR-	.16	.65	.27	-.37
Rotter	.76	.15	-.12	-.18
NPI - Good	.97	.00	-.19	-.12
NPI - Bad	.82	.07	.02	.01
RMIN	-.46	-.70	-.11	.08
RMEX	-.27	-.22	-.15	.81
DITP	.36	.17	.14	-.02
EGND	.42	.26	.17	.55
RVGND	.02	-.12	-.54	.16
ECSD	-.16	-.31	.72	.25
RVCSD	.01	.03	.35	-.01
VOLRAT	.08	.69	-.45	.21

linking moral judgment to ethical behavior. The general procedure, then, in all the statistical analyses pertaining to Hypotheses Three and Four, was to ascertain the partial correlation between moral judgment (DITP) and moral behavior (EGND, RVGND, ECSD, RVCSD, or VOLRAT) with LOC (IAR+, IAR-, Rotter, NPI-Good, or NPI-Bad) and/or religious motivation (RMIN or RMEX) excluded. This partial correlation was then compared to the original, zero-order correlation.

Partial correlations were obtained by the following means. For each combination of measures analyzed, two regression analyses, with stepwise solutions, were done. In the first, moral judgment was the dependent variable. Similarly, a moral behavior measure was the dependent variable in the second analysis. The joint effect of these two analyses was to obtain residuals for each dependent variable which were free of any association with each other and the LOC and/or religious motivation measure common to both equations. For example, in Table 19 below, the first regression variables series studied was "DITP, IAR+, EGND." A residual DITP score was obtained for each subject with IAR+ and EGND partialled out. Then a residual EGND score was obtained with DITP and IAR+ partialled out. These residuals were then correlated by means of a Pearson r. This r represents the degree of association between DITP and EGND with the common variance they shared with IAR+ eliminated. This partial correlation was, as mentioned above, then compared to the zero-order correlation to determine what effect partialling out a particular measure had on the original relationship.

Table 18 gives the zero-order correlations between level of moral judgment (DITP) and five measures of moral behavior. The correlations

TABLE 18

Zero Order Correlations Between Level of Moral Judgment and Five Measures of Moral Behavior

DITP With	Zero-Order Correlations							
	FS	FS-Out	White	White-Out	MW	MW-Out	FW	FW-Out
EGND	.00	.06	.18	.31**	-.05	.12	.37	.41
RVGND	-.07	-.06	.01	.03	.24	.33**	-.68*	-.69**
ECSD	-.19	-.09	-.14	-.05	-.15	-.06	.06	.09
RVCSD	.15	.13	.14	.10	.01	-.18	.16	.20
VOLRAT	.17	.06	.16	.03	.00	-.23	.72*	.83*

Note. FS = Full Sample; FS-Out = Full Sample, InPR Excluded; White-Out = White Subjects, InPR Excluded; MW = Male Whites; MW-Out = Male Whites, InPR Excluded; FW = Female Whites; FW-Out = Female Whites, InPR Excluded. The same notation will be used in succeeding tables.

* $p < .05$

** $p < .10$

TABLE 19

Partial Correlation Analyses of Measures Defining Factor 1, Third and/or Fourth Factor Analysis, Using Data of White Subjects With Indiscriminately Pro-Religious Excluded

Regression Variables Series	Residuals' r*	Significance
DITP, IAR+, EGND	-.28	.10
DITP, Rotter, EGND	-.27	--
DITP, NPI-Good, EGND	-.22	--
DITP, NPI-Bad, EGND	-.21	--
DITP, RMIN, EGND	-.23	--
DITP, RMEX, EGND	-.37	.04
DITP, RMIN, RMEX, EGND	-.30	.08
DITP, IAR+, RMIN, EGND	-.24	--
DITP, IAR+, RMEX, EGND	-.35	.05
DITP, IAR+, RMIN, RMEX, EGND	-.30	.08
DITP, Rotter, RMIN, EGND	-.23	--
DITP, Rotter, RMEX, EGND	-.30	.08
DITP, NPI-Good, RMIN, EGND	-.18	--
DITP, NPI-Good, RMEX, EGND	-.27	--
DITP, NPI-Bad, RMIN, EGND	-.17	--
DITP, NPI-Bad, RMEX, EGND	-.21	--
DITP, NPI-Bad, RMIN, RMEX, EGND	-.27	.10

*Two separate residuals were calculated using the first and last measure in each series as the dependent variable in a multiple regression equation.

are generally very low and insignificant. For the two female sub-samples, significant relationships exist between DITP and VOLRAT (r = .72, p <.02; r = .83, p <.02, respectively) and between DITP and RVGND (r = -.68, p <.03; r = -.69, p <.07, respectively). Correlations between DITP and EGND approached significance for the white sample, InPR subjects excluded (r = .31, p <.08) and between DITP and RVGND for the male white sub-sample with the InPR subjects excluded (r = .33, p <.10).

Thus far we have seen that the exclusion of the indiscriminately pro-religious and/or minority subjects had a noticeable effect on the factor analytic structure of the data. These factor analyses suggested various combinations of measures to study by means of partial correlation analysis. Identical statistical procedures were used to test the hypotheses that locus of control (Hypothesis Three) and religious motivation (Hypothesis Four) account for a significant portion of the correlation between moral judgment and ethical behavior. It was also of interest to see how LOC and religious motivation interacted with each other to influence this relationship. Therefore, for ease of comparison, the results bearing on each of these hypotheses are presented together.

Factor 1 of the third and fourth factor analyses were very similar and they were studied first. Table 19 shows the partial correlations and levels of significance for moral judgment and ethical behavior. EGND was chosen as the measure of behavior to incorporate in the analyses because it had the highest loading on Factor 1 (See Tables 15 and 17) of any of the moral behavior measures. All combinations of LOC and religious motivation measures which had their highest or second

highest loadings on Factor 1 were analyzed in relationship to DITP and EGND. For the complete white sub-sample, DITP had non-significant correlations with EGND as well as the four other measures of moral behavior. Partialling out the measures listed in Table 18 from this relationship had no significant effect. However, with the exception of the last combination of measures in Table 18, all the partial correlations were negative for this white sub-sample.

When the indiscriminately pro-religious were excluded from the white sub-sample, the negative correlation between each pair of residuals increased and several were or approached significance. The zero order r for DITP and EGND, with InPR subjects excluded, approached significance (r = .31, p <.08) so the partialling out had an important effect on the relationship between DITP and EGND.

The EGND score is a difference score. Subjects with low scores tended not to allow the expectancy of success in stealing money in the BPS moral dilemmas to influence their ethical predictions. Thus the results indicated that subjects who were not influenced by the probability of successfully committing a crime tended to use higher levels of moral reasoning in making moral decisions on the DIT.

The strongest measure intervening between DITP and EGND was extrinsic religious motivation (partial r = .37, p <.04). There are trends in the data which suggest that some aspect of IAR+, acceptance or responsibility for academic success, also mediated the relationship between moral judgment and behavior.

Factor 2 on the third and fourth factor analyses are similar, with IAR-, RMIN, and VOLRAT having their highest loadings and ECSD and IAR+ their second highest loadings, on this factor (See Tables 15 and 17).

As mentioned above, there were no significant zero-order correlations between DITP and the five measures of moral behavior when all whites were included in the white sub-sample. With the InPR subjects excluded, the zero-order r approached significance for DITP and EGND, but no other combinations of moral behavior and DITP did so. It was not surprising therefore that partialling out the variation attributable to IAR+, IAR-, and RMIN had no significant effect on the relationship between DITP and ECSD or VOLRAT.

Inasmuch as white female subjects scored significantly higher ($t = 2.37$, $df = 27$, $p < .03$) than white males on the IAR-, the possibility was considered that combining the data of male and female whites obscured trends in the data. Factor 2 did not appear to be a LOC factor because all other LOC measures loaded very high on Factor 1 and low on Factor 2. Therefore, the sex difference in IAR- scores was considered a highly salient aspect in the analysis of Factor 2.

Factor analyses were done for the following sub-samples: male whites; male whites, InPR excluded; and female whites. It was not possible to do a principal factor analysis for female whites with the InPR excluded because after the first iteration the communality exceeded 1.0. The factor in each of these analyses which had IAR- and RMIN loading highest on it was then examined by the partial correlation analysis procedure described above, for the influence of IAR- and/or RMIN on the relationship between level of moral judgment and ethical behavior. All sub-samples, including female white with the InPR excluded, were then examined for each combination of measures, even if its own factor analysis did not suggest such a combination. This allowed a more complete identification of the sex variable's influence on the test measures as

well as an opportunity to detect unsuspected relationships among the several measures of LOC and religious motivation.

Table 20 shows the results of the partial correlation analysis of various combinations of measures derived from the factor analyses of the two white male sub-samples. There is a definite trend in the data suggesting that when IAR- and/or religious motivation scales were eliminated, the relationship between moral judgment and behavior was negative for males and positive for females. Keeping in mind that RVGND is a difference score, the inverse relationship between the two measures signifies that male subjects who tended not to let the size of anticipated gain influence their predictions of unethical behavior also tended to use higher levels of moral reasoning. This inverse relationship was in the hypothesized direction. The positive relationship found between DITP and RVGND after LOC and/or religious motivation were partialled out does not conform in any simple manner to expectations.

The table also indicates that the above-mentioned trend becomes stronger when InPR subjects are excluded from the sample. Also, it is generally stronger for females than males.

It is important to note that the zero-order correlations for the male and female white sub-samples are in opposite directions. That is, zero-order correlations for white males were moderately positive and approached significance with the InPR subjects excluded. They became moderately negative and approached significance when IAR-, RMIN, and/or RMEX were partialled out. For the female white sub-samples, the zero-order correlations were relatively high, negative, and significant; the partial correlations generally became positively correlated and highly significant or approached significance.

TABLE 20

Partial Correlation Analyses of Moral Reasoning and Ethical Behavior Measures Associated with the Highest Factor Loadings Obtained by the Intellectual Achievement Responsibility Questionnaire (Negative Events) and the Religious Orientation Inventory in Factor Analyses of Data Provided by White, Male Subjects

Regression Variables Series	Correlation of Residuals[a,b]				Significance			
	MW[c]	MW-Out	FW	FW-Out	MW	MW-Out	FW	FW-Out
DITP, IAR-, RVGND	-.30	-.37	.68	.68	.09	.07	.03	.07
DITP, RMIN, RVGND	-.24	-.34	.57	.43	--	.09	.07	--
DITP, RMEX, RVGND	-.24	-.35	.87	.91	--	.09	.002	.006
DITP, IAR-, RMIN, RVGND	-.33	-.44	.58	.18	.07	.04	.07	--
DITP, IAR-, RMEX, RVGND	-.29	-.36	.88	.90	.10	.08	.002	.007
DITP, IAR-, RMIN, RMEX, RVGND	-.33	-.33	.86	-.18	.07	.10	.003	--
DITP, RMIN, RMEX, RVGND	-.23	-.38	.86	.70	--	.07	.003	.06

[a]The zero-order correlation and its significance level for DITP and RVGND for the four sub-samples were $r = -.24$, $p > .05$; $r = .33$, $p < .10$; $r = -.68$, $p < .03$; $r = -.69$, $p < .07$ respectively.

[b]Two separate residuals were calculated using the first and last measure in each series as the dependent variable in a multiple regression equation.

[c]See Table 18 for explanation of abbreviations.

The female white sub-sample was then factor analyzed preparatory to a partial correlation analysis of its factors. This factor analysis produced factor structures which were in some ways quite different from the factor structure of white males. The factor analyses of the male and female white sub-samples, with the InPR subjects included, are presented prior to the partial correlation analysis because it will aid in the interpretation of the results in the next section.

The eigenvalues and variance percentages for these analyses are combined in Table 21. Five factors were isolated for both sub-samples. For ease of comparison, the factor loadings for each sub-sample are given side by side in Table 22. Both sub-samples have a strong LOC factor (Factors 1 and 2, respectively), although for females DITP and RMEX loaded much higher on this factor than for males. For males, this factor accounted for 43.2% of the variance versus only 21.2% for females. Both sub-samples also have a factor defined largely by IAR- and RMIN (Factors 2 and 3, respectively). For females, however, VOLRAT also loaded highest on this factor and DITP was also much stronger. Finally, the largest factor for the female sub-sample was characterized by NPI-Bad, DITP, and RVGND, with IAR+, RMIN, and VOLRAT having their second highest loadings on this factor. The composition of Factors 1 and 3 for the female whites have some theoretical similarities which will be discussed in the following section.

The test measures selected for partial correlation analysis as a result of this last factor analysis are listed in Table 23. For males, the correlation of residuals approaches significance ($.10 > p > .05$) in six instances when the InPR subjects were excluded. Invariably, the relationship between moral reasoning and ethical behavior was negative

TABLE 21

Eigenvalues and Amount of Variance Accounted for by Factors Underlying Performance of White Subjects on Test Battery

Factor	Eigenvalues		Variance Percentage	
	Male Whites	Female Whites	Male Whites	Female Whites
1	3.64	5.52	43.2	46.2
2	1.64	2.53	19.5	21.2
3	1.35	1.96	16.1	16.4
4	1.05	1.08	12.5	9.0
5	0.73	0.85	8.7	7.1

TABLE 22

Factor Loadings Obtained in Separate Factor Analyses of Performances of Male and Female White Subjects (N=21 and 8, Respectively)

Measure	Factor 1		Factor 2		Factor 3		Factor 4		Factor 5	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
IAR+	.68	.47	.10	.73	-.02	.45	.24	.15	.06	.08
IAR-	.07	.10	.82	.06	-.09	.92	.03	.20	-.34	-.12
Rotter	.80	-.06	.41	.94	.14	-.11	.04	.19	-.10	-.05
NPI-Good	.93	.29	.08	.69	.16	.04	-.02	.11	.02	-.64
NPI-Bad	.89	.76	.03	.22	-.31	.29	.07	-.08	.14	-.47
RMIN	-.28	-.50	-.82	-.37	.08	-.61	-.25	-.13	-.28	.27
RMEX	-.18	.08	-.16	-.62	.08	.30	.17	.34	.38	.02
DITP	.23	.68	-.01	.50	.24	.51	-.02	.11	-.13	.13
EGND	.24	.13	.04	.14	.07	.14	-.04	.93	.86	.03
RVGND	.08	-.93	-.23	.18	.76	-.17	.08	-.07	.19	-.19
ECSD	-.12	-.16	-.17	-.05	-.57	.03	-.37	.80	.05	.56
RVCSD	.14	.19	.02	.04	-.40	-.25	.09	.30	-.05	.83
VOLRAT	.15	.46	.15	.04	.02	.86	.96	-.16	.09	-.14

TABLE 23

Partial Correlation Analyses of Measures of Moral Reasoning and Ethical Behavior Associated with Locus of Control and Religious Motivation on Factors 1, 2, and 3 Obtained from the White, Female Sub-Sample

Regression Variables Series	Residuals' r[a]				Significance			
	MW[b]	MW Out	FW	FW Out	MW	MW Out	FW	FW Out
DITP, NPI-Bad, RVGND	-.28	-.35	.39	.37	---	.09	---	---
DITP, NPI-Bad, VOLRAT	.04	.24	-.46	-.65	---	---	---	.08
DITP, RMIN, VOLRAT	-.04	.18	-.26	.72	---	---	---	.05
DITP, IAR+, RVGND	-.24	-.34	.77	.82	---	.09	.01	.02
DITP, Rotter, RVGND	-.25	-.32	.85	.86	---	.10	.004	.02
DITP, NPI-Good, RVGND	-.22	-.31	.75	.76	---	---	.02	.04
DITP, IAR+, VOLRAT	.03	.24	-.51	-.80	---	---	.10	.03
DITP, Rotter, VOLRAT	.06	.29	-.82	-.92	---	---	.006	.005
DITP, NPI-Good, VOLRAT	.03	.26	-.71	-.83	---	---	.02	.02
DITP, NPI-Bad, RMIN, RVGND	-.27	-.36	.45	.38	---	.08	---	---
DITP, NPI-Bad, RMIN, VOLRAT	.02	.17	-.18	.75	---	---	---	.04
DITP, IAR+, RMIN, RVGND	-.23	-.33	.78	.89	---	.10	.01	.009
DITP, IAR+, RMIN, VOLRAT	.01	.20	-.62	.35	---	---	.05	---
DITP, Rotter, RMIN, VOLRAT	-.03	.19	-.52	.61	---	---	.10	.10
DITP, Rotter, RMIN, RVGND	-.22	-.33	.74	.95	---	.10	.02	.002

[a]Two separate residuals were calculated using the first and last measure in each series as the dependent variable in a multiple regression equation.

[b]See Table 18 for explanation of abbreviations.

when the effects of LOC and religious motivation were partialled out. Furthermore, in each of these instances, the relationship between DITP and RVGND moved from a moderately positive relationship to a moderately negative one. All in all, there is some support for the Third and Fourth hypotheses, but is far from being conclusive.

The results were more complicated for white female subjects. A close inspection of Table 23 reveals the following: 1) In six instances, when a LOC measure was partialled out from a DITP-RVGND correlation, the zero-order _r_ changed from a significant or near-significant negative relationship to a significant positive _r_. Given that the RVGND is a difference score, the negative zero-order _r_ signifies a positive relationship between level of moral judgment and ethical behavior. Thus, the positive relationship between moral judgment and behavior is attributable to common LOC variation, inasmuch as the partial _r_ reverses the relationship. 2) In seven instances, when VOLRAT was used as the measure of moral behavior and LOC was partialled out, the significant, positive relationship between moral judgment and volunteerism changed to become significantly negative. Thus, the positive relationship which was found to exist between DITP and VOLRAT in accordance with Hypothesis Three is attributable once again to the LOC measure. 3) When a religious motivation scale was partialled out from the DITP-VOLRAT relationship, the partial _r_ remained significantly positive as was the zero-order _r_. 4) When both LOC and religious motivation measures were partialled out from the DITP-VOLRAT relationship, in two instances, both occurring in the female white sub-sample including the InPR, the relationship between moral judgment and behavior changed

from a positive one to a negative one. Given the fact stated just previously, that partialling out religious motivation from this same relationship did not affect its significant, positive nature, one may infer that the additional removal of the variation attributable to LOC was responsible for the change in correlational sign. In two instances, the additional removal of the LOC variation did not effect the DITP-VOLRAT relationship. It is important to note, however, that both these instances occurred with the female white sub-sample excluding the InPR subjects. 5) When both LOC and religious motivation were partialled out from the DITP-RVGND relationship, in four instances in which the residual r was significant, it was always positive. Following the same process of explication in point one above, support for the Third and Fourth hypotheses may be drawn from these findings.

In short, there is evidence of a definite patterning of results for females depending on which measure represented moral behavior and whether or not LOC or religious motivation was partialled out. The results for male whites were also inspected and a definite patterning was also found in the six instances approaching significance: The negative partial r always occurred when RVGND was the measure of moral behavior and a LOC measure was partialled out. The exclusion of a motivation measure with the LOC measure did not change the directionality of the correlation. The results then for both males and females generally support the Third and Fourth hypotheses.

To summarize the data pertaining to hypotheses Three and Four, factor analyses identified two major factors: a LOC factor and a second factor underlying moral reasoning and behavior. These factors became stronger when only white subjects were considered. Sex differ-

ences exist in the data insofar as more substantial support for the hypotheses was found in the female sub-samples than in the white male samples.

CHAPTER IV

DISCUSSION

The results of correlating DIT stage scores with LOC measures provide support for the hypothesis that an internal LOC is associated with higher levels of moral reasoning and, conversely, that externality is associated with lower levels. It is suggested that this relationship exists because performance on both measures depends on to whom the subject attributes responsibility for his experiences. An internal subject accepts personal responsibility for the important events in his life. Thus, in moral dilemmas he is likely to focus on his responsibility for the ethical quality of his interactions with other people and with society. The external attributes responsibility for what befalls him to his social environment or impersonal forces, rather than his personal behavior. Thus, in making moral judgments, he is likely to be influenced more substantially by environmental factors rather than considerations of personal responsibility.

Rest (1974a) gave the following statement as a prototypic example of Stage 1 reasoning on the Heinz story: "You shouldn't steal the drug because you'll get caught and sent to jail if you do." For this person the locus of behavioral control resides in forces external to the self. Elsewhere, Rest (1973) gave the following statement as an example of Stage 6 reasoning on the same story: "...The right course of action can only be the one which is consistent with Heinz' sense of justice to all

people concerned. Heinz ought to act. . .according to what he conceives an ideally just person would do. . . ." Here, too, the person decides against stealing the drug. However, the Stage 6 person, unlike the Stage 2 person, focuses his attention on his conception of what is entailed by ideal social relationships. Both internal and external focus on the consequences of their action and attend to other persons in their environment. The difference is that the external is concerned with the potential power and influence the environment will exercise upon him as a result of his action while the internal is concerned with the impact that his behavior will have upon others.

Bloomberg (1974) hypothesized that there might be a curvilinear relationship between LOC and moral judgment insofar as Stages 1 and 2 reflect narrow self-interests, Stages 3 and 4 focus on environmental forces for definitions of morality, and Stages 5 and 6 reflect self-chosen ethical principles. The results of his study do not support this curvilinear hypothesis nor do the results of this study. The finding of a positive relationship between externality and Stage 2, and internality and Stages 5b and 6 suggests a linear relationship. However, there is a great deal of scatter or inversions of directionality for the correlations in Table 7 as the level of moral reasoning progresses. Inasmuch as these stages represent a continuum and a very limited number of cases were available for each stage (N ranged from 9 to 18), it is possible that significant results were only obtained for the extremes of the continuum. A replication of this aspect of the study with a much larger N for each stage would help establish the linearity or curvilinearity of the relationship between LOC and level of moral judgment.

It is also possible that Arbuthnot's (1973) finding of a non-significant, negative correlation between these two variables for a sample of 50 subjects might be attributable to the scoring method employed to obtain an index of moral judgment. Arbuthnot did not specify in his brief report whether he used Kohlberg's moral interview or Rest's DIT, nor whether or not he used a composite score of post-conventional stages of reasoning as the index of moral judgment. If a composite score was used, given the scatter occurring between the intermediate stages of moral reasoning and the Rotter (See Table 7), it is possible that Stages 5a and 5b would obscure significant trends in the extreme stages.

The second hypothesis was that intrinsic-extrinsic religious motivation and internal-external LOC are moderately and positively correlated. The results of correlating the intrinsic ROI scale with the LOC measures provide strong support. The evidence is generally much weaker for the correlations involving the extrinsic motivation scale.

For both sets of correlations the hypothesized relationship holds true even for the full sample, whether or not the InPR subjects are excluded. The correlations which are significant range from -.29 to -.40. Inasmuch as the ROI was scored in the opposite direction of the LOC measures, the negative sign signifies a positive relationship. Although the exclusion of the InPR subjects has a limited effect of strengthening the hypothesized relationship, when racial minorities are excluded together with the InPR subjects, and the white sample is classified according to sex, the hypothesized relationship becomes much stronger. Significant correlations for white males range from -.30 to

-.72. For females the range is from -.74 to -.93. In addition to the difference in these correlations, female minorities are more intrinsically motivated than male minorities (t = 2.24, df = 9, p <.05). Thus, the data corroborate the findings of Strickland and Shaffer (1971) on two points: 1) A significant positive relationship exists between the Rotter and ROI. 2) Women tend to be more intrinsically motivated than men.

The magnitude of the correlations for white females raises the possibility that the two constructs are very similar to each other. Although it was not possible to do a factor analysis for females with the InPR subjects excluded, examination of Table 22 indicates that on the factor analysis for all white females, intrinsic religious motivation does not have its highest loading on the LOC factor. It does have a moderate loading on the LOC factor which is consistent with the suggestion of Phares (1976) and Midlarsky and Midlarsky (1973) that the LOC variable includes a motivational component. The extrinsic scale does have its highest loading on the LOC factor, but the correlations between the ROI extrinsic scale and LOC measures for white females (See Table 9) are much weaker than the ROI intrinsic correlations. Additional research is necessary to clarify the relationship between the LOC and religious motivation constructs. Inasmuch as the available evidence suggests that intrinsic and extrinsic religious motivation are separate dimensions rather than ends of one continuum (Hunt & King, 1971), it is possible that LOC does not stand in the same relationship to each of these other constructs.

The results pertaining to the Third and Fourth hypotheses are many, varied, and complex. To facilitate their full explication, a

brief review of the investigator's position regarding the relationship between cognitive-developmental and social learning theories of moral development might be helpful. The results will then be discussed in their order of presentation and related to previous research and the investigator's general position.

Cognitive-developmental theorists have focussed much attention on the maturation of intellectual functioning as it pertains to moral reasoning, and then moved forward, as it were, to account for moral behavior. Social learning theorists, on the other hand, have looked at situational factors influencing moral behavior and then moved backward, as it were, to conceptualize the moral decision-making process. The position taken here by the present investigator is that the cognitive-developmental, situational, and prior history aspects of moral development are interrelated. They all are interwoven within the human personality so it is to personality and/or motivational constructs that one must look for an adequate explanation of whatever consistency exists between moral judgments and ethical behavior.

The first four factor analyses presented above deal with the total sample, first including, then excluding the InPR subjects; and then only with white subjects, first including, then excluding the InPR subjects (See above Tables 11, 13, 15, and 17, respectively). In each instance the largest factor is defined by IAR+, Rotter, NPI-Good, and NPI-Bad. The amount of variance accounted for by this factor ranges from 44.2 to 55.3% in these analyses. In the first two analyses EGND also has its highest loadings on this factor. This factor is definitely an LOC factor, probably reflecting the individual's belief in his ability to affect the outcome of the important events in his life.

Thus, for the subject who believes in his ability to achieve academic success (IAR+), the probability of accomplishing one's goal is an important consideration in predicting whether or not an individual will steal (EGND). Both the NPI-Good and NPI-Bad load very high on this factor, which is not entirely consistent with the interpretation that this factor reflects the subject's belief in his ability to succeed. However, the fact that these two NPI subscales are not finely differentiated is consistent with the fact that these two experimental subscales correlated .60 with each other in previous research (Youkelis & Ravelle, 1975). The composition of this LOC factor supports the findings of Mirels (1970) and Collins (1974) that the largest factor subsumed in the Rotter is a belief in one's ability to control the course of one's life in what is often a very difficult world.

Hunt and King (1971) maintain that implicit in Allport's intrinsic-extrinsic religious motivation concept is the operation of a stable, cognitive style. Rotter et al. (1972) acknowledged the role cognitive process can play in changing the effect of the determinants of locus of control. Furthermore, Joe (1971) reviewed several studies which demonstrated that white middle-class subjects scored more internally on the Rotter than did lower-class minorities. Given these findings, it is of interest that when minority subjects are eliminated from the present sample, the loadings of RMIN and DITP on the LOC factor increase. With the exclusion, DITP now has its highest loading and RMIN its second highest loading on the LOC factor. Furthermore, although EGND no longer has its highest loading on this same factor, it maintains a moderate loading on the third and fourth factor analyses (.36 and .46 respectively). This is its second highest loading in both

instances. The Behavior Prediction Scale, of which EGND is a part, was constructed, it should be remembered, according to Rotter's SL theory. These results show that a demographic variable known to affect LOC also affects two measures pertaining to cognitive aspects of personality functioning. The data therefore support the idea that there is a common element shared by the CD and SL theories of moral development and that the intrinsic-extrinsic construct, either as a dimension of personality or as a motivational concept, may link moral reasoning and behavior.

The next factor of interest is Factor 4, first analysis, and Factors 2 and 4, second analysis. Factor 4, first analysis, is largely defined by IAR-, DITP, and VOLRAT with positive loadings and RMIN and ECSD with negative loadings (See Table 11 above). The negative RMIN is equivalent to a positive loading because of its scoring procedure. Thus, level of moral judgment, intrinsic religious motivation, and altruistic behavior (VOLRAT) have a common factor. The significance of IAR- and ECSD for this factor may be explained in terms of an affective state influencing behavior, i.e., guilt. The acceptance of responsibility for one's failures in an academic situation has on the surface a logical relationship to acceptance of responsibility for one's behavior in situations involving moral standards. The ECSD is a difference score. This means that a subject who predicts that the story character will steal when the probability of being caught is low and will not steal when it is high, will receive a higher ECSD score than the subject whose predictions are relatively unaffected by the change of probability conditions. The former subject is much more attuned to external, situational factors, rather than such internal

factors as guilt, in making ethical predictions. The subject with a low ECSD score tends to ignore the probability of being punished when making ethical predictions. For the subject who has internalized society's sanctions against stealing, the objective probabilities of being caught are less relevant and would therefore have less influence on his ethical predictions. This explanation is similar to Kohlberg's Stage 2 and Stage 6 reasoning, examples of which were given above. In short, the negative loading of ECSD on Factor 4, first analysis, suggests that the subject who tends to experience more guilt when confronted with opportunities to steal also tends to use higher levels of moral reasoning and engage in more altruistic behavior.

These findings and their interpretation support Mosher's (1965) work on the topic of guilt as it pertains to moral development from a social learning perspective. Mosher (1965) found that subjects with a more highly internalized sense of guilt were less influenced by variation in external, situational cues than subjects with less internalized guilt when deciding whether or not to engage in unacceptable behavior. Ruma and Mosher (1967) also found significant correlations ranging from .43 to .55 between level of moral judgment on Kohlberg's moral judgment interview and three measures of internalized guilt. The association of IAR- and ECSD is also congenial with the emotion-attribution approach of Dienstbier, et al. (1975). These investigators found that subjects who attributed their emotional arousal to their own misconduct had a greater tendency to resist temptation in situations involving low risk of detection than did subjects who made external attributions.

When the InPR subjects are eliminated from the total sample, the factor analysis isolates a factor whose interpretation is similar to

that of Factor 4, first analysis. The composition of Factor 2, second analysis, (See Table 13 above) indicates that subjects who tend to have a more extrinsic religious motivation (RMEX) and are more influenced by the amount of money available to be stolen in making ethical predictions (RVGND), also tend to use higher levels of moral reasoning less frequently (DITP) and also tend to blame others for their failures (IAR-). Factor 4, second analysis, is defined largely by RMIN and VOLRAT. These loadings suggest that intrinsic religious motivation has a distinct tendency to be associated with an active interest in social welfare. This finding is similar to that of Gore and Rotter (1963) who found that internality was significantly associated with degree of personal involvement in efforts to effect social changes.

Factor 2, second analysis, appears then to reflect the interplay of cognitive, affective, and motivational aspects of personality in arriving at moral decisions. Factor 4, second analysis, focuses on the potential instrumental activity associated with human motivation. In other words, Factor 2 may be viewed as a decision-making factor and Factor 4 as a behavioral, instrumental factor.

The first two factors produced by the factor analyses using only data from white subjects (See Tables 15 and 17) are similar in significance to Factors 1 and 4 of the original analysis (Table 11). The importance of demographic variables in moral development research is underscored by large increases in the variance accounted for by these factors in the latter analyses. Joe (1971) advanced the explanation that it was to be expected according to LOC theory that "individuals who are restricted by environmental barriers and feel subject to limited material opportunities would develop an externally oriented outlook on

life."(p. 624) The current data also lend themselves to a similar explanation, i.e., these same environmental conditions are likely to influence how a person views interpersonal relationships and the decision-making process affecting social interactions.

Partial correlation analyses were performed on various combinations of measures of moral judgment, LOC, religious motivation, and ethical behavior. These combinations were selected on the basis of the factor analytic structure of the data. There appear to be significant sex differences, so the data will be discussed separately. Such differences must be interpreted very tentatively because of the small number of subjects.

For white male subjects the only significant findings occur in the analysis of the DITP-RVGND correlation. The zero-order correlation, with the IrPR subjects excluded, is moderately positive and approaches significance ($r = .33$, $p < .10$). Given the BPS scoring method, this correlation signifies the following: There is a non-significant trend for subjects who are influenced by the reinforcement value of the goal to be achieved by stealing money to also use higher levels of moral reasoning more frequently. Rettig and Rawson (1963) operationalized a high RVGN condition in terms of a crucial medical operation and low RVGN in terms of retiring a personal debt. Both Schulman (1972) and Chapko (1972) noted that the high and low conditions of RVGN may differ in the moral justification they present for stealing. The moderate positive correlation between DITP and RVGND can be interpreted as a generalized consistent tendency to evaluate the moral justification of one's proposed actions. In this sense, DITP and RVGND are similar in that both measures call upon the subject to evaluate the moral justifi-

cation of proposed solutions to ethical dilemmas.

When the effects of LOC measures are eliminated from the DITP-RVGND relationship, a positive, moderate relationship no longer exists. Thus, the shift in direction of correlation is attributable to LOC because even with the partialling out process, the task similarity factor still operated. The fact that DITP and RVGND are negatively correlated after the partial correlation, despite their task similarity, testifies to the strength of LOC as a moderating variable. Religious motivation does not appear to play a very important role in mediating the relationship between DITP and RVGND. There are several instances in which partialling out religious motivation together with LOC produces near significant results. However, the additional elimination of religious motivation variation does not significantly enhance the negative r beyond its original level with only LOC measures partialled out. There are no instances in which the elimination of only religious motivation significantly influences the DITP-RVGND relationship. Inasmuch as DITP loads higher on Factor 1 than RMIN and RMEX for the white male subsamples, it is understandable why partialling out the influence of LOC has a greater impact on DITP's relationship with other measures than does partialling out religious motivation.

The data for white female subjects must be interpreted very cautiously and tentatively because of the very small N. This investigation found a strong, positive relationship for females between level of moral judgment and altruistic behavior which is affected by LOC. Religious motivation does not have a determining influence in this same relationship. This finding is inconsistent with the factor analysis reported in Table 13 for the complete sample, excluding the InPR sub-

jects. This factor analysis shows that intrinsic religious motivation loads highest on the same factor as volunteerism. This would seem to suggest that Hypothesis Three holds true for females, but not Hypothesis Four. However, the relationship between LOC and religious motivation was explored further in a post hoc analysis. The zero-order correlation between IAR- and VOLRAT for white females, excluding the InPR subjects, is .90 ($p < .007$) and the partial r with RMIN excluded is -.83 ($p < .02$). This suggests that the positive relationship between LOC and altruistic behavior is significantly influenced by intrinsic religious motivation. Nevertheless, partialling out RMIN from the DITP-RVGND r has no significant effect. These conflicting data can be reconciled by the explanation that LOC is the primary variable intervening between moral judgment and behavior and that religious motivation is subsumed within LOC. Further research with a larger sample is necessary in order to clarify the motivational aspect of LOC and its relationship to religious motivation.

The most striking aspect of the results presenting the greatest difficulty to interpret is the difference of correlational signs for the DITP-RVGND relationship existing between males and females. As noted above, the zero-order r for males is moderately positive and the partial r is moderately negative. For females, a highly negative zero-order r becomes a highly positive partial r (See Tables 18 and 19).

The comparison of the factor analytic structure of these two subsamples yields a clue to the interpretation of this reversal (See Table 22 above). The first factor for females has DITP, RVGND, and NPI-Bad loading higher on it than on any of the other factors. It is important to note that DITP and NPI-Bad have positive loadings while RVGND has a

negative loading. For males, DITP and RVGND have their highest loadings together on the same factor, both of which are positive. NPI-Bad has a negative loading on this factor. Thus, there are two reversals of loadings for males and females. They differ on the DITP-RVGND and DITP-NPI-Bad relationships. Another interesting difference is the NPI-Bad/NPI-Good loadings on the LOC factor (Factor 1 for males, Factor 2 for females). For females, NPI-Bad loads higher by .47 than NPI-Good. For males, NPI-Good is higher by only .04. This difference cannot be attributed to differences between males and females in degree of correlation between NPI-Bad and NPI-Good. Within each sub-sample, pairs of scores were significantly associated (r = .75, p <.001 and r = .70, p < .03 for males and females, respectively).

Reflection on the nature of the NPI sub-scales suggested that perhaps males and females in the present sample differ on how they treat potentially mitigating circumstances in arriving at moral decisions. Males, it was speculated, may tend to attribute more importance to extenuating factors and these factors may influence their judgments about moral responsibilities. It was suggested above that the zero-order, positive r between RVGND and DITP for males could be explained by the greater justification for stealing in the high RVGN situations on the BPS than in the low RVGN condition. The positive r would indicate a moderate trend for males to evaluate and differentiate the mitigating circumstances present in the moral dilemmas presented on the DIT and BPS. Females, it is now suggested, may be less influenced by mitigating circumstances. Thus, the negative zero-order r between RVGND and DITP indicates that females who tend not to let differences in moral justification for stealing on BPS dilemmas affect their predictions also

tend to use higher levels of moral reasoning on the DIT. For both sexes, partialling LOC significantly reversed the direction of correlation between DITP and RVGND. In essence, this interpretation suggests that internality is an intervening variable for both males and females in these sub-samples, but that they differ in the specific decisions made and behaviors they engage in.

To test this interpretation the DIT protocols were examined for the specific decisions made. The specific issue was whether or not males and females differed significantly in deciding that the moral course of action was to violate the law. The following decisions were considered by the investigator to involve a violation of law: Heinz--The drug should be stolen. Student Takeover--The sit-in should take place. Escaped Prisoner--The prisoner should not be reported to police. Doctor--The doctor should perform euthanasia. Webster--The minority applicant should not be hired. Newspaper--The principal should revoke permission to publish the student paper.

It was felt that the two situations on the DIT corresponding most closely to the difference in high and low RVGN conditions on the BPS were the Heinz and Student Takeover stories. Both these situations pitted property rights against some higher value. This was considered most similar to a situation involving the question of whether or not to steal money to pay for a crucial medical operation.

The above interpretation was tested by performing _t_ tests comparing the frequency with which white males and females decided that it was morally appropriate to violate the law in the DIT situations. Comparisons were made first for the partial sample of DIT dilemmas and then for the complete sample. Specifically, it is hypothesized

that males decide to a significantly greater degree than females to violate the law. The results, for the samples including InPR subjects, are given in Table 24. The results of the t test do not support the hypothesis for either the partial or complete sample of DIT situations. However, an F test of the male and female sample variances does support the hypothesis ($F = 6.52$, $df = 26.89$, $p < .01$ and $F = 2.96$, $df = 21.94$, $p < .07$, respectively).

When the InPR subjects are excluded, the results do support the suggested interpretation. Table 25 shows that white males decided to a significantly greater degree than white females to violate property rights in pursuit of higher values, when their responses to the first two DIT stories were compared ($t = 1.73$, $df = 19.88$, $p < .05$). Comparisons of sub-sample variances also provided additional support for the hypothesis when the complete DIT was used.

It is difficult to interpret precisely what these results imply. What does seem clear is that in excluding indiscriminately pro-religious subjects, white males and females differed in their attitudes about personal responsibility for adverse situations. This much is corroborated by the finding (See Table 6, p. 27) that women scored significantly more internal on the IAR- than did men ($t = 2.37$, $df = 27$, $p < .03$). This obtained difference may signify that women are more hesitant to take bold, illegal actions and/or women's heightened sense of personal responsibility expresses itself subtly on these tests by their assumption that it should be possible to cope with the given situations without resorting to illegal means. Once again, it should be noted that the samples utilized here were very small.

This post hoc finding raises an interesting issue for moral

TABLE 24

Comparison of Male and Female White Subjects' Tendency on the Defining Issues Test to Make Decisions Requiring Legal Violations

	N	M	SD	SE[a]	F	p*	t**	df	p*
Partial DIT									
Males	21	1.02	.66	.14	6.52	.01	1.24	26.89	
Females	8	.81	.26	.09					
Complete DIT									
Males	21	2.79	.97	.21	2.96	.07	.77	21.94	
Females	8	2.56	.56	.20					

[a] Standard error

* 1-tailed test

** Separate variance estimate used

TABLE 25

Comparisons of Male and Female White Subjects' Tendency on the Defining Issues Test to Advocate Violating the Law, with the Data from Indiscriminately Pro-religious Subjects Excluded

	N	M	SD	SE[a]	F	p*	t**	df	p*
Partial DIT									
Males	17	1.15	.61	.15	5.51	.04	1.73	19.88	.05
Females	6	.83	.26	.11					
Complete DIT									
Males	17	2.94	.83	.20	4.10	.07	1.05	18.10	
Females	6	2.67	.41	.17					

[a] Standard Error

* 1-Tailed Test

** Separate variance estimate used

development research. None of the work by Rest which was cited in this investigation reported any differences between groups of subjects in terms of the actual decisions made about the moral dilemmas. On the one hand, it is reasonable to take the position that psychologists should concern themselves with the cognitive processes associated with moral reasoning rather than with the specific decisions made. Stage 6 reasoning is Stage 6 reasoning whether it leads one to commit euthanasia or not. On the other hand, this post hoc analysis implies that the specific content of a moral decision, not just the cognitive processes, may be an important concern for the understanding of moral development. So, for example, Homant and Rokeach (1970) found significant, albeit low, correlations between subjects' valuation of honesty and their actual behavior in a temptation situation.

To explore the relationship between the content of moral decisions and variables influencing these decisions, Pearson correlations were computed for the tendency to decide in favor of violating the law in the DIT dilemmas and the test battery in this investigation. Some of these results are given in Table 26. They indicate that for white males the decision to violate the law is significantly associated with an internal LOC and higher levels of moral reasoning, but that this is not true for females. Of course, when multiple correlations are done post hoc, there is the danger of significant results occurring by chance. However, the data reported are consistent with the other findings of this report. A fruitful area for future research would be the relationship between moral values, reasoning, and behavior, as well as the personality characteristics contributing to these dimensions of moral development. In discussing limitations of this inves-

TABLE 26

Correlations for Male and Female White Subjects, Indiscriminately Pro-religious Excluded, Between Tendency to Advocate Legal Violations in Moral Dilemmas, and Internal Locus of Control and Level of Moral Reasoning

	Pearson Correlations				Significance			
	Advocacy of Violations				Advocacy of Violations			
	Partial DIT		Complete DIT		Partial DIT		Complete DIT	
	Males	Females	Males	Females	Males	Females	Males	Females
Rotter	.48	.06	.36	.14	.02		.08	
DITP	.51	-.53	.47	-.45	.02		.03	

tigation one can first note that the correlational design limits the conclusions that can be reached about the influence of LOC and religious motivation as intervening variables between moral reasoning and ethical behavior. Secondly, the measures of ethical behavior are not very strong, nor are they entirely behavioral. Although there is evidence that the BPS reliably reflects subjects' resistance to temptation behavior, it is nevertheless a pencil-and-paper test requiring only predictions of "someone else's" behavior. The Volunteerism Rating was based on self-report measures of actual behavior and subjects' compliance or non-compliance with a request to volunteer services to a campus organization. The VOLRAT measure was more appropriate than the BPS, which had some task similarity to the DIT. Nevertheless, the measure was not equivalent to experimentally-induced behavior observed under controlled conditions. Finally, the limited number of subjects, particularly females, limits the generalizability of the results.

Notwithstanding these limitations, there is sufficient evidence for certain summary conclusions: First, usage of post-conventional stages of moral reasoning is positively associated with an internal locus of control and pre-conventional reasoning is positively associated with externality. In addition, there appears to be more than a semantic relationship between LOC and intrinsic-extrinsic religious motivation constructs. The motivation constructs do not appear to act in the same way as LOC on the relationship between moral reasoning and behavior. Generally, the exclusion of the indiscriminately pro-religious subjects from various factor analyses strengthened existing relationships between cognitive, behavioral, and LOC measures. However, partial correlation analyses involving religious motivation did not

affect generally the cognitive-behavioral relationships to the same extent. It is possible that intrinsic-extrinsic religious motivation is interrelated in some unknown way with the motivational and cognitive aspects of LOC. Finally, the evidence of this study suggests that LOC is an important variable to account for when conducting research in the field of moral development. Some sex differences were found in the way LOC affected the relationship between moral judgment and behavior. A post hoc analysis provided some evidence that LOC may interact with sex-role associated behaviors, but nothing definite may be concluded about this.

The findings pertaining to LOC have been shown to relate in a rather consistent manner to previous research findings in a variety of areas within the field of moral development. A fruitful area for future research is the clarification of the cognitive and motivational aspects of LOC and how this construct impacts on the decision-making and behavior-regulating processes associated with moral development.

SUMMARY

Prospective personality variables mediating the relationship between moral judgment and behavior were explored by means of a partial correlation analysis of 40 subjects' performance on a battery of questionnaires measuring these variables. Locus of control was found to be positively and significantly associated with moral judgment and religious motivation. It also had a significant influence on the correlation between moral judgment and ethical behavior. Some significant sex differences were found. It was concluded that locus of control is an important variable for the understanding of moral development and that its cognitive and motivational aspects need further clarification.

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APPENDIX A

NPI

Please read the following statements carefully. Indicate whether you agree, sometimes agree, sometimes disagree or disagree with each statement by drawing a circle around your choice. Be sure to answer the way you really feel and not the way you think you ought to respond. Please answer every question. Check to be certain you haven't skipped any.

1. I have a good chance to change the unpleasant things in my life if I work at it.	agree	sometimes agree	sometimes disagree	disagree
2. I don't have any self-confidence.	agree	sometimes agree	sometimes disagree	disagree
3. Life is nothing more than a lottery.	agree	sometimes agree	sometimes disagree	disagree
4. Most people do not feel that their decisions could be made just as well by flipping a coin.	agree	sometimes agree	sometimes disagree	disagree
5. When my work turns out poorly it was not because it was doomed from the start.	agree	sometimes agree	sometimes disagree	disagree
6. People are not able to determine the direction of their lives.	agree	sometimes agree	sometimes disagree	disagree
7. There is very little that I can do to change the way people feel about me.	agree	sometimes agree	sometimes disagree	disagree
8. The quality of my work is unrelated to how much effort I make.	agree	sometimes agree	sometimes disagree	disagree
9. The good things that happen to me are a matter of fate.	agree	sometimes agree	sometimes disagree	disagree
10. I believe that chance has nothing to do with how happy I am.	agree	sometimes agree	sometimes disagree	disagree
11. I have very little influence over the bad things that happen to me.	agree	sometimes agree	sometimes disagree	disagree

12. People can be sure that they have done well only if someone praises them.	agree	sometimes agree	sometimes disagree	disagree
13. People don't get bad grades in school because of bad luck.	agree	sometimes agree	sometimes disagree	disagree
14. When I don't succeed I feel I was just destined to fail.	agree	sometimes agree	sometimes disagree	disagree
15. Bad luck accounts for the bad things that happen to most people	agree	sometimes agree	sometimes disagree	disagree
16. Fate does not determine my accomplishments.	agree	sometimes agree	sometimes disagree	disagree
17. People have the power to determine the direction of their lives.	agree	sometimes agree	sometimes disagree	disagree
18. I have a sense of accomplishment when I finish a difficult job even if no one knows how much effort it took.	agree	sometimes agree	sometimes disagree	disagree
19. I never make plans for the future because I can never make them turn out the way I want.	agree	sometimes agree	sometimes disagree	disagree
20. Chance has nothing to do with people not liking me.	agree	sometimes agree	sometimes disagree	disagree

APPENDIX B

Volunteerism Questionnaire

Name _____ ID# _____

Age _____ Sex _____

College Level _____

The purpose of this questionnaire is to explore whether or not there is a relationship between an individual's participation in volunteer work and his/her attitudes about school and social, political, and religious issues. This questionnaire is concerned with getting information about your volunteer activities, if any, and factors which might facilitate or prevent such activities. All information will be kept confidential.

I. Previous Volunteer Activity

A. Have you ever worked as an unpaid, volunteer for any charitable, religious, educational, or other non-profit organization? (For example, Loyola University Day School, Salvation Army, Red Cross)

YES _____ NO _____

B. Please list any volunteer activities engaged in from age seventeen years until September, 1975. Please identify each separate experience and answer the following questions:

Activity 1. _____

(1) Were you enrolled in school at the time? Yes _____ No _____

(2) High School _____ College _____

(3) Full time _____ Part time _____ (# of semester hours _____)

(4) Were you working for pay some place else at the time?

Yes _____ Hours per week _____ No _____

(5) Approximately how many hours per week and for how many weeks did you volunteer?

Hours _____ Weeks _____

(6) If you were attending school and working at the same time, was paid employment necessary for you to continue in school?

Yes _____ No _____

(7) Please list briefly any other factors which may have facilitated or prevented your participation as a volunteer:

(8) What was your most important reason for volunteering?
(For example, to help people, fashion good record for college or graduate school applications, to make social contacts, etc.)
Please note: A person's behavior is rarely motivated by just one factor. Please identify what you feel was the major factor influencing your decision to volunteer. You do not have to limit yourself to the sample reasons listed above. Please be as honest and accurate as possible. Your answer cannot be construed as a reflection of your moral character. The major focus of this questionnaire is to survey the factors related to volunteerism, not to judge the ethical quality of the reasons.

For other volunteer activities, please use the reverse side of PAGE ONE. Please identify these activities and answer questions B (1) through (8) in paragraph form.

II. Current Volunteer Activities

A. Since September, 1975, have you worked at any time as an unpaid volunteer for any charitable, religious, educational, or other non-profit organization?

YES _____ NO _____

B. Identify these experience(s) below and please answer in paragraph form the 8 questions listed in Section I,B of this questionnaire. If you require more room, please use the opposite side of THIS page. Even if you are not currently a volunteer, questions 1-4, 6, and 7 need to be answered.

Activity 1. (if any) _____

APPENDIX C

Dear Loyolan:

Campus Ministry is looking for volunteers to participate in a variety of special and ongoing activities. We are in need of volunteers for this semester for the activities listed below. Please fill out the information below only if you have a serious interest and willingness to participate. You may check more than one activity.

Activity	YES	NO
1. Food Drive	___	___
2. Guatemalan Relief Project	___	___
3. Nursing Home Visitations	___	___
4. Activity Planning for Delinquent Teenagers	___	___
5. Hosting Student-Faculty Coffee Hours	___	___
6. Planning Team for Coffee House	___	___

Name: _____

Mailing Address: _____

_____

Telephone: _____

Approximate number of hours available this semester:

1-5 ____ 6-10 ____ 11-15 ____ 16-20 ____ More than 20 ____

Student _____ Faculty _____ Administrative/Staff _____

Please fill out and return this form to us at your earliest convenience.

Thank you.

APPENDIX D

Instructions to Raters

Please rate each subject for their interest in volunteer activities. For the purposes of this study, a volunteer activity is defined as any work, performed without monetary compensation, for a religious, educational, cultural, or other non-profit organization. A 5 point scale is to be used, with 1 signifying low interest and 5, high interest in volunteer activities.

Please base your judgments on the following descriptions of the circumstances and behaviors which are presumed to reflect and/or provide opportunity for the expression of an individual's degree of interest in volunteer activities.

High Interest:

A person with high interest in volunteer activities will actually participate in such activities if his first-order commitments such as employment, academic work, and/or family obligations permit. The individual will not necessarily sacrifice these first-order commitments in order to volunteer. However, if the individual has more than a minimal amount of time available for leisure and relaxation, it is expected that some of the leisure time would be devoted to volunteer activity. The higher the volunteer's interest, the more likely he will give of himself in terms of time, energy, and emotional involvement. The higher his interest, the more likely that the volunteer will have involved himself because of the intrinsic value of the activity to him, rather than because of social influences or extrinsic secondary gains (e.g., admission to graduate school).

Low Interest:

This person will probably not participate in such activities even though he has ample time to do so. Such people may select one or two leisure activities to devote themselves to. These activities are chosen for the individual's pleasure or benefit rather than that of others. If a person does actually participate in a volunteer activity, it is likely to be for less amounts of time than a person with high interest. The person's motivation is more likely to be as a result of social influences or extrinsic considerations rather than as a result of an intrinsic interest in volunteering.

APPROVAL SHEET

The thesis submitted by Simcha Goldman has been read and approved by the following Committee:

Dr. James E. Johnson, Chairman
Assistant Professor, Psychology, Loyola

Dr. Eugene C. Kennedy
Professor, Psychology, Loyola

The final copies have been examined by the Director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

1-5-77
Date

James E. Johnson
Director's Signature