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**LA THÈSE A ÉTÉ
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LEVEL OF FAIRNESS-REASONING AND HUMAN VALUES
AS PREDICTORS OF
SOCIAL JUSTICE-RELATED BEHAVIOR

By Susan Steibe

Thesis presented to the School of
Graduate Studies of the University
of Ottawa as partial fulfillment
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of Doctor of Philosophy

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CURRICULUM STUDIORUM

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ABSTRACT

Previous studies demonstrate a relationship between human values and behavior in both the laboratory (Penner, 1971) and in real life (Rokeach, 1973, 1969; Shotland and Berger, 1970). Other past research has reported positive results in linking level of fairness-reasoning to experimental measures of behavior (Jacobs, 1976, 1977; Froming and Cooper, 1976; Gunzberger, Wegner and Anooshian, 1977; Leming, 1978; Malinowski, 1978). Using level of fairness-reasoning to provide a model of a cognitive-developmental process which can structure and use human values as content, the present study hypothesized that behavioral responses to social justice-related events were significantly more predictable on the basis of cooperative justice-related value content plus level of fairness-reasoning than either of those predictors alone. It was also hypothesized that in cases where principled level of fairness-reasoners highly preferred cooperative justice-related values, real life social justice-related behavior would be most significantly manifested. Data from 171 adults analyzed by stepwise multiple regression indicated that level of fairness-reasoning (Rest's Defining Issues Test) was a significant predictor of attendance behavior at social justice events, while Rokeach values of equality and a world at peace were not. Level of fairness-reasoning in

combination with other significant predictors of social justice-related behavior, i.e. high preference given to the values a comfortable life, courageous and wisdom, and low preference given to the values logical and intellectual, explained significantly more of the variance in social justice-related behavior than the level of fairness-reasoning alone or the five values alone. A multiple comparison of attendance behavior scores showed that principled level of fairness-reasoners who hierarchically placed equality in a middle position showed significantly more attendance behavior than low level of fairness-reasoners who hierarchically placed equality in a middle position. Data from post hoc questionnaires pointed out that individuals who attended one or more social justice events reported significantly more involvement of their values in their decisions to attend than did individuals who attended no social justice events. Findings were discussed in terms of the affirmation of fairness-reasoning as a predictor of social justice-related behavior, the theoretical perspective of values as internal, mediating cognitions, as well as cognitive transformations of needs, and the operation of psychological processes other than the cognitive one in predicting social justice-related behavior.

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INTRODUCTION

How and when do values relate to action? This question is theoretically intriguing and empirically challenging.

Rokeach (1973, 1979) has highlighted values as preferred cognitions or beliefs that are activated in situations as intervening variables. In Doob's (1941) analysis, a value can be viewed as an implicit, mediating response occurring between an objective stimulus and an overt response and effecting the latter.

As cognitions, values are necessarily subject to those organizing influences which affect other cognitive processes. Rest's (1974, 1979) levels of cognitive-development in fairness-reasoning provide a model of a process which can structure and use human values as content. The cognitive-developmental levels of fairness-reasoning may be thought 1) to represent an interactive system within which values are organized and 2) to represent certain rules by which a person applies value terms. A given structure (or level) aids in the understanding of how people organize and use values at the applicable point in time along the cognitive-developmental continuum. Level of fairness-reasoning in this study is seen as a cognitive structuring process which interacts with value content and moderates the manifestation of values in real life behavior.

The present study identifies two cooperative justice values and seeks to investigate their roles as mediating cognitions between social justice stimuli (promotional appropriate ends) and overt behavior (attendance at justice-related events). Consideration is also given to cognitive-developmental level. Specifically, this study investigates the impact of cooperative justice values (equality and a world at peace) on social justice-related behavior for persons at high (principled) versus low cognitive-developmental levels of fairness-reasoning.

The literature relevant to the study is presented in the first chapter. The first chapter also discusses the problems investigated in greater depth, and presents this study's hypotheses. The second chapter presents the experimental design and specifically describes the experimental tools, the subject population, and methods of data analysis. The results of the study are presented in the third chapter. The fourth chapter discusses the findings and presents suggestions for further research.

CHAPTER I

REVIEW OF THE LITERATURE

Literature relevant to this study is presented in this chapter. Section A introduces a cognitive-developmental approach to the behavioral aspect of values, where values are viewed as content within a cognitive structuring process. Cognitive-developmental approaches to moral or fairness-reasoning are traced. Highlighted are the developmental, cognitive, and behavioral aspects of fairness-reasoning. Research studies are cited indicating support for each aspect presented. Section B is directed toward a conceptual integration of a cognitive-developmental process of fairness-reasoning (as structure) with cooperative justice values (as content), which shows the application of values to real life social justice-related behavior. This section explores the definition of a value and a value system, distinguishes kinds of values, and contrasts values with other related concepts. The link between values and behavior is examined through empirical studies and through a theoretical viewpoint in which values are viewed as an implicit response with energizing characteristics that can motivate the external response. A cooperative justice value, equality, is traced through stages of fairness-reasoning, and distinctions are made as to the way an individual might conceptualize and act out the value equality at a low (stages

1. through 4) versus a high (principled stages 5 and 6) cognitive-developmental level of fairness-reasoning. Section C concludes the chapter with a statement of the specific problems investigated by this study and experimental hypotheses.

A. A Cognitive-Developmental Approach to Fairness-Reasoning

This initial section will examine, through James Rest's work on fairness-reasoning, a cognitive structuring process that is hypothesized, in the present research, to interact with value cognitions and moderate the manifestation of human values. Subsections will include (1) a historical research perspective of a cognitive-developmental approach to fairness-reasoning, (2) a cooperative-justice approach of fairness-reasoning, (3) developmental considerations of fairness-reasoning, (4) the role of cognition in fairness-reasoning, and (5) behavioral manifestations of fairness-reasoning.

James Rest's (1979) central research thesis is that the differences among people in the ways they construe and evaluate moral problems are determined largely by their concepts of fairness. Further, Rest postulates it is possible to identify and describe these basic concepts, and that more adequate and complex concepts of fairness develop from less adequate simple ones. Such an approach is well-

grounded in the cognitive-developmental literature, which stresses developmental maturity and associated cognitive changes as a significant influence on moral development. Rest has operationalized his thesis in the Defining Issues Test (DIT) (1972) a cognitive-developmental measure of moral reasoning.

For purposes of clarification, it is noted that the word "morality" in the present study refers to "fairness" and is used to connote concepts of social cooperation. Throughout this study, the terms "fairness" and "morality" will be used interchangeably.

The cognitive-developmental approach to fairness-reasoning is personified in the works of Piaget (1932), Kohlberg (1958, 1963, 1969, 1971, 1976), and most recently, Rest (1972, 1974, 1979). Rest (1979) bases his thesis on the theoretical work of Kohlberg, whose involvement in the research area of moral judgment dates from his doctoral dissertation (Kohlberg, 1958), the purpose of which was to carry forward into adolescence Jean Piaget's (1932) pioneering investigation of the development of moral judgment in children. While Rest's research is concerned with an older population (adolescence through adulthood) the cognitive-developmental aspects of the theories of his predecessors hold. Though the author recognizes that current research has studied, criticized, and carried forward various aspects of the work of Piaget and Kohlberg, it is only the

cognitive-developmental contributions of each of these theorists that will be addressed here.

1. A historical research perspective.

In the 1930's, Piaget's book on The Moral Judgment of the Child (1932) was in stark contrast to other investigators' work on moral thinking at the time. Pittel and Mendelsohn (1966) review the various earlier approaches. While the main interest of other researchers contemporary to Piaget was to explain the occurrence or nonoccurrence of some behavior that had significance from the researcher's (or society's) point of view, Piaget aimed to explain why a subject values certain things from the person's own point of view. For other researchers, a subject's verbalizations were interesting only insofar as they predicted behavior; for Piaget, verbalizations were regarded as interesting for what they revealed about the inner world of the subject. As Piaget interviewed children about many kinds of fairness situations, finding that they had definite intentions about moral right and wrong, he observed that their point of view seemed to be drastically different from that of an adult. Piaget characterized the difference between child and adult points of view by postulating different underlying cognitive organizations, each with its particular logic and way of interpreting experience. Piaget characterized the young

child's moral point of view as "moral realism" or "heteronomous morality," in which the child is aware of moral rules and duties, but does not see them as social arrangements and human devices for regulating cooperative interaction. Rather, the child assumes moral rules are fixed in the nature of things, like natural, physical laws, and are the same for everyone. Only gradually does the young child realize that fairness rules are cooperative arrangements among equals, agreed upon for mutual benefits. This latter point of view is called "autonomous morality".

One fundamental tenet of the cognitive-developmental approach, then, is that a person's perception of reality is cognitively constructed. A second fundamental tenet is that cognitive structures evolve - that there is a developmental progression by which the earlier cognitions are elaborated to accommodate greater complexity in experience. As empirical evidence for the theory of the developing structure of moral judgment, Piaget's book is filled with examples of young children's moral thinking contrasted with older children's thinking. It has been pointed out (Rest, 1979) that by today's journal standards, such cross-sectional data would not count for much without data on scoring reliability, subject consistency, statistical tests of significance, or covariance with IQ. However, a major contribution was Piaget's pointing researchers to a key empirical test of cognitive-developmental theory - namely, to look for age-

related differences in types of responses - and this has been the most extensively used paradigm in cognitive-developmental research.

Kohlberg's dissertation in 1958 elaborated the cognitive-developmental approach in moral judgment research. Presenting to 72 male subjects (ages 10-16) complex moral dilemmas and interviewing them about what they thought should be done and why, Kohlberg concluded that Piaget's two stages did not adequately describe the kinds of reasoning produced by these subjects. Kohlberg identified dozens of features in the recurrent responses of subjects; furthermore, the thinking seemed to cluster into six stages instead of Piaget's two. The brief characterizations of the six stages are well-known to researchers of moral judgment.

In 1971, Kohlberg published his most extensive discussion of how his six stages form an order of increasing cognitive adequacy. In the 1971 presentation, one stage is better than its predecessor not only in terms of being more differentiated, but also in terms of taking account of increasingly complex problems (e.g. how to organize a society). By 1976, however, Kohlberg was describing moral stages in terms of different kinds of "social perspective": the perspective of an individual considering his own interests (at Stages 1 and 2), or the perspective of an individual who sees himself as a participant in a group whose members share expectations (at Stages 3 and 4), or the

perspective of a rational moral individual "who has made the moral commitments or holds the standards on which a good or just society must be based" as at Stages 5 and 6 (Kohlberg, 1976, p. 36).

A great amount and variety of research has been done on Kohlberg's six-stage model of moral reasoning, and several new outgrowths with cognitive-developmental bases have emerged (Shantz, 1975; Damon, 1977; Selman, 1976; Selman and Jaquette, 1977; Turiel, 1974; Rest, 1974, 1979). One new direction and a focal point of the present research includes the work of James Rest on the DIT. Rest's research arose primarily in response 1) to the need for a practical, validated method for assessing moral judgment, and 2) to the need to establish a data base for the major claims of the cognitive-developmental theory (Rest, 1979). As a result of accumulating evidence, Rest has reinterpreted two key ideas of cognitive-developmental theory - the stage concept and the relation of moral judgment to behavior. Additionally, Rest has couched his cognitive developmental theory of fairness-reasoning in terms of cooperation. It is with the latter that an investigation into Rest's postulations will begin. Subsequently, Rest's thinking on the simple stage concept will be presented, followed by a discussion of the relationship of fairness-reasoning to behavior.

2. Fairness-reasoning: a cooperative justice approach

Rest (1979) acknowledges the strong influence of John Rawl's (1971) theory of social justice on his thinking regarding morality. Rest begins by observing that every person is born into an association of people. People band together for mutual advantage - for raising the young, for protection, for a division of economic labor, for the pure pleasure of interpersonal stimulation, for sexual stimulation, and so on. Social cooperation makes a better life. Therefore participants in a social group have a mutuality of interests for maintaining that group. There is also, however, a source of potential conflict of interests, since each person cannot be assumed to be indifferent to the distribution of the benefits of social collaboration. Thus there are natural tendencies to want to collaborate and cooperate but also tendencies to preserve and protect individual interests.

A crucial function of moral thinking is to provide a plan for the distribution of the benefits and burdens of social collaboration. Moral rules and principles regulate the basic relationships among people in terms of allocating rights (what kinds of claims a person can make on others in his own interest) and allocating responsibilities (the claims that others can make on their behalf from the person). For Rest (1979), a change from one stage of moral thinking to the

next is equivalent to how the subject ascribes rights and responsibilities in a moral dilemma.

Table 1, column 3, presents the central concepts that are used in determining moral rights and responsibilities for each of the six stages of fairness-reasoning. At stage 4, for example, the morality of law and duty to social order is operative. Contrasted to stage 4 can be the stage 2 morality of "Let's make a deal."

In accounting for the change in how a subject ascribes rights and responsibilities in a moral dilemma, Rest postulates two factors. The first factor is, simply, how rules are known and shared.

...socio-moral development begins with rudimentary concepts of shared expectations (norms established by the demands of the caretaker) and culminates in a concept of mutual expectations founded on a logical analysis of the requirements of an ideal system of cooperation (Rest, 1979, p. 19).

Table 1, column 1, concretizes these stage changes by providing examples for each stage as to how rules are known and shared. At stage 4 from column 1, for example, all members of society know what is expected of them through public, institutionalized law. This understanding about how rules are known and shared can be differentiated from stage 2 in column 1, where each person is understood to have his/her own interest, and an exchange of favors might be mutually decided.

Table 1

James Rest's Stages of Fairness-Reasoning

Stage	Coordination of expectations about actions (how rules are known and shared)	Schemes of balancing interests (how equilibrium is achieved)	Central concept for determining moral rights and responsibilities
Stage 1	The caretaker makes known certain demands on the child's behavior.	The child does not share in making rules, but understands that obedience will bring freedom from punishment.	The morality of obedience: "Do what you're told."
Stage 2	Although each person is understood to have his own interests, an exchange of favors might be mutually decided.	If each party sees something to gain in an exchange, then both want to reciprocate.	The morality of instrumental egoism and simple exchange: "Let's make a deal."
Stage 3	Through reciprocal role taking, individuals attain a mutual understanding about each other and the on-going pattern of their inter-actions.	Friendship relationships establish a stabilized and enduring scheme of cooperation. Each party anticipates the feelings, needs, and wants of the other and acts in the other's welfare.	The morality of interpersonal concordance: "Be considerate, nice, and kind, and you'll get along with people."
Stage 4	All members of society know what is expected of them through public institutionalized law.	Unless a society-wide system of cooperation is established and stabilized, no individual can really make plans. Each person should follow the law and do his particular job, anticipating that other people will also fulfill their responsibilities.	The morality of law and duty to the social order: "Everyone in society is obligated and protected by the law."
Stage 5	Formal procedures are institutionalized for making laws, which one anticipates rational people would accept.	Law-making procedures are devised so that they reflect the general will of the people, at the same time insuring certain basic rights to all. With each person having a say in the decision process, each will see that his interests are maximized while at the same time having a basis for making claims on other people.	The morality of societal consensus: "You are obligated by whatever arrangements are agreed to by due process procedures."
Stage 6	The logical requirements of non-arbitrary cooperation among rational, equal, and impartial people are taken as ideal criteria for social organization which one anticipates rational people would accept.	A scheme of cooperation that negates or neutralizes all arbitrary distribution of rights and responsibilities is the most equilibrated, for such system is maximizing the simultaneous benefit to each member so that any deviation from these rules would advantage some members at the expense of others.	The morality of non-arbitrary social cooperation: "How rational and impartial people would organize cooperation is moral."

taken from Rest, J. Development in judging moral issues; Minneapolis: University of Minnesota, 1979, pp. 22-23

The second factor that, according to Rest, accounts for stage change, is how one achieves a balance of interests of people in a cooperating group.

... if the rules of a society operated to maximize the welfare of each participant without giving advantages to some people at an undue cost to others, by and large, its participants have a great stake in maintaining the system. In other words, a balancing of interests creates a stable social equilibrium; each participant is willing to bear his social burdens for the sake of the benefits of social cooperation, realizing that others reciprocally bear their respective burdens and receive their proportional benefits. Concepts of fairness and justice are essentially notions about the balancing of individual interests and the benefits of cooperation (Rest, 1979, p. 19-20).

At stage 4 (Table 1, column 2), the achieving of a balance of interests of people in a cooperating group is determined by the law. At stage 2, this achievement is attained through reciprocal exchange.

To summarize, moral or fairness-reasoning, for Rest, is concerned with how the benefits and burdens of social cooperation are to be distributed (the rules of a social system that assign people's rights and responsibilities). Rest analyzes moral development in terms of its successive conceptions of 1) how mutual expectations (rules) among cooperating individuals are established, and 2) how the interests of individuals are to be equilibrated.

Table 1 presents the stage characterizations on the two major developmental dimensions and that stage's central

concept for determining moral rights and responsibilities.

3. Developmental considerations of fairness-reasoning.

Rest (1979) has re-visited the notion of development through the simple stage theory in cognitive-developmental research. Rest's postulations on stage consistency across moral dilemmas, a "pure" measure of cognitive structure, and invariant step-by-step development through stages can be contrasted with the postulations of Kohlberg. Rest cites empirical data that challenges the simple stage model in terms of giving much evidence of subject fluctuation in stages, rather than evidencing a subject in "one moral stage or another" (Rubin and Trotter, 1977; Kuhn, 1976). He highlights studies that demonstrate the inconsistencies indicated about a subject's thought structures if test characteristics are varied, (for example, Medinnus, 1959; Magowan and Lee, 1970; Flavell, 1970). Finally, Rest challenges the step-by-step, "all-or-none" view of the simple stage model through the use of empirical research (Flavell, 1970, Shantz, 1975; Hoffman, 1970). Rest (1979) proposes the following modifications to the simple stage theory of fairness-reasoning development.

First, that "the notion that a person 'has' or 'has not' a stage is wrong" (p. 63). Flavell and Wohlwill (1969) have shown that the manifestation of a certain pattern of

reasoning is not an "all or nothing" matter. Flavell and Wohlwill (1969, p. 49) note that when children are in a period of transition in acquiring a structure, (for example, conservation of length), they vacillate in the employment of the cognitive structure. Subjects first exhibit the structure very seldom, then increasingly to the point of using it fairly reliably in appropriate situations. "The recent Piagetian literature strongly suggests that development is normally gradual rather than abrupt" (Flavell and Wohlwill, 1969, p. 79).

Secondly, that "developmental assessment is probabilistic" (p. 63). No pure, direct assessment of cognitive structure exists that is unaffected by the specific task, content, and response characteristics of the situation. Thus, any developmental assessment must consider these performance and situational factors in evaluating the subject's use of a certain type of fairness-reasoning (Bortner and Birch, 1970; Gelman, 1972; Smedslund, 1969). Therefore, states Rest (1979), the manifestation of a particular cognitive structure in a particular set of tasks gives us only a probabilistic indication whether that cognitive structure would be manifest in any other set of tasks..

Thirdly, that the notion of step-by-step development through the stages is challenged. It is difficult, concludes Rest (1979), to consider a subject at a single step at any

particular time, when such striking stage mixtures occur, owing to content and performance and to different levels of structure development. Developmental change, then, can be thought of as an upward shift in the subject's distribution of responses, where "upward" is defined as increases in higher stages or types at the expense of lower types.

In summary, a developmental approach to fairness-reasoning is one in which development needs to be seen as gradual, and for which assessment must be considered probabilistic.

4. The role of cognition in fairness-reasoning.

How does fairness-reasoning, as measured in Rest's DIT, operate within the greater set of cognitive processes of perception, memory and thinking? Fairness-reasoning as a cognitive process is a type of problem-solving with characteristic, stable features despite different content. As respondents to the DIT evaluate and select reasons salient to solving specific social issues, information regarding respondents' abilities to process symbols and generalize beyond specifics is provided. Fairness-reasoning, as a form of the cognitive process of problem-solving, is susceptible to influences of age, IQ, motivation and situational factors.

Studies correlating the DIT with various tests of intellectual aptitude and achievement argue for a cognitive

component in fairness-reasoning. Rest (1979, p. 148-49) presents 52 correlations, 83% of which are in the .20-.50's range, giving evidence of moderate correlation of fairness-reasoning to cognitive processes, the latter measured by abstract thinking, problem-solving and verbal, spatial, and mechanical reasoning. In summarizing these correlations, Rest remarks on the relationship of the DIT to general intelligence:

It is interesting to note that whenever subtests are given, the verbal subtest is not consistently more highly correlated with the DIT than the nonverbal subtest (in only three out of seven comparisons, verbal is more highly correlated than nonverbal) and that the composite indices (verbal plus nonverbal) are consistently more highly correlated than just the verbal subtests alone. This suggests that the linkage between intellectual aptitude and the DIT is not just verbal fluency or knowledge of special vocabulary, but the linkage is in a common general factor of intelligence (Rest, 1979, p. 147).

Additionally, Rest points out that the correlation between general intelligence and level of fairness-reasoning is a "moderate" one, thus implicating that while fairness-reasoning is a cognitive process, it is not synonymous with a generalized ability to use and retrieve symbols, but is rather a subset within.

Alston (1971) raises the logical possibility that age trends on measures of fairness-reasoning reflect age trends in preference for certain forms of moral judgement rather than age trends in capacity to think in new ways. In the

following series of studies, the comprehension of moral concepts at various stages independent of the subject's preference for certain moral concepts, was investigated.

Rest, Cooper, Coder, Masanz and Anderson (1974) found correlations of .67, .62, and .58 for 67 students, ages 14 to adulthood, 160 students, junior high to graduate school and 73 ninth graders, respectively, between the DIT and a measure of comprehension of moral concepts. In 1975, Rest studied 88 subjects, ages 17-20, correlating their scores on the DIT with their scores on a moral comprehension measure. He reports a correlation of .42 between the two measures.

Crowder (1976) investigated scores on the DIT and scores on the Comprehension test for 53 volunteers from a naval base, and reports a correlation of .32. Rest, Davison, and Robbins (1978) report a correlation of .51 for 54 subjects, ages 19-22, between the same two measures.

Moreover, in a study to determine whether fairness-reasoning is tapping conceptual capacity or merely preference, McGeorge in 1975, and Bloom, in a 1977 replication of his study, found that subjects decrease their DIT scores when instructed to take the DIT as "someone with no sense of justice," but subjects do not increase their scores when instructed to take the DIT as someone "with the highest principles of justice." These studies give support to the idea that moral reasoning (as measured by the DIT) does reflect a certain cognitively based conceptual capacity

and is not merely preference for certain forms of moral judgement.

Rest (1979) presents a summary table of unpublished papers which have reported correlations of the DIT P-score with several other measures usually considered to be related to cognitive development. Measures of Leveling-Sharpening correlate .49 with the DIT P-score for 32 college students (Briskin, 1975); Perry's Intellectual and Ethical Development measure correlates .45 with the DIT for 40 male college students (Meyer, 1975). Panowitsch (1976) reports a correlation of .41 between the DIT and the Cornell Critical Thinking Test. Other measures related to cognitive-development that have been correlated with Rest's DIT include Piaget's Golden Rule Task which, for 29 delinquents, correlates .30 (McColgan, 1975), Harvey's Conceptual Systems which is reported to correlate .18 for 127 college women, and Loevinger's Ego Development measure, correlating .42 for 15 high school students (Chiosso, 1976) and .38 for another sample of 56 high school students (Satterstrom, 1977). In a published study (Cauble, 1976) whose subjects were 90 college students, the correlation between the DIT and Piaget's Formal Operations is reported as .40.

As can be seen, then, fairness-reasoning, as measured by the DIT, does appear to be generally, moderately, and positively correlated with other cognitive processes of

general intelligence (i.e. comprehension, evaluation, generalization and other processes tapped in measures of cognitive-development). The conclusion that level of fairness-reasoning, as measured by Rest's DIT, holds validity both developmentally and cognitively is significant for purposes of the present study, in that level of fairness-reasoning is used herein to provide a model for a cognitive-developmental structural process.

The second key idea of James Rest focal to the present study is the relationship of fairness-reasoning to real life behavior. In the following subsection, this is examined.

5. Behavioral manifestations of fairness-reasoning.

Psychologists espouse various viewpoints with regard to the relation of moral judgment to behavior. Some researchers view the relationship as a simple, linear one. For example, Kurtines and Greif (1974) faulted moral judgment research for not demonstrating "predictive validity." According to them, if there are six stages of moral judgment, there ought to be six different behaviors in every moral situation, corresponding one-to-one to the different moral judgment stages.

At the other extreme, some psychologists have stated that no relation exists between the structure of thinking and actual choice behavior. Indeed, some have argued that

finding a relationship is a sign of invalidity of the measure of moral judgment (Martin, Shafto, and Van Deirse, 1977).

According to this view, the distinction between structure and content implies complete empirical independence.

Other psychologists (for example Mischel and Mischel, 1976) claim there is no relation between moral judgment and behavior, because words do not predict to deeds, and assume that advanced moral judgment is indistinguishable from the invocation of fancy language.

Between these extreme views is the position that moral judgment is an important factor in real life behavior, but that the interaction with other antecedants and consequents complicates the relationship:

Moral judgment as a psychological variable has a limited role in the explanation of moral action - it may be a star role but it is only one player in a large cast... Once a moral judgment is made, many further psychological processes remain in determining the plan of action to be - whether it strictly follows from notions of fairness or not (Rest, 1979, p. 170).

Studies that have investigated the contribution of fairness-reasoning, using the DIT as a measure, to behavior are reviewed below. These studies are relevant to the present research in that the findings illustrate that individuals attaining higher levels of fairness-reasoning use abstract, universal principles of cooperative justice in a mode that is less situation-specific than that of individuals

attaining lower levels of fairness-reasoning. From a cognitive-developmental perspective, such abstract and universally applied principles indicate an underlying differentiated and stable cognitive structure, attained through a process of developmental maturity and associated cognitive changes.

The following five studies investigated experimental measures of behavior (promise-keeping in the Prisoner-dilemma game, susceptibility to group pressure in an Asch-type situation, distributive justice behavior, and two tests of cheating) and their relationship to the DIT.

Jacobs (1976, 1977) studied behavior in the Prisoner's Dilemma game, a simulation game widely used in the study of conflict resolution. Sixty adult women, on the basis of their scores on the DIT, were divided into a "conventional" morality group (subjects whose DIT P% scores were lower than 50%) or a "principled" morality group (subjects whose DIT P% scores were greater than 50%). Subjects were assigned to one of three different experimental conditions. In one condition ("Defect" condition) the confederate partner broke the promise to cooperate and started competing with the subject, thus making the subject sustain double losses as long as the subject cooperated and kept the previous agreement. In a second condition, the confederate partner broke the agreement only 50% of the time ("Partial Defect" condition). In a third control condition, the partner maintained the agreement

("Cooperative" condition). Thus the subjects' promise-keeping behavior could be examined as a function of the provocation of the confederate partner's defiance from the original agreement. The results revealed that in the "Cooperative" treatment, both conventional and principled subjects cooperated just as their partners cooperated throughout all 80 trials. In the "Defect" conditions, principled subjects kept their promise significantly more often than the conventional subjects ($p < .001$). Further, the interaction of moral judgment level with trials was significant ($p < .05$), indicating that conventional subjects with defecting partners got progressively more competitive, whereas principled subjects showed an initial dip in cooperation followed by a slight increase in cooperation. More abstract and stable principles of cooperative justice are seen to be operating in the principled subjects who, regardless of the situational variation and provocation, maintain more cooperative behavior than do the less than principled subjects who are more behaviorally influenced by the situation.

Froming and Cooper (1976) studied compliance behavior in an Asch-type situation. The subject listened to very rapid clicks in earphones and was asked to count the number of clicks. The subject was in a group of confederates of the experimenter, and the group was asked to report the number of clicks. On some trials the confederates overestimated or underestimated the number of clicks, and the behavior of

interest was to see if the subject would go along with the group when they were wrong. The measure of compliance was the frequency with which the subject went along with the incorrect estimate. The subjects were 91 male undergraduates in an introductory psychology course. The authors report a significant negative correlation of compliance scores with the DIT P-score ($p < .03$). Individuals functioning at a principled level of cognitive-developmental reasoning exhibited behavior more resistant to external group pressures, guided by general and universal principles, rather than the affiliative motive of maintaining positive relationships within the group through conforming behavior.

Gunzberger, Wegner, and Anooshian (1977) studied the distributive justice behavior in 44 male subjects aged 13-18 who believed they were a member of a group of four students to be rewarded for their work. After working for one hour on a questionnaire the subject was asked to distribute money among four people. The subject (designated "A") had worked for one hour. He was told that a second person (designated "B") had also worked for one hour. A third person (designated "C") had worked only 25 minutes because supposedly that was the extent of time that would be profitable for him to work. A fourth subject (designated "D") could have profitably worked for an hour, but had been called back to a class after 25 minutes. The subjects' distribution of money was classified into one of five

patterns, as follows:

- (1) a self-interest distribution was one in which a subject allocated more money to himself than to any other group member;
- (2) a parity distribution was one in which money was allocated equally to all group members;
- (3) an equity distribution was one in which money was allocated on the basis of the actual input of time worked;
- (4) a social responsibility distribution was one in which additional money was allocated to the constrained individual (person D) from all other group members;
- (5) an individual responsibility distribution was one in which the conditions of equity above were met, and in which additional money was allocated to the constrained individual (person D) from the reward allocation (person A) alone.

Subjects given the DIT were divided into stage groups on the basis of endorsing to an exceptional degree one of the stages. Analysis of variance indicated that the way subjects distributed the rewards was significantly different among the moral judgment groups, $p < .05$. The equity pattern was highest for the Stage 3 group; the social responsibility pattern was higher for the Stage 4, 5 and 6 than the Stage 2 and 3 groups; and the individual responsibility pattern was highest for the Stage 6 group.

In the latter pattern, the universal stage 6 principle of Rest, "that individuals have an equal claim to benefit from the governing principles of cooperation" (1979, p. 38) appears operational. For purposes of the present research, it is worthwhile to note that such a principle overrides earlier developmental ones in terms of the universality of the concept of cooperation. Cognitively, the attainment of this principle indicates differentiation and stability, as well as developmental maturity. That distributive justice behavior patterns coincide with underlying cooperative-justice principles is a noteworthy finding pertinent to the present study.

Leming (1978) studied cheating behavior with the Hartshorne and May "circles test." In this test, subjects are asked to attempt to memorize the location of nine circles on a page of paper, and are then instructed to close their eyes and write the numbers 1 through 9 in the circles. Subjects then report their scores. Since it is virtually impossible to place more than a few numbers in the circles, high scores presumably represent peeking while instructed not to do so. Of 152 college undergraduates tested, Leming found that subjects with low DIT scores cheated more ($p < .01$).

Malinowski (1978) studied cheating behavior in terms of the fidelity with which subjects reported their scores when left alone to work on a physical coordination task. The subjects were 53 male college undergraduates. Subjects low

in DIT scores cheated to a greater extent ($p < .006$), were more likely to cheat sooner ($p < .025$), and cheated on more test trials ($p < .05$).

In both studies of cheating behavior, individuals demonstrating less utilization of principled reasoning, as indicated by lower P scores, manifest less stable and more situationally influenced concepts of fairness. These concepts can be contrasted with those of the non-cheating behavior of individuals, whose concepts of fairness are regulated by more universal and more stable principles of justice.

While there is no simple one-to-one relationship between level of fairness-reasoning and behavior, substantial empirical support is given to the statement that the level of fairness-reasoning (as measured by Rest's DIT) is a factor with important behavioral manifestations (Jacobs, 1976, 1977; Froming and Cooper, 1976; Gunzberger, Wegner, and Anooshian, 1977; Leming, 1978; Malinowski, 1978). A salient and shared point of communality of the cited studies is that individuals who manifest high (principled) levels of fairness-reasoning employ more abstract and universal principles of cooperative justice and are less situation-specific in the application of those principles than are individuals who manifest low levels of fairness-reasoning. From a cognitive-developmental perspective, such abstract and universally applied principles indicate an underlying differentiated and stable cognitive

structure, attained through a process of developmental maturity and associated cognitive changes.

The following section will examine the way in which values or a system of values should logically interact with the cognitive-developmental process of fairness-reasoning. Highlighted in this section will be (1) values defined and described and (2) values as a link to behavior.

B. Content-Process Interaction: Values and Level of Fairness-Reasoning

All things being equal, one influential factor that should intervene in a subject's behavioral display of fairness-reasoning is that subject's system of values. Rest (1979) acknowledges the lack of research relating fairness-reasoning, values and behavior:

Typically in moral judgment research, no assessment is made of other values and their relevance to a subject in a particular situation. Until we start doing this, we can hardly expect to find very high predictability of behavior... (p. 178-79).

A moral judgment test only gives us information about a subject's concepts of fairness. Such a cognitive-developmental approach does not predict specific actions, but describes the general form of thinking most likely to underlie a wide range of an individual's judgments in a particular issue domain or across several domains. Although there is no simple one-to-one correspondance between action

and structure, the cognitive-developmental approach makes it clear that an analysis of reasoning is one necessary condition for the complete understanding of social behavior (Selman, 1976).

In essence, cognitive-developmental fairness-reasoning analyses do not "explain" the causes of social behavior: rather, they present a way of organizing and describing social behavior.

The developmental stages of fairness-reasoning may be thought to represent certain principles which the individual applies to value content. Essentially, values are content and moral development stages are differential operations performed on that content. The distinction between cultural influences and cognitive-developmental influences is seen by McLellan (1975) as a distinction between content and structure. Content tells us what a person believes, and this is obviously dependent upon culturally variable experiences. Structure tells us how a person organizes within and reasons about his belief system. Thus, the content of one's value system is dependent upon previous social learning experiences and cultural influences. How one organizes or uses this content depends upon the degree of cognitive differentiation and integration as well as other motivational factors, needs, satisfactions, etc. The stages of cognitive-moral development provide a process for structuring. A given structure (or stage) aids in understanding how people

organize and use values at the applicable point in time along the stage-developmental continuum.

Basic to any concept of structure is the notion of differentiation, or distinctiveness of the elements which constitute the set. Psychologically this involves an articulation of concepts, an isolability of one idea from another. Scott (1963) has suggested that cognitive differentiation is associated with a particular kind of modifiability that is neither rigid nor brittle. Since a value is, in large part, a belief integrated into a complex, prioritized system of beliefs (Rokeach, 1973) the notions of differentiation, stability and modifiability that are common to cognitive structuring are also applicable to value structuring. On the basis of the value structure, one may make differential predictions about how values are used. Examination of the interaction between content (values) and the cognitive-developmental structuring process offers a way of conceptually integrating these two distinct kinds of influences on moral behavior.

Values, conceived of as internal mediating cognitions that guide actions (Rokeach, 1973), should enable us to predict how that person will assign priorities among behaviors that constitute instrumentalities in the realization of her/his cognitions of long-term goals. This would occur using the knowledge of a person's values as well

as her/his level of fairness-reasoning. For example, in the extreme case of an individual whose cognitive structure is unstable and undifferentiated, one might expect considerable variance in value-related behavior. In such a case, value-related behavior would be more directly linked to situational variables. The values (implicit responses) themselves are different (in content, importance, or both) in each situation. At the other extreme is the individual with a highly differentiated and stable cognitive structure. Value-related behavior in this case would be more consistent, irregardless of situational variables. This is because prediction of behavior would seem markedly easier in the latter extreme, where a value would tend to maintain its relative position in the hierarchy regardless of situational variation.

1. Values defined and described.

It is recognized that systematic knowledge about personal values is critical to the understanding of human behavior (Kitwood and Smithers, 1975; Reich and Adcock, 1976; Rokeach, 1973). Values have been defined as "the dominant interests of the personality," as measured by the Allport-Vernon-Lindzey Study of Values (1960) and as "preferred life styles" as treated by Morris's (1956) Ways-to-Live study. The value orientations work of Kluckhohn

and Strodtbeck (1961) treats values as answers to certain fundamental questions about the nature of reality. Gordon's Survey of Interpersonal Values (1960) and Survey of Personal Values (1964) overlap considerably with the concept of "need" adapted by workers such as Murray (1938).

An important attempt in more recent years to provide a comprehensive and integrated theoretical approach to the understanding of values in human behavior is the work of Rokeach (1973). In the present study, values will be examined according to the theoretical approach of Rokeach. The definition, kinds, and distinctive properties of values will be discussed.

For Rokeach a value is "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (p. 5). A value system is "an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance" (p. 5). A value system is acquired through experience and a process of maturation, says Rokeach, the individual gradually integrating the isolated, absolute values taught in the social context into a hierarchically organized system, wherein each value is ordered in priority or importance relative to other values. In a specific situation which activates more than one of an individual's values, the resultant behavior is dependent upon

the hierarchial priority of those values activated by the given situation. Values are activated as internal intervening variables.

In addition to a behavioral component, values have cognitive and affective aspects.

A value is a cognition about the desirable ... To say that a person has a value is to say that cognitively he knows the correct way to behave or the correct end-state to strive for ... A value is affective in the sense that he can feel emotional about it, be affectively for or against it ... (p. 7).

Rokeach distinguishes two kinds of values; terminal values, defined as desirable end-states of existence, and instrumental values, which denote modes of conduct. Rokeach assumes that the number of values human beings possess is small enough to be identified and measured. He suggests that on intuitive grounds there are just so many end-states for which to strive and just so many modes of behavior that are instrumental to their attainment. His own measure of values (Rokeach, 1967) lists 18 terminal and 18 instrumental values.

For Rokeach, values are psychological structures internalized as a result of cultural, societal and personal experience, and distinct from other related concepts. A value is different from an attitude in that a value refers to a single belief of a specific kind, whereas an attitude refers to an organization of several beliefs around a specific object or situation. A value is distinguished from

a social norm as a concept more personal and internal, whereas a norm is consensual and external to the person. A value is not isomorphic with a need, but a cognitive representation and transformation of a need that includes societal and institutional demands. Unlike the built-in characterological bias of the trait concept that forecloses possibilities for change, values connote personal change as a result of changes in social conditions. A value differs from an interest in that an interest is but one of the many manifestations of a value and cannot be classified as an idealized mode of behavior or end-state of existence.

Value are psychological structures that have consequences of their own. Theoretically stated, values are guides and determinants of social attitudes and of social behavior.

In this study it is expected that social justice-related behavior will be predicted by high priority being given to value content that logically would be seen by the actor to be instrumental to maximizing principles of cooperative justice. Which values are most likely to be seen in this light?

From a list of 18 terminal values, Rokeach cites the values of equality (brotherhood) and a world at peace (free of war and conflict) as "social values" (p. 8), that are society-centered and interpersonal in focus. He contrasts these to other end-states or terminal values that are personal and self-centered, such as salvation and inner

harmony, and speculates the effects of social values' versus personal values' prioritization.

It seems reasonable to anticipate that ... attitudes and behavior will differ (from one person to another) depending on whether their personal or their social values have priority ... (p. 8).

Social values denoting concepts of brotherhood and a world free of war and conflict appear to be those values most closely connected to principles of cooperative justice, and most likely to be seen as instrumental to maximizing principles of cooperative justice. For this study's purposes, then, the social values of equality (brotherhood) and a world at peace (free from war and conflict) were selected as cooperative justice-related values. These of all values should optimally serve as predictors for social justice-related behavior in general. Therefore, it is expected that people who give high priority to such cooperative justice-related values will attend activities promoting principles of cooperative justice. Such things as the issue of the rights of children, a speech challenging one's responsibilities toward the rights of people in underdeveloped countries, and/or a forum for action advocating the concretization of social justice issues in one's own milieu, should act as social justice stimuli to elicit attendance behavior, and were used in the present study to do so.

2. Values as a link to behavior.

If it is indeed the case that values are standards that guide actions, then knowing a person's values should enable some prediction of his or her behavior in experimental and real life situations. Empirical support for the relationship between values as measured by the Rokeach Value Survey, and active behavior is sampled through the literature review below.

Rokeach (1973), on the basis of value analysis, attempted to distinguish between those individuals who join civil rights organizations and those who do not. Subjects consisted of 408 freshmen in two residential colleges at Michigan State University who had completed the Rokeach Value Survey, and who were solicited by first-class letter in April 1968 and, again, a year later to join the National Association for the Advancement of Colored People (NAACP). To join, the subject has to fill out an application form, enclose it along with a dollar in a prestamped return envelope, and post it in a United States mailbox. Forty-eight of the subjects thus joined the NAACP, either in 1968 or 1969. The Median test indicated significant differences between those 48 subjects who joined the NAACP and those 360 subjects who did not on the median rankings of the terminal values of equality ($p < .001$), a comfortable life ($p < .01$), a world at peace ($p < .05$), national security ($p < .05$), and pleasure ($p < .05$). The median rankings of the

instrumental values of ambitious ($p < .01$) and honest ($p < .05$) additionally differentiated joiners from non-joiners. Rokeach concludes that college students who are attracted to a civil rights organization such as the NAACP can be described as having a value pattern that is different from those who do not join in that they give more emphasis to equality, a world at peace, and honest, and care significantly less for a comfortable life, national security, pleasure, and being ambitious.

In a laboratory study, Penner (1971) correlated rankings of terminal values with the amount of eye contact between white subjects and white and black confederates with whom they had engaged in a 10-minute discussion. Penner obtained separate measures of eye contact for the first and second five minutes of interaction. None of the 18 correlations between terminal values and eye contact was statistically significant when white subjects interacted with white confederates ($N=20$), either during the first or second five minutes of interaction. Under the condition wherein white subjects had interacted with black confederates ($N=76$), the correlation between equality and amount of eye contact was .29 for the first five minutes of interaction, and .31 for the second five minutes. Both correlations are significant at the .01 level of probability. Under the same conditions, negative correlations were found to be significant between a comfortable life ($-.25$ for the first five minutes of interaction, $p < .01$) and $-.34$ for the second five minutes,

$p < .001$), family security ($-.26$ for the first five minutes of interaction, $p < .01$) and $-.31$ for the second five minutes $p < .01$), and pleasure ($-.21$ for the second five minutes of interaction, $p < .05$). White subjects who look less at the black confederates they talk to, care significantly more for comfortable life, family security, and pleasure than do white subjects who look more at the black confederates. These findings are extrapolated from the laboratory situation and explained in terms of value orientations influencing behavior. White persons who are more materialistic (a comfortable life) and hedonic (pleasure) and more concerned with the security of their family (family security) seem afraid of black strangers and therefore engage in more evasive interactions with them. In contrast, white persons who are more egalitarian (equality) in their value orientation engage in more authentic or intimate interactions with black strangers.

Rokeach (1969) investigated the relationship between church attendance and terminal and instrumental values. Subjects consisted of a national sample of adult Americans ($N=1,406$) and a sample of college students ($N=306$). Using the Median test, Rokeach reports significant value differences on 12 values among adult Americans varying in churchgoing behavior, and significant value differences on the same 12 values plus 4 additional ones among college students. In both samples, salvation is the value that most sharply distinguishes churchgoers from nonchurchgoers. Its

composite rank is third for adults attending weekly and fifteenth for those never attending; its composite rank is first for college students attending weekly and eighteenth for those never attending. In both samples, those attending weekly place greater value than nonchurchgoers on being helpful and obedient and usually lesser value on a comfortable life, an exciting life, freedom, pleasure and being imaginative, independent, intellectual and logical. Four additional values served to significantly distinguish between college students who vary in frequency of churchgoing. Those who are churchgoers care more for a world of beauty, and for being honest and loving, and they care less about being capable. Rokeach concludes from this study definite distinctive value patterns of Americans varying in their churchgoing behavior.

Shotland and Berger (1970) gave a questionnaire that included the Value Survey to 131 female employees of a company belonging to the Mid-western Scanlon Plan Association. Upon completing the questionnaire, 39 percent of the subjects returned the scoring pencils that had been distributed to them and 61 percent did not. One question these investigators were interested in was whether these two groups of women were distinguishable from one another in their value patterns. They found four values that differentiated significantly between those returning and those not returning pencils. The median rank of honest,

salvation, and a world at peace was significantly higher for those returning than for those not returning the pencils. Paradoxically, however, pencil returners also placed a significantly lower value on being helpful, a finding that is not easily interpretable.

The studies cited above provide empirical support for Rokeach's theoretical linkage between values as measured by the Value Survey, and real life behavior, as seen in activities of individuals who join civil rights organizations versus those who do not (Rokeach, 1973), as seen in churchgoing behavior (Rokeach, 1969) and as seen by those exhibiting honest behavior and those who do not (Shotland and Berger, 1970). Penner (1971) gives evidence that values can be used to influence and explain behavior when extrapolated from the laboratory situation. That there exists a relationship between some values and some behavior is substantiated empirically, yet the linkage remains unclear. For a description of such a possible relationship, let us turn to the theoretical viewpoint of Leonard Doob (1947), within whose approach a value can be understood as an intervening implicit response occurring between a stimulus event and an overt response.

Leonard Doob (1947) has offered a theoretical explanation of an attitude, placing his analysis in learning theory. In Doob's analysis, an attitude is viewed as an implicit, mediating response - a hypothetical construct or

an intervening variable between an objective stimulus and an overt response. The attitude, although unobservable by an outside observer, is both a response to the observable stimulus and a stimulus to the observable response, in a sort of "chaining" mechanism. For example, an observable stimulus elicits an attitude as an implicit response. The implicit response elicits an observable response (Hull, 1943).

More precisely, Doob defines an attitude as "an implicit drive-producing response considered socially significant in the individual's society" (1947, p. 136). While acknowledging and respecting Rokeach's distinction between an attitude and a value, Doob's definition of an attitude is not incompatible with those characteristics Rokeach attributes to a value. Looking more closely at the elements of Doob's definition, it becomes evident that the same characteristics he applies to an attitude may be applied to Rokeach's value. By "implicit" Doob means that the response is not directly observable; it may effect overt behavior, but it is not overt behavior. The response "may be conscious or unconscious, distinctly verbal or vaguely proprioceptive" (p. 136). The description of "implicit" may be applied to a value. Rokeach (1973) speaks of a value's behavioral component in the sense that "it is an intervening variable that leads to action when activated" (p. 7), and while noting that values and attitudes are both intervening variables, argues that values are the

more central of the two.

Doob also asserts (consistent with several other treatments of learning theory e.g., Miller, 1951; Miller and Dollard, 1941) that the implicit response has energizing characteristics which can motivate the external response. Rokeach (1973) has postulated that "a value is more dynamic a concept than attitude, having a more immediate link to motivation (p. 19). He argues that values have a strong motivational component.

Instrumental values are motivating because the idealized modes of behavior they are concerned with are perceived to be instrumental to the attainment of desired end-goals. Terminal values are motivating because they represent the supergoals beyond immediate, biologically urgent goals ... But there is another reason why values can be said to be motivating. They are in the final analysis the conceptual tools and weapons that we all employ in order to maintain and enhance self-esteem (p. 41).

Doob limits the term attitude to those implicit responses which mediate "socially significant behavior." "Socially significant behavior" is used qualitatively to set attitudes apart from other habits and associative bonds. Thus the distinction is not critical to the theory because attitudes and other habits obey the same empirical laws. Values, too, may be thought of as mediating "socially significant behavior" in the qualitative sense of the term as used by Doob. It does seem, then, in a definitive sense, that one might substitute the term "value" for "attitude" and

apply further Doob's thinking about attitudes to values.

Doob assumes that the implicit response (the value) is both cue- and drive producing. With respect to the cue properties, an individual can discriminate the presence or absence as well as the varying levels of intensity of an implicit response, just as he can discriminate the presence-absence and intensity of an overt stimulus. For example, then, when confronted with the invitation to attend a forum action group for the purposes of supporting nuclear disarmament, a person is capable of experiencing either the presence or absence of a certain value or implicit response. To say that an individual holds the value of "world at peace" in this instance is to say that cognitively she/he knows a desirable way to behave to the invitation. Affectively she/he can feel emotional about the value, be for or against it, approve of those who exhibit positive instances and disapprove of those who exhibit negative instances of it (Rokeach, 1973).

Theoretically, it is expected that the cognitive process (level of fairness-reasoning) should interact with the cue and drive producing aspects of the value content (viewed as an implicit response) and should thereby be influential in prompting behavior consistent with both content and process.

To see how such interaction should take place, let us ask the following question: How will cooperative justice-related values (equality and a world at peace)

operate as salient content within a low (less than principled stages 1-4) versus a high (principled stages 5 and 6) level of fairness-reasoning? Rest (1979) asserts that "at each step there is an intuitive stage of what is right and fair" (p. 35). Thus, cooperative justice-related values operate at each level. It may be useful to trace the cooperative justice-related value of equality (the content) through the stages (the structuring process), and contrast the less than principled versus the principled understanding of equality in order to exemplify clearly the cognitive process interacting with the value content. Stages 1 through 4 are defined in this study as composing the low or "less than principled" level of fairness-reasoning.

Stage 1 provides a normative structure (the caretaker's demands) for the regulation of human interaction; however, in this system of cooperation there is great inequality between parties and hardly any reciprocity. The system comes into being because of the accidents of birth i.e., who was born first, who is bigger and more powerful, etc. An abstract concept of equality, defined as brotherhood and equal opportunity for all, would have little meaning at this state.

Stage 2 goes a long way toward establishing some equality among participants in a cooperative arrangement through the notion of simple exchange. Stage 2, however, provides only a very temporary and fragmentary system of social cooperation, and is arbitrarily bound by the

particular circumstances of parties getting together and having favors that each one wants.

Stage 3 provides for a more established, ongoing system of cooperation in friendship relationships, each party being committed to the other's welfare; however, Stage 3 arbitrarily limits cooperation to whatever friendships have been established at a given time. The meaning of equality for persons at Stages 2 and 3, then, would seem to have a concrete, simple exchange, and restricted meaning, rather than connoting concepts of "brotherhood" and "equal opportunity for all."

Stage 4 establishes a society-wide system of cooperation in which all participants equally are under the law and in which all are reciprocating, each carrying out her or his own role. Stage 4, however, allows gross inequities and arbitrary distribution of the benefits and burdens of social living, because the social order may be set up legally to give advantage to some at the expense of others (for example, a slave society). The abstract notion of equality defined as "brotherhood" and "equal opportunity for all" would be subservient to the set laws and rules for a Stage 4 individual.

Stages 5 and 6 are defined in this study as composing the high or "principled" level of fairness-reasoning.

Stage 5 attempts to eliminate arbitrary rules by providing procedures for making new rules that reflect the

will of the people, giving each person an equal say in determining the arrangements of society. Hence, each receives from social cooperation the most that one could hope for, while at the same time having a moral basis for pressing claims on others. Stage 6 goes one step further in insuring "equal opportunity for all." Even when laws are enacted that reflect the will of the people, inequities can still exist (particularly for powerless minorities). The defining feature of Stage 6 is its appeal to abstract principles which rational, equal, and impartial people would choose as the governing terms of their cooperative interaction. Equality, as an abstract concept connoting "brotherhood" and "equal opportunity for all", may be seen as activated in individuals at Stages 5 and 6 of fairness-reasoning.

For the purposes of the present study, then, the levels of fairness-reasoning are psychometrically measured by James Rest's measure (1972) which will be used to specify a person's ability to reason along a prescribed developmental continuum. Level of moral reasoning in this study is seen as a cognitive structuring process which interacts with value content and moderates the manifestation of values in real life behavior. At the same time, it is recognized that development of fairness-reasoning, as measured by Rest (1972), is not a content or value-free process. For Rest, the goal toward which moral development is continually striving is cooperative justice. Thus, scores on the DIT

should in themselves hold predictive power to a person's behavior in real life social justice-related situations.

What can be expected, then, is that behavioral responses to social justice-related events will be more highly predicted on the basis of cooperative justice-related value content plus level of fairness-reasoning than either of those variables alone.

That is, the incentive or energizing aspects of the cooperative justice-related values of equality and world at peace (implicit response) as they relate to involvement in social justice-related behavior (overt behavioral response) are more logically appropriate and less situationally specific for individuals operating at a high (principled) fairness-reasoning level than those operating at a low (less than principled) level. Thus, even when value priorities of equality and world at peace are equivalent for Person A (high level of fairness-reasoning) and Person B (low level of fairness-reasoning), the prediction of Person A's participation in social justice-related behavior will be easier due to the internalized and more consistent properties of the cognitive structuring process at the principled levels of fairness reasoning.

For example, it is possible for two individuals to value equality as an end stage of existence more highly than all other alternative end-states. However, the reasons why each values equality so highly may be different. Person A may

value equality because of her/his concept of nonarbitrary social cooperation (Rest's Stage 6 principled level) which is based on the principles of the reciprocity and equality of human rights. The other individual, Person B, may value equality highly because of a rigid rule-orientation (Rest's Stage 4 less than principled level) which recognizes that the official doctrine of the society is to value equality highly and also the maintenance of the social order demands it. It is apparent, however, that A's value of equality has validity and application apart from any specific present societal norms while B's high value of equality depends on the perceived context of societal and legal norms. The high placement of the value equality on the Value Survey by adults at a low level (Person B) of fairness-reasoning, does not necessarily mean that a social justice-related situation (overt stimulus) will activate the value (implicit response) which will necessarily energize or motivate the external, overt response. In such a case, social recognition, or group identification may actually take precedence in real life situations. On the other hand, the high placement of the value equality on the Value Survey by adults at a high level (Person A) of fairness-reasoning where values are more abstract, stable and differentiated cognitions, would imply the value equality to more consistently act as "an intervening variable that leads to action when activated" (Rokeach, 1973, p. 7). That is, it functions as an implicit

response that has energizing characteristics which can motivate the external response (Doob, 1947; Miller, 1951; Miller and Dollard, 1941) more independently of specific present societal or cultural contexts.

Thus, while the same values might occupy the identical positions in two individual's hierarchy of values, the behavioral manifestation of a value(s) can vary according to each individual's cognitive structuring process, in that internal, abstract and symbolic cognitive frames of reference present greater guides to people of more developed moral judgment maturity.

C. Problems Investigated and Hypotheses

This final section of Chapter 1 will include the problems investigated in this research and this study's experimental hypotheses.

The present study seeks to employ the theoretical rationale of Rest's cognitive-developmental theory of fairness-reasoning. It addresses the issue of human values as predictors of real life behavior. More specifically, the purpose of this study is to empirically investigate the relationship between levels of fairness-reasoning and the cooperative justice values of equality and a world at peace on social justice behavior in real life situations. In the form of hypotheses:

1. Those individuals who exhibit a high level of fairness-reasoning will show significantly more attendance behavior at social justice events than will individuals who exhibit a lower level of fairness-reasoning.
2. Those individuals who give high preference to the value equality will show significantly more attendance behavior at social justice events than will individuals who give low preference to the value equality.
3. Those individuals who give high preference to the value a world at peace will show significantly more attendance behavior at social justice events than will individuals who give low preference to the value a world at peace.

It is also the purpose of this study to demonstrate that the cooperative justice values of equality and a world at peace, in addition to the cognitive-developmental level of fairness-reasoning, will together be better predictors of real life social justice behavior than will either the values or the level of fairness-reasoning alone. In the form of hypotheses:

4. The predictive ability of three variables (level of fairness-reasoning, equality, and a world at peace) to

the criterion variable (attendance behavior at social justice-related events) will be significantly greater than the predictive ability of the single variable of level of fairness-reasoning to the criterion variable.

5. The predictive ability of three variables (level of fairness-reasoning, equality, and a world at peace) to the criterion variable (attendance behavior at social justice-related events) will be significantly greater than the predictive ability of the two variables of equality and a world at peace to the criterion variable.

Finally, all other factors being equal, an interaction prediction is made. It is proposed that individuals at a principled level of fairness-reasoning will actualize highly held cooperative justice values in real life justice-related situations more often than will other individuals. Stated in the form of hypotheses:

6. That group of individuals with both high level of fairness-reasoning and high preference for the value equality will show significantly more attendance behavior at social justice events than will any other group of individuals.

7. That group of individuals with both high levels of fairness-reasoning and high preference for the value a world at peace will show significantly more attendance behavior at social justice events than will any other group of individuals.

The next chapter presents the experimental design for the testing of these hypotheses.

CHAPTER II

EXPERIMENTAL DESIGN

In this chapter, a detailed description will be given of the design of this study in four main sections. The tools are described in Section A. Section B deals with the subjects who participated in the study. In Section C, the experimental procedures are discussed. Section D concludes the chapter with a discussion of the statistical procedures used in the analysis of the data.

A. The Tools

In this section, the Value Survey as a measure of value content, the Defining Issues Test (DIT) as a cognitive-developmental measure of fairness-reasoning, and the Social Justice Committee Evaluation Sheet will be described. These will be followed by descriptions of those social-justice events/situations comprising the real life behavior used in this study.

1. Value Survey.

Milton Rokeach's theoretical conceptions of values are operationalized in the Value Survey (Rokeach, 1967).

Identifying 18 terminal and 18 instrumental values, Rokeach has provided the Value Survey as an instrument which can

measure the order and changes within an individual's value system. The Value Survey is composed of two parts. In the first are listed 18 terminal values in alphabetical order, which the subject is instructed to rank in order of importance. The second part consists of an alphabetical list of 18 instrumental values to which the same instructions apply. The Value Survey is an ordinal and ipsative measure which a respondent can complete in 10 to 20 minutes.

Although five forms of the Value Survey have been developed, Rokeach (1973) considers Form D of the Value Survey, with defining phrases added to the named values, and utilizing a gummed label format, as the best version developed thus far. This is indicated by the consistently high measures of reliability of Form D, its ego-involving format, and a high completion rate. A copy of Form D of the Value Survey, as used in the present study, may be found in Appendix 1.

Utilizing Form D of the Value Survey with a college sample (N=117), Rokeach (1973) reports a test-retest reliability of .78 (terminal values) and .72 (instrumental values) over a three week interval. With a sample of 204 college students, Rokeach reports a test-retest reliability of .69 (terminal values) and .61 (instrumental values) over a 14 to 16 month interval. While individual differences in value system stability have been noted to exist, the determinants of such are yet ambiguous. Rokeach (1973)

reports more stable terminal and instrumental value systems in women compared with men, in younger compared with older college students, among those with favorable attitudes toward civil rights compared with those having less favorable attitudes, and among those preferring intellectual to social activities. Other variables seem to be determinants only of terminal value system stability or only of instrumental value system stability. Political party identification shows a significant relationship with terminal value system stability, but not with instrumental value system stability. On the other hand, more stable instrumental value systems were found among honors students as compared with non-honors students, among those planning to go on for higher degrees as compared with those not planning to do so, and among social science and communication majors as compared with home economics majors. These same variables were not significantly related to terminal value system stability. Still yet other variables seem to be unrelated to either kind of stability. Hollen (1967) found no relationship between value system stability and dogmatism, or between value system stability and respondent ratings concerning degree of value commitment, importance, vagueness, difficulty, or uncertainty felt about one's value rankings.

Results for Form D test-retest reliabilities have additionally been obtained for each value separately. While Rokeach (1973) cites the test-retest time interval for this

study as ranging from three to seven weeks, and marks the sample as 250, he neglects to describe the sample in any further detail, except as that "we ended up with after several years of research" (p. 27). Rokeach concludes from this data that terminal values are generally more stable than instrumental values from test to retest. For terminal values the product-moment reliabilities range from .51 for a sense of accomplishment to .88 for salvation. The average reliability of the terminal values is approximately .65. The reliabilities of the 18 instrumental values are somewhat lower, averaging around .60. They range from .45 for responsible to .70 for ambitious. From the same study, Rokeach observes that those values initially ranked as most and least important change the least from test to retest; those ranked in the middle change the most. Such a U-shaped relationship, however, is noted by Rokeach as probably inherent in all ranking procedures.

The validity of the Value Survey is presented in terms of discriminant and convergent validity. As examples of discriminant validity, Rokeach (1973) offers evidence that his measure demonstrates that certain values are differentially related to specific reactions: the assassination of Dr. Martin Luther King, various attitudes toward student protest, the American presence in Vietnam, communism, church activism, male vs. female prison inmates (Cochrane, 1971), racists vs. anti-racists attitudes

(Feather, 1970) honest vs. dishonest behavior (Homant and Rokeach, 1970; Shotland and Berger, 1970), compatible vs. incompatible college roommates (Sikula, 1971), clients who continue counseling vs. those who discontinue (Shotland, 1969), intrinsic vs. extrinsic religious orientations (Tate and Miller, 1971), and attitudes toward Black militancy (Willis and Goldberg, 1970). That the Value Survey demonstrates convergent validity, i.e. certain values are related to certain behaviors, is exemplified by the values of those persons who join a civil rights organization, of participants in civil rights demonstrations, of churchgoers, and of specific lifestyles (Rokeach, 1973) as well as values related to dogmatism or "close-mindedness" (Rim, 1970), and to certain occupational roles and choices (Hague, 1968; Rokeach, Miller, and Synder, 1971).

Cochrane and Rokeach (1970) investigated the possible presence of order effects with Form D of the Value Survey with samples of adult Americans (N=1,409), male prison inmates (N=363), and university students (N=298). Since the terminal and instrumental values are presented to the respondent in alphabetical order, there is the possibility that he will rank those higher up in the alphabetical order as more important than those lower down. The authors conclude no order effects attributable to a methodological defect in the Value Survey.

Kelly, Silverman, and Cochrane (1972) used 117

undergraduate psychology students to study the effects of social desirability in responding to the 18 terminal values. Experimental subjects filled out the terminal values first under standard instructions and also sometime afterward under "social desirability" instructions; that is, the subject was asked to arrange the values "in the order that you think would make you appear most favorably in the eyes of the experimenter ... The final ranking should portray you in a fashion you deem to be the most socially desirable." The resulting correlation between the two sets of scores was $-.09$, suggesting that there was no significant relationship between the tendency to respond in a socially desirable manner and rankings of the terminal values under standard instructions.

In investigating the factorial structure of values, Rokeach (1973) identifies seven bipolar factors by varimax rotation, in a sample of adult Americans ($N=1,409$), which together account for 41 percent of the variance. No single factor accounts for more than eight percent of the variance. Rokeach concludes that 36 terminal and instrumental values are not readily reducible to some smaller number.

Formal criticism of Rokeach's theory has appeared. Jellison (1975) states the theory has been seen before in the sense that Rokeach's theory of human values represents a common tradition and common approach to values. The theory is felt to be weakened by the use of the cognitive

consistency model) in understanding values and behavior change. Concepts such as self-concept, inconsistency, and self-dissatisfaction are seen as ambiguous, as is the process by which an individual resolves inconsistencies. The Value Survey comes under fire as providing no guide for the prediction of behavior, given one's value rankings. Subsequent post hoc analysis and interpretations of experimental ranking-behavior groups are considered common sense, and the question of prediction is left unresolved.

Jellison's expectations that the Value Survey, as a measure of preferred values, provide a prediction of behavior in and of itself, can be challenged. It is not a measure that predicts, but a theory. It is a purpose of this study to examine a theoretical framework from which values can be seen to operate as internal, intervening variables.

Kitwood and Smither (1975) have criticized the Value Survey for forcing a strict, hierarchial order of values, for its ipsative structure, selected values, for the difficulty of ranking 18 values at a time, and for the relevance of the named values to beliefs, attitudes, and behavior. These authors call for a measure of values 1) that is relatively free from class and culture bias, 2) the items of which make reference to concrete situations, rather than abstractions, 3) that is capable of measuring variation in value intensity and 4) where the expression of the respondents' personal values is not constrained. Unfortunately, the authors

conclude that the above recommendations are not adequately accommodated within any existing instrument measuring values.

The implications of some of Kitwood and Smither's criteria appear contradictory, as in the case where they urge content that is culture-fair and at the same time content that makes reference to concrete situations. The more the latter is achieved, the greater the chances the former shall be violated as it is the specifics of situations that most embody the themes of culture. Being helpful in one context can be manifested concretely in another context via diametrically opposed behavior on the concrete level.

On another issue, when one moves to a data gathering format that does not constrain free expression, enormous content analysis and inter-rater reliability and consistency problems emerge. Considering Kitwood and Smither's critique then, it seems such refinements, besides being inconsistent, bring other subsequent liabilities that can be just as great as the benefits they hope to attain. The lack of action in this direction in the last five years may be due to researchers' judgment that such benefits are likely utopic while the costs necessary to achieve them do not justify the efforts that would be necessary.

In summary, then, the following conclusions pertinent to this research may be drawn regarding the Value Survey: 1) the Value Survey is an operationalization of Rokeach's theoretical concepts of terminal and instrumental values, 2)

as an instrument, the Value Survey is simple in design and economical time-wise to administer to groups, and 3) despite criticism, the Value Survey has proven to be a reliable and valid instrument that has been used to ascertain similarities or differences between groups of individuals and in relating certain values of certain behaviors. Because of the above, the Value Survey was felt to be a pertinent and useful measure of values for the present study.

2. Defining Issues Test (DIT).

The Defining Issues Test (DIT) is derived from Kohlberg's cognitive-developmental theory of moral development. The DIT provides an objectively scored and group-administered measure of moral reasoning capacity. In addition, it avoids many of the psychometric difficulties arising from the Kohlbergian interview technique of assessment (cf. Kurtines and Greif, 1974). The DIT is a standardized, cognitive-developmental measure of moral or fairness-reasoning, with a minimal dependence on the testee's verbal expressiveness. A limitation of the measure is that it cannot be used with subjects who have lower than 12 year-old reading level. A copy of the DIT can be found in Appendix 2.

The DIT consists of six moral dilemmas adapted from Kohlberg's interviews which are followed by twelve stage

prototypic statements (also derived from Kohlberg's work). The subject is first asked to rate each of the statements on a five-point Likert scale in terms of the statement's relative importance in reaching a decision with respect to the dilemma presented. The subject is then asked to select and rank order the four most important of these statements. These final rankings are used in the calculation of the actual index of moral maturity referred to as the P-score.

It should be noted that while the DIT takes the basic theoretical approach of Kohlberg's work, it cannot be considered to be measuring exactly the same phenomena because of the difference in methodology. Rest (1979, 1974) and Alozie (1976) outline some important aspects in which the DIT differs from the Kohlbergian interview technique. An examination of these issues may further clarify the properties of the DIT.

The first issue concerns the nature of the data source. Kohlberg's assessment requires a subject to spontaneously generate a new solution to a problem and then has a judge allocate a subject's responses to data categories. The DIT asks a subject to evaluate various considerations provided by the examiner and consequently to classify his own responses. The DIT, then, is more of a recognition task than one of production and subjects are thus likely to show more advanced moral thinking (more use of principled thinking) on the DIT. Indeed, Alozie (1976), in an intensive study of the

differences of Kohlberg's test with the DIT, found that subjects chose items on the DIT at higher stages than the stage at which they produce statements on the Kohlberg interview. It is suggested that this discrepancy is quite reasonable within the context of a developmental theory since recognition and discrimination generally precedes the ability for original production. The DIT can be regarded as tapping the earlier and more tacit moral understanding of a subject in the recognition and discrimination of principled thinking.

A second issue is concerned with the manner by which to index development. The traditional Kohlbergian method has been to allocate a subject to one of the six stages on the basis of his responses in the interview. Rest (1979, 1975) suggests that this is misleading since subjects are never entirely within one stage and any one protocol contains indications of different stage thinking. Thus to assign a subject categorically to one stage based on predominant usage of that stage is an oversimplification. The DIT provides a continuous index (the P-score) which locates a subject's development in terms of the relative importance he gives to principled moral thinking. This method avoids the arbitrary nature of stage-typing based on predominant usage as well as indirectly including in the final index an indication of the discrepant information caused by mixed stage usage. Loevinger (1976) points out that the P-score lacks intuitive appeal as a measure of overall development because it

incorporates no information from issues keyed to the stages 2, 3 or 4. Comparing several new indices derived from scaling techniques with the P index (Davison and Robbins, 1977), Rest (1979) acknowledges the P-score's insensitivity to changes occurring in the lower stages. To researchers using the DIT to evaluate outcomes of clinical and educational programs, Rest advocates the use of Davison's index.

Generally speaking, then, while Rest's and Kohlberg's assessment techniques assume the same theoretical basis, each uses its own methodology to collect and summarize data, and thus, each taps a different aspect of the same phenomena.

While data concerning the psychometric robustness of the DIT are relatively limited due to the recency of its development, the initial results are encouraging. A first study of the DIT (Rest et al, 1974) examined the protocols of 160 subjects drawn from four different educational levels - junior high, high school, college, and graduate school. This latter group was composed of seminarians and doctoral students studying moral philosophy and political science. The results indicated that the more advanced groups showed a clear increase in the P-score as well as a substantial decrease of lower stage usage. Test-retest correlations based on the 28 ninth graders were in the .80's. A study by McGeorge (1974) was undertaken to obtain a test-retest reliability estimate. This sample contained 19 ninth

graders and 33 Australian, college-age students. A short-term interval between testings indicated no significant changes in P-score sums.

The DIT manual (Rest, 1974) provides further validating information. Sixteen studies involving over 1,500 subjects are reviewed and the average group P-scores reported in these samples fit closely with those originally described (Rest et al, 1974). Results are also reported from studies examining change following explicit moral/ethical educational experiences. Significant upward change was found following these enrichment experiences as compared to no significant changes following exposure to regular courses in logic or philosophy.

Rest (1975) reports on the pattern of longitudinal change - an integral aspect of a developmental theory. Eighty-eight former junior and senior high school students who had been tested in a previous study (Rest et al, 1974) were re-tested following an interval of two years. Significant developmental change was found with all subjects showing increased usage of principled moral thinking. The younger subjects also showed shifts from preconventional to conventional thinking. Test-retest reliability over two years was .68 for the younger group and .54 for the older group.

McGeorge (1975) examined the susceptibility of the DIT to faking. Subjects were unable to fake upward although they

could fake downward. The results support the general theory of a sequential developmental pattern of moral reasoning such that subjects recognize lower stages as immature and can respond correctly when asked to fake downward while higher stages are relatively inaccessible and thus preclude upward faking. This study also reports a test-retest reliability of .65 (eighteen day interval). The author suggests that this correlation is attenuated by a restricted range of scores.

Research relating the DIT to certain demographic variables will be only briefly summarized. Education shows a consistent and powerful relationship to the DIT (Rest, 1979). Age is related to the DIT for student groups but not for adult groups (Dortzbach, 1976; Coder, 1976). There is suggestive evidence that intellectual milieu, as indicated by region of the country and religious membership (assessed at the individual congregation level, not denomination), is associated with moral judgment (Ernsberger, 1976; Lawrence, 1978). SES, sex, political party, type of residence, profession, or college majors do not have clear and consistent relationships with DIT scores, and more research is warranted (Rest, 1979).

On the DIT, the P-score is that index used as the final score. It locates a subject's development in terms of the relative importance he/she gives to principled levels of fairness-reasoning (stages 5 and 6). For example, a subject with a P-score of 40 is interpreted as having selected

principled fairness-reasoning items on the DIT approximately forty percent of the time.

Numerous scoring indices may be derived from the DIT in addition to Rest's generally recommended P-score. However, for the purposes of the present research, the use of the P-score seems the most appropriate index, and the scoring procedures for this study involved the calculation of that measure. A P-score may be expressed as a P-row score, or it may be expressed in terms of a percentage, a P% score. In the present research, both expressions are reported whenever possible.

The scoring takes into account only the four ranked statements which follow each moral dilemma. These ranked items are converted into the moral stage which they were designed to represent. An item ranked first or most important is given more weight than an item ranked second, third or fourth, since these items had less importance to the subject. Thus the first choice receives a weight of four, the second a weight of three, the third a weight of two, and the least important a weight of one. This weighting process is carried out for each story, with four entrees for each story and resulting in 24 entrees altogether. (See Appendix 3 for an example of a scoring sheet.) The P-score is then calculated by adding together all the weights assigned to stage five and to stage six items. This sum is divided by 60 so as to be expressed in terms of a proportion. The P-score

can vary from 0 to 95 rather than 100 since on three of the dilemmas there is no fourth possible principled item to choose. The P index, then, represents the sum of weighted ranks given to "principled" items, and is interpreted as the relative importance given to principled considerations in making a moral decision.

3. Social Justice Committee Evaluation Sheet.

The Social Justice Committee of a catholic university designed and administered a measure to evaluate their own effectiveness during the 1978-1979 year. A main objective of the '78-'79 year's program had been to expose the university community to relevant social justice issues, with the underlying purpose of encouraging a socio-critical attitude for future ministry in the Catholic Church. One purpose of the Committee's evaluation sheet was to measure the amount of community exposure to social justice issues that had been successfully accomplished. A second purpose was to ascertain whether a socio-critical attitude was operative, as measured from the participants' responses regarding the reasons for attending social justice events sponsored by the Committee.

In cooperation with the researcher, the Committee added two items to their evaluation sheet.

The first added item requested the participants to note their attendance or non-attendance at each of the Committee's

sponsored events. This data was necessary for the present research in order to ascertain the real life behavioral responses of the subjects. Such self-report data could be numerically verified through the Social Justice Committee's previously collected statistics, which included the actual number of people who attended each of their sponsored events.

The second extra item requested the participant to rank on a scale of one (1=no extent) to five (5=total extent), the extent to which (s)he perceived her/his values were involved in the attendance decision. Though not directly connected to a stated hypothesis, the researcher saw this data as being potentially useful when interpreting the real life behavior of subjects.

Finally included in the Evaluation Sheet was a statement to the effect that evaluator responses would be used as part of a research study on group value systems, and that individual responses would be kept completely confidential. Evaluators were given the option to request that their responses not be used in the research study.

A copy of the Social Justice Committee Evaluation Sheet may be found in Appendix 4.

4. Social Justice Events.

Three social justice events comprising the real life behavior used in this study are described below. Each event

was sponsored in a major way by the Social Justice Committee of the university the subjects attended. All events were held within an eight week period and were highly publicized before their occurrence. Descriptions of each event given below were verified by the chairman of the Social Justice Committee (Coffeyl).

The common denominators of all three events were 1) the strong emphasis on a social justice issue, (2) adequate subject exposure to the stimulus through advertising and publicity, and 3) the occurrence of the event at other than scheduled class periods.

Attendance behavior at the three events was judged to provide a reliable index of real life justice behavior. Epstein (1979) has demonstrated that single items of behavior have a high component of error of measurement, thereby limiting the possibility of replication, and a high component of situational uniqueness, thereby limiting the possibility of generalization. Thus, increasing the number of events measured was considered a more valid assessment of real life behavior.

Real Life Behavior #1: Day of Awareness: Year of the Child

Sponsored by the Social Justice Committee of the University in conjunction with outside civic and non-profit organizations, the Day of Awareness: Year of the Child

project was organized as 1) a consciousness-raising effort to alert the public to social issues of justice involving children and families, and 2) a concrete action-evoking event for the attendees in the form of a Plenary Session at the end of the day.

Publicity for the event included several large, colorful display boards in the main foyer of the building, noting the invited speakers and the day's agenda. Formal advertising commenced approximately 10 days before the actual event.

Several departments of the University cancelled classes for the purpose of encouraging students to attend this event. The majority of participants were enrolled in these classes.

Real Life Behavior #2: "Impressions on Pueblo": Conference
with Archbishops Quillet and MacNeil

This conference was organized by the Social Justice Committee as an opportunity to gain first-hand feedback from representatives of the Synod of Latin American Bishops, who had met to set policy and deal with issues of social justice in the Latin American Church. Major issues discussed at the Synod were those of the Catholic Church's present political role in the violence vs. non-violence controversy of Latin America, the question of the involvement of Church hierarchy in the fight for political justice through violence, and some decision as to what methods the Church might use to insure

social justice in the Latin American countries.

The Conference was publicized for a week in advance by the Social Justice Committee in conjunction with the Speaker's Bureau of the University through a permanent, prominent display board in the main entrance of the University.

The "Impressions of Pueblo" Conference was held on a weekday evening.

Real Life Behavior #3: Student Forum

A student forum was called by the Social Justice Committee of the University, as a result of the Plenary Session of the Day of Awareness: Year of the Child. The Plenary Session participants had called for a more conscious effort on the part of University faculties to see that socio-critical theological and pastoral training be provided, and, specifically, had requested that an academic course be added to the program cycle to deal with social justice issues. The purpose of the student forum was to ratify a formal brief prepared by the Social Justice Committee that would present the stated request to the University Administration.

Publicity for the Forum involved a member of the Social Justice Committee personally contacting each professor at the University one week in advance of the scheduled Forum to

request 5 minutes of class time. During this allotted time, a written announcement of the purpose of the Forum, and an invitation for the student body to attend was read to each class. Persons interested but unable to attend were requested to give their input to one of the Social Justice Committee members.

The Student Forum was held at a lunch-hour meeting, when no other University classes were formally scheduled.

B. The Participants

For the investigation of the hypotheses of this study, it was necessary to select participants from an adult sample within whom principled levels of fairness-reasoning were likely to be available. Rest (1979) and Connolly (1976) have observed that relatively few adults choose mostly principled moral considerations (stages 5 and 6) in making moral decisions on the DIT. However, Rest notes that certain samples of adults do tend to exhibit higher levels of fairness-reasoning:

Adults in general seem to slow down in moral judgment development in their 20's and to plateau after leaving school; however, those continuing their education in specialties that emphasize moral thinking (doctoral students in moral philosophy or political science, seminarians) attain much higher DIT scores than the average adult (p. 43).

Throughout a one week period, a total of 235 anglophone adults, including seminarians and doctoral students in moral theology and philosophy, attending classes randomly selected by the researcher in cooperation with a university administration, were requested to participate in a study of values by completing the Defining Issues Test and the Value Survey within a designated time period. Participants used code numbers rather than names for identification purposes on all measures, and were assured of the confidentiality of the test results which would be used for research purposes only.

Two hundred fifteen persons returned the measures within the allotted time period. Of the returned measures, twenty-eight participants were eliminated due to failure to meet the validity criteria on the DIT as set by Rest (1974), one participant was eliminated due to incompleteness of the Value Survey, and fifteen eliminated due to these participants' involvement in a night class only, a factor the researcher judged would affect the amount of exposure to the stimulus of the behavioral measures.

One hundred seventy-one persons were involved in the statistical analyses of the present study. All participants were full-time or part-time students attending courses at St. Paul University, completing graduate or undergraduate degrees in programs of pastoral counseling, parish ministry, theology, or church law. The subjects consisted of 74

females and 97 males, ranging in age from 20 years to 67 years, with a mean age of 36 years and a standard deviation

of 10.1 years. Table 2 presents this descriptive data.

Because of its small population of approximately 400 students, the strong Christian philosophy that explicitly operates, and the common denominator of a theological and ministerial thrust to the courses of study offered, the Canadian university from which the participants were sampled may be described as somewhat unique. The university tends to attract a high number of mature students.

C. Procedures

The experimental procedure involved the happenings of the three previously described real life events, the administration of the DIT, the Value Survey, and the Social Justice Committee Evaluation Sheet, as well as a group or individual debriefing/feedback session. All three social justice events were held within an eight-week period. All of the measures were completed approximately one month after the social justice events had taken place. Figure 1 displays a flow chart showing the sequence of the occurrences of the experimental procedure.

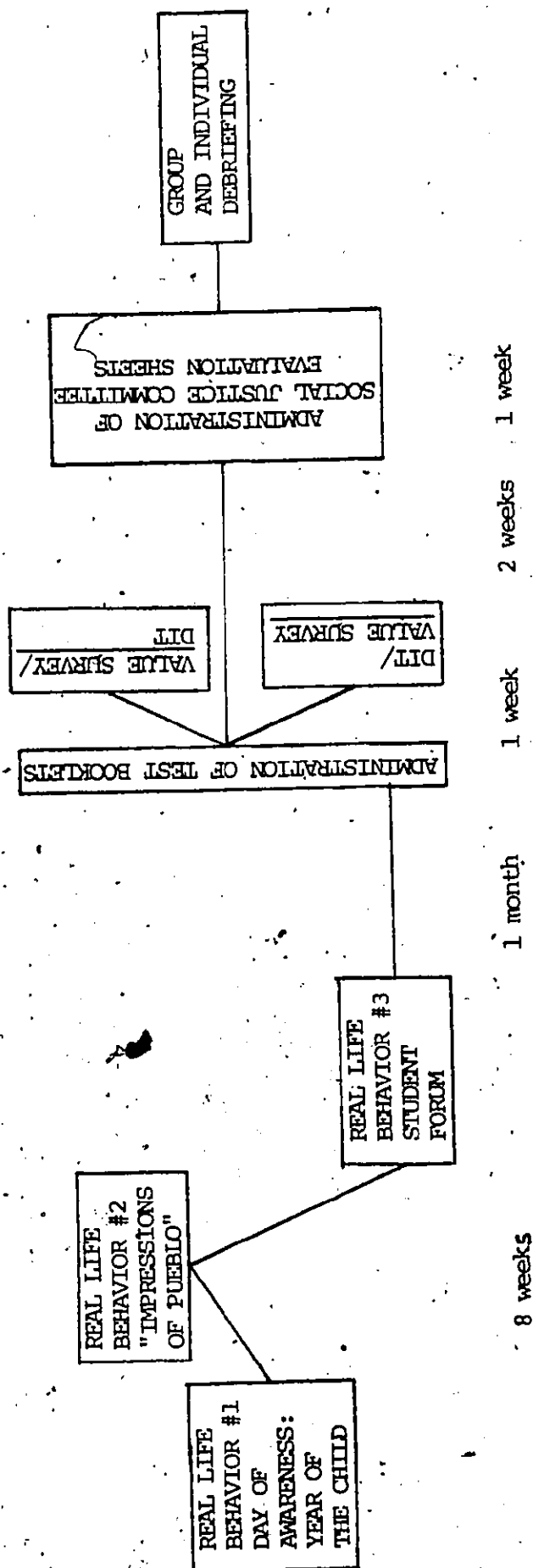
The administration of the DIT and the Value Survey generally occurred at the end of a regularly scheduled class period. Students were asked to return the completed test battery at the subsequent class meeting, usually held within a one week period. Three groups of students completed the

Table 2

Sex, Age and Years of Education
for 171 Adult Participants

Males	97
Females	74
Mean Age: Standard Deviation	36.2 years: 10.1 years
Range of Age	20 years to 67 years
Average Years of Education	18 years

FIGURE 1
Sequential Flow Chart of Experimental Procedure



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measures during the class time. Individual instructors were contacted prior to the class meeting and their agreement to solicit students as subjects was obtained. The examiner then came to the next class meeting to distribute the measures. Participants used code numbers to ensure anonymity, and were assured confidentiality of test results to be used for research purposes only.

The two measures were arranged in a test booklet. In order to avoid any systematic test sequence bias, the booklets were constructed in counterbalanced order, with either the DIT or the Value Survey appearing first. As part of the statistical analysis, the effects of these different orders were directly assessed. Prior to handing out the booklets a brief introduction (Appendix 5 includes the introduction verbatim) was provided by the examiner who stated that the object of the study was to investigate the structure and organization of value systems. An explanation of the real life behavior prediction hypotheses was purposely omitted in order to assure unbiased responding. Following the return of all testing materials by the participants, both individual and group debriefing was made available for interested participants.

The third and final measure, the Social Justice Committee Evaluation Sheet, was administered by the Social Justice Committee two weeks after the return of the test booklets containing the DIT and the Value Survey.

Instructions included the use of the previously selected code number for those students who had recently participated in the value organization research. Appendix 6 presents the instructions verbatim.

D. Analysis of the Data

Both raw scores and converted percentile scores on the DIT were determined for each of the 171 subjects.

For the purpose of the major statistical procedures, the ordinarily ranked data from the Value Survey was transformed into normalized interval level t-scores (Guilford, 1965) with a mean of 50 and a range of 33.6 to 66.4. Appendix 7 presents this data.

Self-report attendance behavior for each social justice event, collated from the post-hoc questionnaire, proved numerically accurate when verified with the actual numbers of participants at each social justice event, cumulated by the Social Justice Committee of the University. Attendance behavior was measured on a four-step scale of 0 to 3.

Attendance at no social justice event warranted a score of 0, attendance at any one of the social justice events merited a score of 1, attendance at any two of the social justice events equaled a score of 2, and attending all three social justice events rated a score of 3. With regard to Real Life Behavior #1 (Day of Awareness - Year of the Child), full

attendance was credited for attendance at any part of the day's agenda, in order not to discriminate against attending behavior for those subjects for whom classes had not been cancelled.

For exploratory purposes each subject answered, on a Social Justice Committee Evaluation Sheet, the question, "To what extent were your values involved in your decision to attend or not attend the social justice events", and rated their answers on a scale of 1 (no extent) to 5 (total extent). These "value importance" ratings were collated for the research sample.

The 171 subjects' individual scores obtained on the DIT, the transformed scores of the Value Survey rankings of the selected justice-related values of equality and a world at peace, the behavioral measure data, and the post-hoc questionnaire value importance rankings, can be found in Appendix 8.

To test for the effect of the order-of-test presentation, the technique of one-way analysis of variance was applied, conducted using the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975, chap. 22).

A stepwise multiple regression analysis was chosen for analysis purposes because it best answers the prediction question of 1) values and 2) level of fairness-reasoning as contributors to real life justice-related behavior (as

elaborated in hypotheses 1, 2 and 3). The rank-order procedure employed by the Value Survey is an ipsative procedure (one that generates nonindependent data within individuals), and thus may be questioned as to its violation of the assumption of independence when statistical comparisons are made across individuals. Hicks (1970) has stated:

Specifically, attribute scores experimentally dependent on one another, and the number of attributes measured is the primary determinant of the degree of the artifactual interdependency (p. 181).

However, with 18 values, the extent to which this independence assumption is violated is relatively small, the average intercorrelation being only $-.06$ (Rokeach, 1973). That is, once a person has ranked 17 values, the ranking of the 18th value is completely determined. This amount of ipsitivity can be tolerated (Rokeach, 1973). Indeed, Feather (1979) has employed product-moment correlation coefficients and, subsequently, stepwise multiple regression analysis on the transformed rankings for each value on the Value Survey, while Cochrane, Billig, and Hogg (1979) used stepwise discriminant analysis in order to test hypotheses utilizing as independent variables values ranked on the Value Survey. Thus, in the present study, multiple regression was chosen as the most appropriate test statistic, while taking into account that amount of ipsitivity generated by the Value.

Survey.

Stepwise multiple regression analysis was conducted using the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975, chap. 20).

Another principle technique of analysis was the test for differences in multiple correlations (Guilford, 1965), chosen as an appropriate statistic for contrasting specific correlational combinations of the variables equality, a world at peace, and level of fairness-reasoning, as elaborated in hypotheses 4 and 5.

Analysis of variance followed by Scheffe's S Method (Kirk, 1968) was the test statistic deemed most appropriate to answer those questions raised in hypotheses 6 and 7, regarding differences in mean scores for attendance behavior among various groups. A user's program of ANOVA was chosen from the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975, chap. 22).

Other techniques of analysis used in the present research include one-way analysis of variance to test the differences between the mean scores of value importance for four groups, Fisher's test for differences between two uncorrelated means (Guilford, 1965), and a test to determine the significance of the difference between a sample median and the population median (Kendall and Stuart, 1969).

For statistical significance, it was decided to accept the .05 level of probability in all cases where significance was tested. The results of these analyses are presented and discussed in the next chapter.

CHAPTER III

RESULTS

This section presents the results of the statistical analysis outlined in the previous chapter. Section A consists of the preliminary analyses of the comparisons of samples on the basis of level of fairness-reasoning (DIT) scores and value importance medians for equality and a world at peace. Also included in the preliminary analyses are the effects of order of test presentation. Following this, Section B includes the testing of the first three experimental hypotheses which involve the prediction from 1) cognitive processes and 2) the cooperative justice values of equality and a world at peace to social justice-related behavior in three real life situations. These hypotheses are tested by a multiple regression analysis. Section C tests experimental hypotheses 4 and 5, involving the predictor-significance of the combinations of cited independent variables, through testing the differences in multiple correlations. Section D refers to hypotheses 6 and 7 and describes the findings obtained by the application of a two-way analysis of variance and the Scheffe S method to the data. Finally, Section E concludes this chapter by presenting data from the Social Justice Committee Evaluation Sheets, summarized through a one-way analysis of variance and Scheffe post-hoc comparisons.

A. Preliminary Analyses

1. Sample statistics.

Table 3 presents the number of participants, the means and standard deviations for the level of fairness-reasoning scores, the transformed scores of the value equality and the transformed scores of the value a world at peace. These statistics are provided for each of the four social justice behavior groups, that is, for those participants who attended one, two, or ~~three~~ social justice events, as well as for the total sample.

Applying Fisher's t-test (Guilford, 1965), the average level of fairness-reasoning (P%) score of this sample (46) is significantly higher ($p < .01$) than that reported by Rest (1979), who cites the average P% after combining all adult American samples (1,149 subjects from 29 samples) as 40. The average P% of the present sample is also significantly higher ($p < .01$) than that reported by Connally and McCarrey (1978), who cite the average P% of 289 adult Canadian subjects as 37.2. Connally and McCarrey's (1978) results are significantly lower ($p < .01$) than those reported by Rest (1979). Table 4 presents these results.

Rokeach (1979) reports a median rank of 7.6 for the terminal value of equality for a sample of 1,430 adult Americans collected in 1971, and a median rank of 2.9 for the

Table 3

Number of Subjects, Means and Standard Deviations for Level of Fairness-Reasoning Scores (P% and R-raw), the Transformed Scores of Equality, and the Transformed Scores of a World at Peace for Attendance at None, One, Two or Three Social Justice Events and for the Total Sample.

Attendance behavior at Justice-Related Events	Number of Participants	Level of Fairness-Reasoning		Equality		A World at Peace	
		P%	P-raw Score Mean	Standard Deviation	Mean	S.D.	Mean
0	95	44	26.4	8.4	48.5	9.2	47.3
1	50	47	28.6	7.7	48.6	9.4	48.4
2	20	52	31.3	9.7	50.1	10.4	45.2
3	6	55.5	33.0	10.6	49.0	8.7	40.7
Total	171	46	27.9	8.6	48.7	9.3	47.4

Table 4

Student's T-tests for Comparisons Between Level of Fairness-Reasoning Scores (P%)
Reported by Three Studies

	Number of Cases	Mean	Standard Deviation	Sum of Squares	T-Value	Degrees of Freedom	2 Tail Prob
Present Study	171	46	14.5	35734	15.117	1,318	p < .01
Rest (1979)	1,149 (combined samples)	40	16.7	320165.7			
Present Study	171	46	14.5	35734	19.5	457	p < .01
Connolly and McCarrey (1978)	289	37.2	15	64800			
Rest (1979)	1,149 (combined samples)	40	16.7	320165.7	2.604	1,436	p < .01
Connolly and McCarrey (1978)	289	37.2	15	64800			

terminal value of a world at peace for the same sample. In the present sample of 171 adults, the median rank of equality is 6.6, significantly higher (Table 5) than that reported by Rokeach, and the median rank of a world at peace is 7.8, significantly lower (Table 5) than that reported for Rokeach's 1971 sample. A test of significance for the median (Kendall and Stuart, 1960) was judged the most appropriate to determine if the sample median differed significantly from the population median (Dionne²). Table 5 presents these results.

2. Order-of-test presentation.

To test for the effect of the order-of-test presentation, the following procedure and analysis were completed.

Seventy-nine participants (Group 1) were presented with a test sequence such that they completed the Value Survey before the DIT, while for ninety-two participants (Group 2) this order was reversed. The first group, then, consists of those participants who completed the measure of level of fairness-reasoning (DIT) first, followed by the Value Survey. The second group consists of those participants who completed the Value Survey first, followed by the DIT.

Three one-way analyses of variance were computed. A one-way analysis of variance comparing the value importance

Table 5

Tests of Significance Between the Population Median
Rankings of the Values Equality and a World at Peace and the
Sample Median Rankings of the Values Equality and a World
at Peace

Equality

Population median rank	=	7.6
Sample median rank	=	6.6
Standard deviation	=	3.909
Sample size	=	171
Constant	=	1.2533
Standard error of median	=	.3745
Difference between population median rank and sample median rank	=	1
Difference ÷ Standard error of median	=	2.67*

A World at Peace

Population median rank	=	2.9
Sample median rank	=	7.8
Standard deviation	=	4.398
Sample size	=	171
Constant	=	1.2533
Standard error of median	=	.4214
Difference between population median rank and sample median rank	=	4.9
Difference ÷ Standard error of median	=	11.63*

* p < .05

mean scores for equality between the two groups indicated that the groups were not significantly different. The results are presented in Table 6.

A second one-way analysis of variance, comparing the value importance mean scores for a world at peace between those 79 participants who completed the Value Survey before the DIT and those 92 participants who completed the Value Survey after the DIT, indicated no significant difference between these two groups. Table 7 presents these findings.

A third one-way analysis of variance compared mean scores for level of fairness-reasoning (P-row). Significant difference was found between the mean level of fairness-reasoning scores for the two groups ($F=6.230$, $p < .014$). That group of 79 subjects who completed the Value Survey before the DIT demonstrated a significantly higher mean score (mean score = 29.6, standard deviation = 9.00) on the level of fairness-reasoning measure (DIT) than did that group of 92 participants who completed the Value Survey after the DIT (mean score = 26.6, standard deviation = 7.86). From Table 8, which displays these results, it may also be noted from the η^2 , that the order-of-test presentation accounts for approximately .036 percent of the variation in the level of fairness-reasoning scores.

Order of test presentation was such that one might expect comparability of groups. However, there was no empirical check done for this. Therefore, one cannot

Table 6

Analysis of Variance of the Value Importance Scores of Equality by
Order-of-Test Presentation

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F	eta ²
Main Effects	78.962	1	78.962	0.918	0.339	
Order-of-Test Presentation	78.962	1	78.962	0.918	0.339	.005
Explained	78.965	1	78.965	0.918	0.339	
Residual	14537.773	169	86.022			
Total	14616.738	170	85.981			

Table 7

Analysis of Variance of the Value Importance Scores of a World at
Peace by Order-of-Test Presentation

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F	eta ²
Main Effects	32.151	1	32.151	0.391	0.533	
Order-of-Test Presentation	32.151	1	32.151	0.391	0.533	.002
Explained	32.152	1	32.152	0.391	0.533	
Residual	13903.836	169	82.271			
Total	13935.988	170	81.976			

Table 8
Analysis of Variance of Level of Fairness-Reasoning (P-raw)
Scores by Order-of-Test Presentation

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F	η^2
Main Effects	449.621	1	449.621	6.230	0.014	
Order-of-Test Presentation	449.621	1	449.621	6.230	0.014	.036
Explained	449.625	1	449.625	6.231	0.014	
Residual	12195.848	169	72.165			
Total	12645.473	170	74.385			

Table 9

Number of Cases, Mean Scores and Standard Deviations for the
Level of Fairness-Reasoning, for the Importance Given to Equality
and for the Importance Given to a World at Peace for two
Groups Divided on the Basis of Test Presentation

		<u>Order-of-Test Presentation</u>	
		<u>Group 1</u>	<u>Group 2</u>
		<u>(DIT, Value Survey)</u>	<u>(Value Survey, DIT)</u>
<u>Number of Cases</u>		92	79
<u>Level of Fairness-Reasoning</u>			
*Mean		26.38	29.63
Standard Deviation		9.00	7.85
<u>Importance Given to Equality</u>			
Mean		48.10	49.46
Standard Deviation		9.60	8.87
<u>Importance Given to a World at Peace</u>			
Mean		47.84	46.97
Standard Deviation		8.90	9.25

* p < .05

preclude the possibility of group differences on pertinent variables such as level of education.

Table 9 summarized the numbers of cases and the mean scores and standard deviations for level of fairness-reasoning, and for the selected justice values of equality and a world at peace for the two groups of participants.

B. Multiple Regression Analysis

In the stepwise regression, the variable that explains the greatest amount of variance in the dependent variable will enter the regression equation first; the variable that explains the greatest amount of variance in conjunction with the first will enter second and so on. In other words, the variable that explains the greatest amount of variance unexplained by the variables already in the equation enters the equation at each step. Thus, it is possible to isolate a subset of available predictor variables that will yield an optimal prediction equation with as few terms as possible.

Appendix 9 includes a correlation matrix for the DIT scores and the 36 terminal and instrumental values utilized in this study. Appendix 10 lists the unstandardized regression coefficients for the level of fairness-reasoning (DIT) scores and the terminal and instrumental values contributing to the regression equation.

In order to test hypotheses 1, 2, and 3, a multiple regression procedure was employed to examine the degree of linear dependence of the criterion variable, attendance behavior at social justice events, on the independent variables of the level of fairness-reasoning and all 36 terminal and instrumental values. Table 10 summarizes the findings. The independent variables of level of fairness-reasoning, 15 terminal values, and 15 instrumental values were included in a final regression equation for which the F ratio indicated an overall goodness of fit ($F=2.05009$, $df=31,139$, $p < .01$). The overall null hypothesis (multiple $R=0$) being rejected, it is concluded that one or more of the population regression coefficients has an absolute value greater than zero.

From the standardized regression coefficients (beta in Table 10) is determined the relative importance of each independent variable upon attendance at social justice events measured on a four-step scale of 0 to 3. Since the beta values in Table 10 are partial regression coefficients, they may be used as measures of the influence of each independent variable upon attendance at social justice events, with adjustments made for all other independent variables. From Tables 10 and 11 it can be seen, for example, that the influence of level of fairness-reasoning is slightly diminished ($R=.228$ to $R=.191$) if the confounding effects of all other variables are controlled. However, even when

Table 10

The Regression Equation: Included and Excluded Variables
With Accompanying Beta Weights

Multiple R = 0.56023		F = 2.05099 (p < .01)	
R Square = 0.31385		Degrees of Freedom = 31,139	
Standard Error = 0.75602			
Variables in the Equation		Variables not in the Equation	
Variable	Beta	Variable	Beta
Level of Fairness-Reasoning	0.19189	A World at Peace	0.00093
Logical (less)	-0.25974	Pleasure	-0.00378
A Comfortable Life	0.17410	True Friendship	0.00327
Intellectual (less)	-0.23237	Obedient	-0.00358
Courageous	0.14836	Polite	-0.00326
An Exciting Life	0.19624	Responsible	0.00828
Wisdom	0.11270		
A World of Beauty	0.12570		
National Security	0.08249		
Ambitious (less)	-0.14655		
Self-controlled (less)	-0.12080		
Loving (less)	-0.09734		
Mature Love (less)	-0.11605		
Social Recognition (less)	-0.11175		
Cheerful	0.06699		
Self-respect (less)	-0.09353		
Freedom	0.05812		
Happiness (less)	-0.06559		
Honest (less)	-0.09585		
Independent (less)	-0.06714		
Broadminded (less)	-0.06705		
Forgiving	0.03247		
Family Security (less)	-0.04188		
Equality	0.04079		
Clean (less)	-0.02988		
Capable (less)	-0.02891		
Salvation (less)	-0.01807		
Helpful (less)	-0.01626		
Inner Harmony	0.02050		
A Sense of Accomplishment	0.01439		
Imaginative	0.01088		
(Constant)	3.294931		

controlling for the variables of all other terminal and instrumental values, the level of fairness-reasoning still emerges as a significant predictor of attendance behavior. With regard to the order of test presentation, then, this is an important finding, since even after partialling out all of the confounding effects of the values, the level of fairness-reasoning maintains its significance as one of the heaviest weighted predictors of attendance behavior at social justice events.

Tests for specific regression coefficients were made and results used to indicate which of the independent variables significantly contributed to the regression equation and which variables could be deleted. The hierarchical F test (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975) was applied. The hierarchical test of significance procedure involves adjustments for only those variables that precede a given variable in the hierarchical order, and therefore reflects the total influence of each variable rather than reflecting only the direct linkages between the independent variables and attendance at social justice events as is gleaned from the beta weights. From Table 11 it can be seen that six independent variables were found to be significant at the .05 level of confidence. Level of fairness-reasoning was that independent variable which entered the regression equation first and which explained the greatest amount of variance in the criterion variable of attendance at social

Table 11
 Hierarchical F-Tests, Multiple R's, and R Square Change
 for Significant Variables in the Regression Equation

Variable	F	Multiple R	R Square	RSQ Change
Level of Fairness-Reasoning	10.6*	0.22861	0.05226	0.05226
Logical (less)	7.46*	0.29311	0.08592	0.03365
A Comfortable Life	6.66*	0.34190	0.11690	0.03098
Intellectual (less)	7.35*	0.38731	0.15001	0.03311
Courageious	7.80*	0.42508	0.18069	0.03068
Wisdom	4.60*	0.44900	0.20100	0.02031

df = 1,151

* p < .05

justice events. An F test of the regression coefficient indicated significance at the .01 level of confidence. Thus, the level of fairness-reasoning is a significant predictor of attendance at social justice events. Hypothesis 1, then, is confirmed, that individuals who obtain high scores on the DIT will show significantly more attendance at social justice events than will other individuals. The instrumental value logical was the second independent variable which was included in the equation and was significant at the .01 level. It can be noted from Table 10 that this predictor carried a negative sign, denoting the lower its rank in the hierarchy of values, the more likely it was to predict attendance of social justice events. A comfortable life, a terminal value, was significant at the .05 level in contributing to the regression equation. A second instrumental value carrying a negative sign, intellectual, was found to be significant at the .05-level of confidence. Courageous, an instrumental value, and wisdom, a terminal value, were the final two independent variables to significantly contribute ($p < .05$) to the regression equation. Thirteen terminal values and fourteen instrumental values were insignificant ($p < .05$) in contributing to the regression equation. Among these was the value equality. Thus, hypothesis 2 was not confirmed. The cooperative justice value of equality was not a significant predictor of

social justice behavior.. Individuals who rank equality high on the Value Survey do not show significantly more attendance at social justice events than other individuals.

Three remaining terminal values, a world at peace, pleasure, and true friendship, and three instrumental values, obedient, polite, and responsible were not included in the regression equation (see Table 10). Thus the importance given to the cooperative justice value of a world at peace was not a significant predictor of attendance at social justice events. Hypothesis 3, that individuals who rank a world at peace high on the Value Survey will show significantly more attendance at social justice events, is not confirmed.

From the multiple regression analysis, the degree of linear dependence of attendance behavior at social justice events on the independent variables of level of fairness-reasoning and the five predictor values, that is, logical, a comfortable life, intellectual, courageous and wisdom, can be determined. The strength of the dependence is explained by the R^2 value, or the amount of variation in attendance behavior at social justice events that can be explained by linear dependence upon the six independent variables operating jointly. Table 11 (bottom line, 3rd column) shows that $R^2 = .201$, indicating that 20% of the variation in attendance behavior at social justice events is explained by level of fairness-reasoning, logical, a

comfortable life, intellectual and wisdom.

C. Differences Between Multiple R's

In order to test hypotheses 4 and 5, an F test to determine the significance of a difference between multiple R's (Guilford, 1965) was applied. Such a test allows us to know whether the multiple R with more predictor variables included to correlate with the criterion variable is significantly greater than the R with a smaller number of predictor variables.

Table 12 presents the results of four analyses. The first analysis tests hypothesis 4, that

the predictive ability of the three variables of the level of fairness-reasoning, equality, and a world at peace to attendance behavior at social justice events will be significantly greater than the predictive ability of the single variable of level of fairness-reasoning to attendance behavior at social justice events.

As can be seen from Table 12, the resulting F value for the first analysis ($F=.141$) is not significant at the .05 level. This non-significant F value indicates that the multiple R with the greater number of predictor variables is not greater than the prediction to attendance at social justice events using the level of fairness-reasoning alone as a predictor. Attendance at social justice events does not appear more

Table 12

Tests of Significance of Differences Between Multiple R's

	Multiple R	R Square	Number of Variables	DF	F
Level of Fairness-Reasoning	.228	.052	1		
Level of Fairness-Reasoning, and values <u>Equality, A World at Peace</u>	.232	.052	3	2,167	0.141
<u>Equality, A World at Peace</u>	.050	.002	2		
Level of Fairness-Reasoning, and values <u>Equality, A World at Peace</u>	.232	.053	3	1,167	9.00*
Level of Fairness-Reasoning	.228	.052	1		
Level of Fairness-Reasoning, and values <u>Logical, A Comfortable Life, Intellectual, Courageous, Wisdom</u>	.449	.201	6	5,164	6.12*
<u>Logical, A Comfortable Life, Intellectual, Courageous, Wisdom</u>	.412	.165	5		
Level of Fairness-Reasoning, and values <u>Logical, A Comfortable Life, Intellectual, Courageous Wisdom</u>	.449	.201	6	1,164	7.46*

* $p < .05$

significantly predicted by level of fairness-reasoning scores, equality, and a world at peace than by level of fairness-reasoning scores alone.

The second analysis tests hypothesis 5, that

the predictive ability of the three variables of the level of fairness-reasoning, equality, and a world at peace to attendance behavior at social justice events will be significantly greater than the predictive ability of the two variables of equality and a world at peace to attendance behavior at social justice events.

From Table 12 it can be seen that the resulting F value of 9.00 is significant beyond the .05 level of confidence. It can be concluded, then, that the multiple R with the greater number of predictor variables, that is $R=.232$ for level of fairness-reasoning, equality, and a world at peace, is a more significant predictor of attendance at social justice events than is $R=.05$, the multiple correlation for the cooperative justice values of equality and a world at peace with attendance at social justice events. Thus hypothesis 5 is confirmed. Attendance behavior at social justice events will have been more significantly predicted by level of fairness-reasoning, equality, and a world at peace than by equality and a world at peace alone. It is to be noted, however, from Table 10, that the beta weights of equality and a world at peace do not warrant significance with respect to inclusion in the regression equation. It can

be concluded, then, that the major contribution to the multiple R value of .232 is made by the level of fairness-reasoning.

In the third analysis in Table 12, the difference between the multiple R of level of fairness-reasoning and the multiple R of the five predictor values in addition to the level of fairness-reasoning is tested. The resulting F value is significant ($p < .05$) indicating the higher multiple correlation is significantly greater than the lower multiple correlation, even after taking into consideration the difference in the number of variables.

The fourth analysis tests the difference in the multiple R between the five predictor values and the five predictor values combined with the level of fairness-reasoning. The F value indicates significance at the .05 level of probability, demonstrating the higher correlation to be greater than the lower.

Thus, in both the third and the fourth analyses, the variables of the level of fairness-reasoning plus the five predictor values of logical, a comfortable life, intellectual, courageous, and wisdom are seen to be more significant predictors of social justice behavior than either the level of fairness-reasoning or the five predictor values alone.

D. Two-way Analyses of Variance

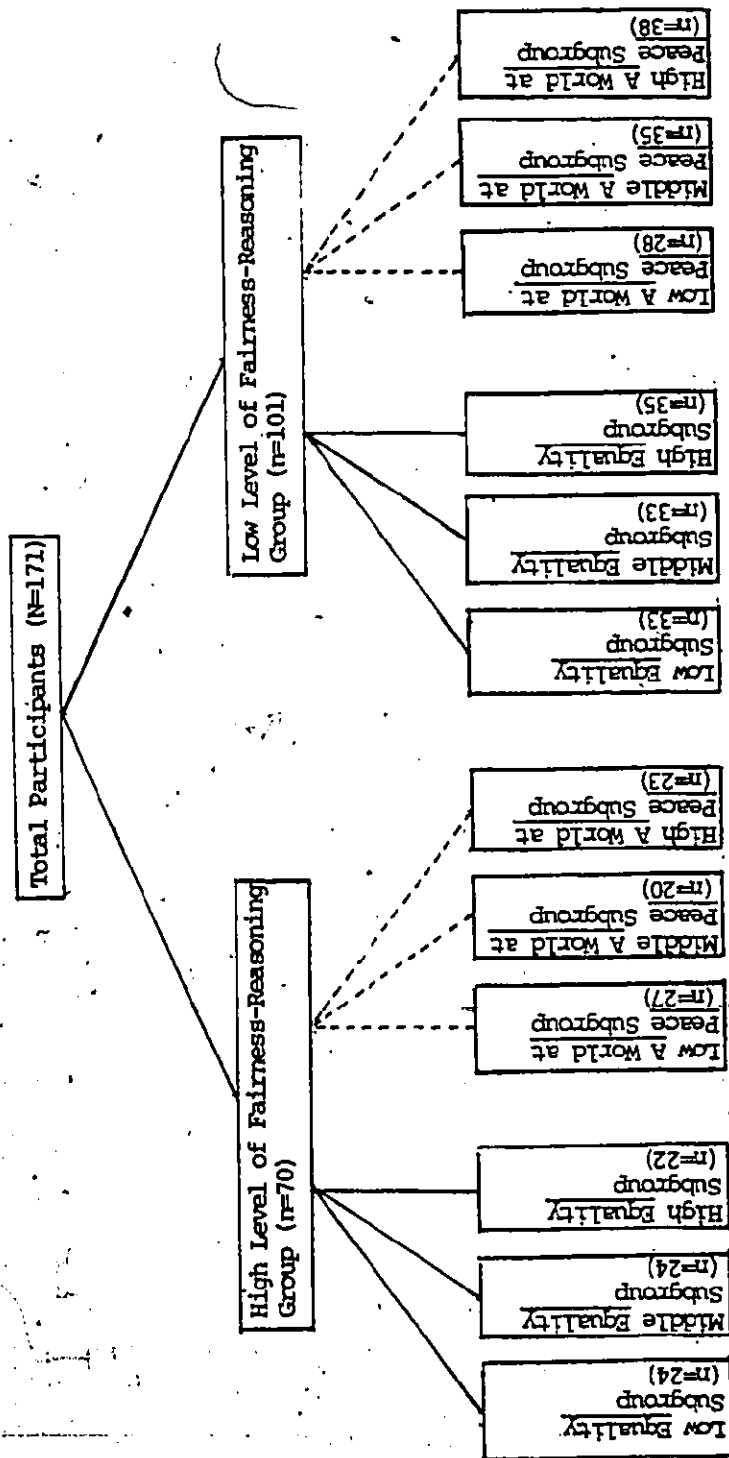
1. Division of sample into groups.

In order to test the remaining hypothesis, the participants were divided into two unequal groups based on the level of fairness-reasoning scores. This categorization dichotomized the group based on low and high levels of fairness-reasoning (Figure 2). The fifty percentile score was used as the cut-off point for dividing the sample into low and high level of fairness-reasoning groups.

Participants who selected principled items more than 50% of the time are assumed to possess a qualitatively different cognitive organization from those subjects who select less than 50% of the principled items (Rest, 1974). That is, the selection of principled items presupposes a hierarchical arrangement of systems of thinking whereby the more advanced forms of thinking encompass and reintegrate the earlier forms of thinking. The 50% score as a cut-off point for the determination of low or high levels of fairness-reasoning groups has proved useful in other research (Jacobs, 1976, 1977).

For each of the two groups divided on the basis of DIT scores, a tripartitive division for the value importance scores of equality and of a world at peace was conducted (Figure 2). The transformed scores of the ordinal rankings on the Value Survey for the cooperative justice values of 1)

FIGURE 2
Division of Sample Into Dichotomous Level of Fairness-Reasoning
Groups and Tripartite Equality and a World at Peace Subgroups



equality and 2) a world at peace were used to further categorize each level of fairness-reasoning group into three subgroups. In other words, the high level of fairness-reasoning group has further divided into three subgroups based on the value importance scores for equality and three subgroups based on the value importance scores for a world at peace. In a similar manner, the low level of fairness-reasoning group was divided.³

The thirty-third and the sixty-sixth percentile scores were used as the cut-offs for dividing each level of fairness-reasoning group into low, middle, and high equality subgroups. For each level of fairness-reasoning group, the same categorization was applied to the transformed scores of a world at peace. The precise percentile points were 33.9 and 66.7 for the value equality, and 33.9 and 64.3 for the value a world at peace. This division for the value equality resulted in low subgroups containing 24 participants in the high level of fairness-reasoning group and 33 participants in the low level of fairness-reasoning group. Value importance scores for the low equality subgroups ranged from 33.6 through 45.0. Middle equality subgroups contained 24 participants in the high level of fairness-reasoning group and 33 participants in the low level of fairness-reasoning group, the value importance scores ranging from 45.1 through 53.0. High equality subgroups consisted of 22 participants in the high level of fairness-reasoning group and 35 in the

low level of fairness-reasoning group, whose value importance scores varied from 53.1 through 66.4.

The tripartitive division for the cooperative justice value of a world at peace resulted in two low subgroups containing 27 participants in the high level of fairness-reasoning group and 28 participants in the low level of fairness-reasoning group. Transformed scores for the low a world at peace subgroups ranged from 33 through 45.0.

Middle a world at peace subgroups contained 20 participants in the high level of fairness-reasoning group and 35 in the low level of fairness-reasoning group, whose value importance scores ranged from 45.1 through 51.9. High a world at peace subgroups consisted of 23 participants in the high level of fairness-reasoning group and 38 in the low level of fairness-reasoning group, whose value importance scores ranged from 52 through 66.4.

In more descriptive terms, the equality tripartitive division produces three subgroups which differ from each other in terms of the relative importance that is attached to the value of equality. These three subgroups exist for each of the two level of fairness-reasoning groups. In order to be included in the low subgroups, an individual must have preferred approximately 66% or more of the other values to that of equality, and must have ranked them higher on the Value Survey. The members of the high subgroups performed in an opposite manner, and assigned greater importance to the

value equality approximately 33% or less of the time, and thus ranked them lower than equality on the Value Survey. The middle subgroup included those individuals who ranked equality in the middle range of the Value Survey.

In a similar manner, the tripartitive division of a world at peace scores produced three subgroups for each group divided on the basis of DIT scores. These subgroups differ from each other in terms of the relative importance that is attached to the value of a world at peace in its hierarchical order on the Value Survey.

2. Findings.

In order to test the interaction prediction made in hypothesis 6, that the group of individuals with both high levels of fairness-reasoning and high preference for the value equality will show significantly more attendance behavior at social justice events than any other group of individuals, a two-way analysis of variance was applied to the dependent variable, attendance behavior at social justice events. The results of this analysis are summarized in Table 13.

Table 13 demonstrates that the interaction effect of the level of fairness-reasoning and equality is significant at the .01 level of confidence. Scheffe's S method (Kirk, 1968) was applied to make all possible comparisons among the six

Table 13

Analysis of Variance of Attendance Behavior at Social Justice Events by the Level of Fairness-Reasoning and by the Importance Given to the Value Equality

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Main Effects					
Level of Fairness-Reasoning	4.026	1	4.026	6.285	0.013
<u>Equality</u>	0.316	2	0.158	0.246	0.782
2-Way Interactions					
<u>Equality/Level of Fairness-Reasoning</u>	5.809	2	2.905	4.534	0.012
Explained	10.081	5	2.016	3.147	0.010
Residual	105.707	165	0.641		
Total	115.788	170	0.681		

mean scores for attendance behavior at social justice events. Table 14 presents the differences among means.

It can be seen from Table 14 that the only significant difference among means occurs between the group of individuals who attains a high level of fairness-reasoning and who ranks equality in the middle of the Value Survey and the group who attains a low level of fairness-reasoning and who ranks equality in the middle of the Value Survey.

However, that group of individuals who attains both a high level of fairness-reasoning and highly prefers the value equality on the Value Survey, does not show significantly more attendance behavior at social justice events than any other group of individuals. In other words, the mean score of 1.591 for attendance behavior at social justice events, attained by that group of individuals who select more than 50% of principled (stages 5 and 6) items on the DIT and who also prefer the value equality to more than 66% of the other values, is not significantly different from the mean scores for attendance behavior attained by any other group of individuals.

In résumé, the data of Table 14 indicates that hypothesis 6 is not upheld. That is, when participants attained high levels of fairness-reasoning plus highly preferred the value equality, greater attendance behavior at social justice events did not result.

Figure 3 displays a pictorial graph of the interaction.

Table 14

Scheffe's S Method for Differences Among Means
for Attendance Behavior at Social Justice-Related Events

	Low F.R./ Middle Equality	Low F.R./ Low Equality	High F.R./ High Equality	Low F.R./ High Equality	High F.R./ Low Equality	High F.R./ Middle Equality
Low Fairness-Reasoning/(F.R.) Middle Equality = 1.273	-	.212	.318	.470	.519	.769*
Low Fairness-Reasoning/Low Equality = 1.485	-	-	.106	.258	.307	.557

Tabled value for F for 5 and 165 degrees of freedom = 2.28 (.05 level of probability)

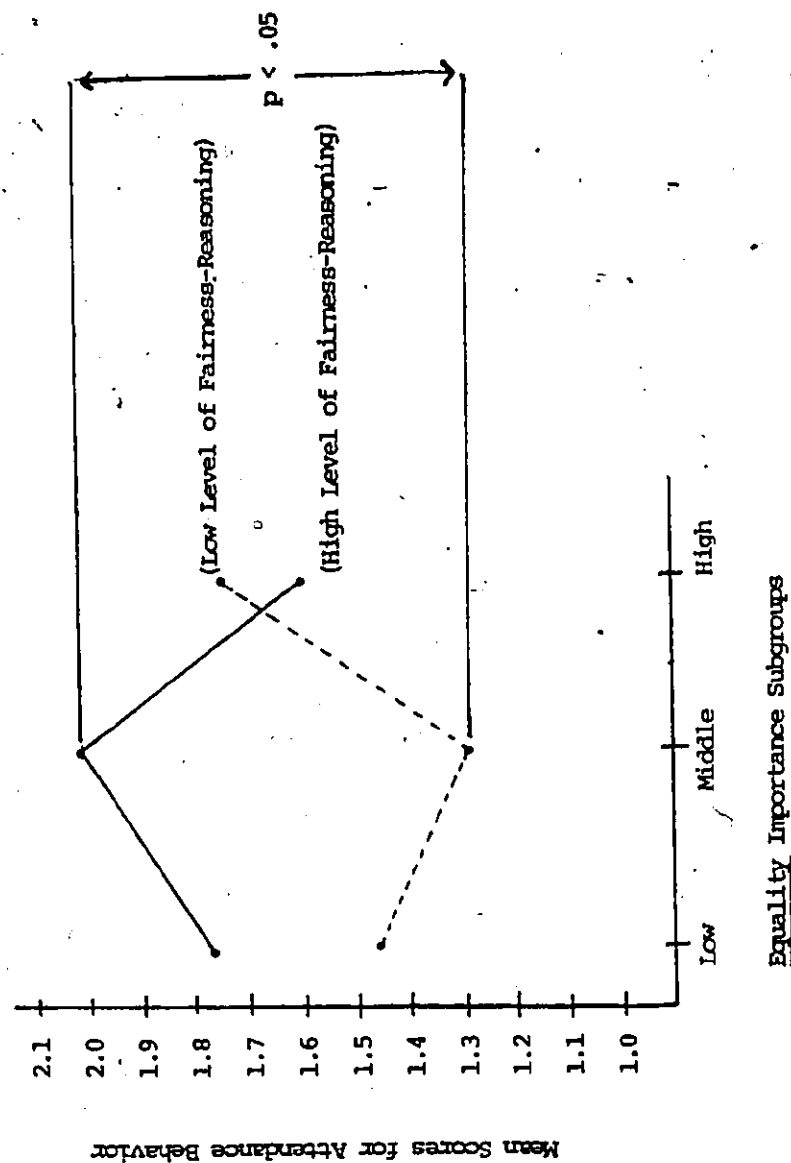
NS = .641

Scheffe's S = .725

*p < .05

FIGURE 3

Illustration of Attendance Behavior at Social Justice Events Mean Scores to Show Interaction Effects of Level of Fairness-Reasoning and the Importance Given to the Value Equality



results.

Hypothesis 7, that the group of individuals with both high levels of fairness-reasoning and high preference for the value a world at peace will show significantly more attendance at social justice events than any other group of individuals, was tested by the application of a two-way analysis of variance to the dependent variable of attendance at social justice events. The results of this analysis are summarized in Table 15. Examination of Table 15 shows that the main effect of level of fairness-reasoning is significant, which underlies the statistical importance of this variable in accounting for attendance behavior at social justice events.

The main effect of the importance of the value a world at peace, as well as the interaction effects of a world at peace and the level of fairness-reasoning are nonsignificant. It can be concluded, then, that high, middle, or low rankings of a world at peace contribute little statistically to differential attendance behavior. It can also be concluded that the effect of level of fairness-reasoning does not differ significantly across high, middle, or low rankings of a world at peace. Likewise, the effect of a world at peace is uniform across different categories of the level of fairness-reasoning. Thus, hypothesis 7 is not confirmed. That group of individuals with both high levels of fairness-reasoning and high preference for the value a world

Table 15

Analysis of Variance of Attendance Behavior at
Social Justice Events by the Level of Fairness-
Reasoning and by the Importance Given to the
Value a World at Peace

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Main Effects					
Level of Fairness-Reasoning	4.115	1	4.115	6.171	0.014
<u>A World at Peace</u>	1.382	2	0.691	1.037	0.357
2-Way Interactions					
<u>A World at Peace/Level of Fairness-Reasoning</u>	0.415	2	0.207	0.311	0.733
Explained	5.753	5	1.151	1.725	0.131
Residual	110.035	165	0.667		
Total	115.788	170	0.681		

at peace did not show significantly more attendance behavior at social justice events than other individuals.

E. Investigation of Post-hoc Questionnaire

On the Social Justice Committee's Evaluation Sheets, each subject answered the question, "To what extent were your values involved in your decision to attend or not attend the social justice events", and ranked his/her answer on a scale of 1 (no extent) to 5 (total extent). A one-way analysis of variance was applied to the data to ascertain the differences among means of ranked value importance for those who attended none, one, two or three of the social justice events.

Table 16 presents these results. A linear trend of increased means of ranked value importance is demonstrated, from subjects who attended none of the social justice events (mean score = 2.2105) to subjects who attended one of the social justice events (mean score = 3.4800), to subjects who attended two of the social justice events (mean score = 3.800), to subjects who attended all three social justice events (mean score = 4.1667). The resultant F ratio (18.210) is significant at the .0001 level of probability. The Scheffe post hoc comparison for value importance indicates a significant mean difference ($p < .05$) between those subjects who attended none of the social justice events and those who attended either one, two, or three of the social justice

Table 16

Analysis of Variance of Value Importance Rankings
by Attendance Behavior at Social Justice Events,
and Scheffe Post-Hoc Comparison of Mean Scores

Source	DF	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	87.1122	29.0374	18.210	0.0000
Within Groups	167	266.3018	1.5946		
Total	170	353.4138			

Group Attendance	Count	Mean	Standard Deviation	Standard Error
None	95	2.2105	1.4652	0.1503
One Event	50	3.4800	0.9089	0.1285
Two Events	20	3.8000	1.1050	0.2471
Three Events	6	4.1667	0.4082	0.1667
Total	171	2.8363	1.4418	0.1103

Scheffe Post-Hoc Procedure

Mean
2.2105
3.4800
3.8000
4.1667

Group
Attendance
None
One Event *
Two Events *
Three Events*

Three Events
Two Events
One Event
None

* $p < .05$

events.

Thus, the salient findings of this study can be summarized as follows:

1. By design, the mean score of the level of fairness-reasoning (P%) of the adult sample in the present study is significantly higher than those mean scores reported in two other published studies using adult samples.
2. Level of fairness-reasoning was a significant linear predictor of attendance behavior at none, one, two, or three social justice events, accounting for approximately 5% of the variance in attendance behavior.
3. The cooperative justice-related values of equality and a world at peace did not emerge as significantly weighted coefficients in the regression equation. When these values were combined with the level of fairness-reasoning, the resulting predictive ability to attendance behavior was no more significant than that predictive ability of level of fairness-reasoning alone to attendance behavior, but was more significant than that predictive ability of equality and a world at peace alone with attendance behavior.
4. High importance given to the values a comfortable life,

courageous, and wisdom, and low importance given to the values logical and intellectual emerged to compose a significant prediction pattern of attendance behavior at none, one, two, or three social justice events, which accounted in total for approximately 15% of the variance in attendance behavior. When these values were combined with level of fairness-reasoning, the resulting predictive ability to attendance behavior was more significant than that predictive ability of level of fairness-reasoning alone to attendance behavior, and more significant than that predictive ability of the values (a comfortable life, wisdom, courageous, logical, and intellectual) alone to attendance behavior.

5. That group of individuals who both attained a high level of fairness-reasoning plus highly preferred the value equality, or who attained a high level of fairness-reasoning and highly preferred the value a world at peace, did not exhibit significantly more attendance behavior at social justice events than other groups of individuals.
6. That group of individuals who attained a high level of fairness-reasoning plus hierarchically placed the value equality in a middle position on the Value Survey,

exhibited significantly more attendance behavior at social justice events than did that group who attained a low level of fairness-reasoning plus hierarchically placed the value equality in a middle position on the Value Survey.

7. Individuals who attended one or more social justice events reported significantly more involvement of their values in their decisions to attend social justice events than did individuals who attended no social justice events.

In the following chapter, these findings are discussed.

CHAPTER IV

DISCUSSION

Section A will open this chapter with discussions of the results of the preliminary analyses of the sample statistics followed by the results of the order of test presentation. Next, the results of hypotheses 1 through 7 will be interpreted and their implications will be discussed in Section B. Finally, Section C will provide directions for further research.

A. Preliminary Analyses

1. Sample statistics.

That the present sample is composed of individuals with a higher mean level of fairness-reasoning score than the average North American adult (Table 4) is both an expected and sought for occurrence.

That the present sample is composed of individuals with a higher median score for the terminal value equality and a lower median score for the terminal value a world at peace than those median scores of the average adult (Table 5), is a conclusion that must be qualified.

It is to be noted that Rokeach (1979) reports medians for terminal and instrumental values from a 1971 adult American sample composed of 1,430 subjects. These he

contrasts with medians for the same values from a 1968 adult American sample composed of 1,409 subjects. For both the terminal values of equality and of a world at peace, Rokeach (1979) reports significant changes between the 1968 and the 1971 samples. Equality, with a median rank of 7.6 in 1971 by adult Americans, is significantly higher than its 1968 median ranking of 8.5 ($p < .01$). A world at peace attained a median ranking of 2.9 in 1971; this is a significant change ($p < .05$) from its 3.3 median ranking in 1968. Thus, over a three year period, these values (as well as others that Rokeach reports) do not seem to remain hierarchically stable for a large sample of adult Americans. One might question, then, contrasting median rankings of values from a 1980 adult sample with those of a 1971 adult sample. Thus, while significant differences in median rankings do exist between the present sample and Rokeach's (1979) sample of 1971, such differences may simply be an artifact of the number of years that elapsed or due to changed political circumstances over the years.

2. Order of test presentation.

The group of 79 subjects who completed the Value Survey before the DIT demonstrated a significantly higher mean score on the DIT than did the group of 92 subjects who completed the Value Survey after the DIT. The variable of the

order-of-test presentation, that is, completing the Value Survey before the DIT, produces a significant effect on the DIT results. Thus, the clarification of one's own values through the ranking procedure appears to sensitize one to the next task of reasoning about moral decisions. In relation to this finding, two issues become salient to the present study; 1) Are scores on the measure of fairness-reasoning used (the DIT) susceptible to the situational context in which the test is taken? If so, then can the validity of the DIT in measuring cognitive processes that are supposedly stable, internalized, and independent of situational contexts be questioned? and 2) What are the effects of the order-of-test presentation on the interpretation of the results of this study?

With regard to the first question raised, a closer look at research with regard to the manipulation of test-taking sets is warranted. Two studies are pertinent to this area. The first study (McGeorge, 1975) previously reported in Chapter 2, page 63 of this study, shows that subjects did not significantly increase their DIT P% scores when instructed to fake high; however, they did decrease significantly when instructed to fake bad. These findings are what would be expected if the DIT under standard conditions taps the upper levels of a subject's capacity, for then the subject does not really know how to increase his score. Also assuming that moral judgment is a developmental factor, the subject can easily fake downward because he is aware of simpler, less

adequate ways of thinking now discarded but still understood.

Bloom (1977) assigned 132 college students to one of six groups: Group 1 subjects were instructed to take the DIT twice, first under "fake good" conditions such as McGeorge used, then under normal conditions; Group 2 subjects, first under normal conditions, then under fake good conditions; Group 3 subjects, first fake good, then under instructions to take the test as a philosopher, Group 4, philosopher, then fake good; Group 5, philosopher, then normal; Group 6, normal, then philosopher. Scores were essentially identical under standard, fake good, and philosopher instructions. Subjects do not seem to have more advanced concepts of justice than the ones given on the usual DIT. Subjects seem to use the highest concepts they have. Also determined from the DIT are M scores, representative of lofty sounding but meaningless items, and useful as a validity check. M scores were analyzed by Bloom (1977) in the same way, with no order or treatment effects ($F=.69$, $p=.63$). Rest (1979) asserts that DIT scores cannot be significantly increased by instructions to fake good without enough increase in M scores to invalidate the questionnaire.

While conclusions from fakability studies validate scores on the DIT as resistant to the experimental manipulation of test-taking sets, certain other studies have investigated experimental treatments of the enhancing sort, which do in fact increase DIT scores. That is, certain

experimental or educational treatments supply those experiences that do produce greater "pre-post" gains than treatments that do not.

Rest (1979) summarizes 16 intervention studies, three of whose authors reported significant pre-post gains on DIT scores after 6 week to 8 month-long experiences in psychological development programs. For example, Erikson, Colby, Libbey, and Lohman (1976) reported a significant pre-post gain ($p < .05$) in DIT scores for 19 junior high school students after a semester-long participation in a course designed to promote general personality and social development. Sprinthall and Bernier (1977) reported a significant pre-post gain ($p < .01$) in DIT scores for 18 teachers after a 6 week summer workshop in personality and social development, while Whitely and Nelson (1976) reported a significant pre-post gain ($p < .02$) in DIT scores for 77 college freshman after an 8-month experience in special residential college and course work in psychological growth.

Three additional studies are cited by Rest (1979) whose authors reported significant pre-post gains on DIT scores after 12 hours to semester-long moral education programs. Coder (1975) reported a significant pre-post gain ($p < .005$) for 87 adult church members after 12 hours of a program focused on moral problems, moral philosophy, and moral discussion. Panowitsch (1975) reported a significant pre-post gain ($p < .002$) in DIT scores for 152 college



students following a semester-long ethics course. Finally, a significant gain in DIT scores ($p < .05$) is reported by Piwko for 68 college students who participated in 10 two-hour sessions in a course on moral values and commitments.

The remaining 10 intervention studies designed to investigate pre-post DIT score changes yielded nonsignificant results (Rest, 1979). These included two studies of brief, short-term interventions. Geis (1977) investigated changes in DIT scores for 90 college students following four hour-long class periods over two weeks in group discussions of moral dilemmas. Walker (1974) studied changes in DIT scores for 70 8th graders following a short, one-time exposure to different levels of moral reasoning.

To date, no further published research is available on very short-term experimental enhancement treatments that might affect DIT scores.

If we assume from the present results of order-of-test presentation that DIT scores are somewhat enhanced or elevated by the previous procedure of value-ranking, we need not reject the validity of the DIT as a measure of fairness-reasoning. Rest (1974) states that "moral judgment is not a value-neutral intellectualization skill, but relates to value commitments as well" (5-1). Thus, it seems reasonable that clarifying one's own values through a procedure of value-ranking should sensitize one to one's own values and should call for consistency when applying these

values to those social problems as presented in the DIT, thus enhancing, at least for a short while, DIT scores.

What are the effects of the order-of-test presentation on the interpretation of the results of the present study? Examination of η^2 , provided by Table 8, conveys the information that only .036 of the variance of the dependent variable (DIT scores) is attributable to the independent variable (order-of-test presentation). Thus, while significant differences do exist between mean scores on the DIT for two groups divided on the basis of order-of-test presentation, it is to be noted that this difference accounts for only a small amount of the variance in level of fairness-reasoning scores.

A second statistic can be examined which provides information relevant to this same question. The standardized regression coefficients (beta in Table 10) provide information as to the relative importance of each independent variable upon attendance behavior. Since the beta values in Table 10 are partial regression coefficients, they can be used as measures of the influence of each independent variable upon attendance behavior, with adjustments made for all other independent variables (Nie et al, 1975). From Table 10, it is evident that even when controlling for the effects of all other variables, the level of fairness-reasoning (as measured by the DIT scores) still emerges as a significant predictor of social justice-related

behavior.

With regard to the order-of-test presentation, then, even when the effects of all the values are partialled out, the level of fairness-reasoning maintains its significance as one of the heaviest weighted predictors of social justice-related behavior. Thus, results from hypotheses 1 through 5, which utilize those statistics computed from the stepwise multiple regression analysis, may be interpreted and discussed without major qualification due to order-of-test presentation results.

B. Hypotheses

Hypotheses 1, 2, and 3 tested the prediction of attendance behavior at social justice events from a) a high level of fairness-reasoning, b) high preference given to the value equality, and c) high preference given to the value a world at peace, as respective, separate predictors. Of these three hypotheses, only hypothesis 1, that

those individuals who exhibit a high level of fairness-reasoning (as measured by scores on the DIT), will show significantly more attendance behavior at social justice events (as measured on a four-step scale from 0 to 3), than will individuals who exhibit a lower level of fairness-reasoning,

was upheld. The fact that the predictor variable - level of fairness-reasoning, as measured by DIT scores - is a

significant predictor of attendance behavior at social justice events, provides further empirical evidence for a theoretical relationship between level of fairness-reasoning and real life social justice behavior. Such a finding corresponds positively with the empirical research examined in the first chapter, i.e. Jacobs, 1976, 1977; Froming and Cooper, 1976; Gunzberger, Wegner, and Annoshian, 1977; Leming, 1978; and Malinowski, 1978.

From Table 11, it is evident from the R^2 that level of fairness-reasoning accounts for approximately five percent of the variance in attendance behavior at none, one, two or three social justice events. While this amount of variance is statistically significant, it may be questioned as to why the level of fairness-reasoning variable did not explain more of the unexplained variance.

One explanation involves the limited variability in the criterion variable of social justice-related behavior. The fact that the measure of attendance behavior at social justice events ranged only from 0 to 3 measured on a 4-step scale, may be viewed as a handicap in terms of statistical analysis. The restriction of range of the behavioral measure contributes to a high component of error of measurement and restricts the generality of behavior measured. Social justice behavior, as measured in the present study, was limited to three specific contexts. As Epstein (1979) has demonstrated, when measures of behavior are averaged over an

increasing number of events, stability coefficients increase to high levels and objective behavior can then be reliably related to self-report measures. So, having used more real life behavioral measures of social justice would probably have increased the amount of variance attributable to the level of fairness-reasoning variable.

A second explanation as to why level of fairness-reasoning does not explain more of the unexplained variance in attendance behavior points to the recognition versus the production of moral choices factor, the recognition task being that which is measured by the DIT. In moral judgment research using Kohlberg's stages, studies by Rest, Turiel, and Kohlberg (1969) and Rest (1973) suggest that subjects prefer statements (give higher ratings of importance to statements) at stages higher than the stages they can paraphrase, and spontaneously produce statements at even lower stages. Hence a particular type of thinking (e.g. principled) seems to be evident developmentally first in a preference task, then in a paraphrasing-for-comprehension task, then in spontaneous production. In these studies, paraphrasing-comprehension was rarely more than one stage ahead of spontaneous production, although preference was further ahead. In comparison between the DIT (a recognition-rating task) and Kohlberg's measure (a spontaneous production and justification task), the DIT credits subjects with higher forms of thinking than

Kohlberg's measure (Rest et al., 1974; Alozie, 1976). On the average, subjects were almost two stages higher on the DIT than on the Kohlberg measure. It can be speculated, then, that by definition of itself as a measure of the spontaneous production of moral reasoning, the Kohlberg Measure of Moral Judgment would have produced a higher correlation with measures of real life social justice behavior than did the DIT.

What of cooperative justice values and their role as predictors of real life social justice behavior? Hypotheses 2 and 3, which respectively predicted high preference given to the values equality and a world at peace as significant determiners of attendance behavior at social justice events, were not confirmed. Equality and a world at peace, both values that Rokeach (1973) implies are social values, and equality, in particular, being the value which appears to be at the core of autonomous moral judgment, (McLellan, 1974) do not emerge as significantly weighted coefficients in the regression equation. As presented by Table 12, values other than equality and a world at peace, in conjunction with a high level of fairness-reasoning, are better predictors of social justice behavior as measured in this study.

What can be said about the cognitive-developmental levels of fairness-reasoning as an 1) interactive system within which values are organized or as 2) the representation of certain rules by which a person applies value terms?

Theoretically, it was expected that the cognitive process of fairness-reasoning should interact with the cue and drive producing aspects of value content (equality and a world at peace), and thus moderate the manifestation of these cooperative justice values in real life social justice-related behavior.

From the perspective of cognitive mediational processes, specific external stimuli (outside events) serve as elicitors of internal mediating responses which in turn are linked to outside behaviors through internal mediating stimuli. At two points, at least, in the theoretical linkage, the chain of events can be broken and the linkage severed.

The first point would be where the specific stimuli (social justice events) must compete with others in the stimulus field to elicit an internal response. It may be in this experiment that other stimuli (both exogenous or endogenous) were more relevant to people's needs at the particular point in time, so that the mediating response of "Oh, that's related to egalitarian justice principles" lost out to other responses (a comfortable life, wisdom, courageous, logical, and intellectual). This describes an instance where people who accord high preference to equality or a world at peace do not attend the justice-related events.

The second point of severance in the linkage would occur when the energizing characteristics connected with the

internal response compete with other energizing characteristics associated with other internal responses so that the internal mediating stimulus (the decision to attend) as a cue to the overt response of attendance behavior, loses out to others (the decision not to attend, the decision not to decide, the decision to have lunch or to play squash instead). This would be another instance where people who highly value equality or a world at peace do not attend a specific justice-related event.

Of course, a third instance would be where individuals do decide to attend yet actually do not due to lack of consistency, perseverance or situational constraints.

In the present study, a combination of these instances may have existed so that people who gave high value to equality or a world at peace did not generally attend the specific justice-related events. Another complicating feature is in the multieffectuality of attendance behaviors. It is conceivable that individuals who do not value equality or a world at peace highly do attend the justice-related events for reasons of affiliation or curiosity, for example, yet such linkages are felt to be considerably less frequent.

In résumé, the appeal of the stimuli of social justice events versus the attractiveness of others in the stimulus field, the competition of the drive-producing characteristics connected to the internal response with those energizing characteristics associated with other internal responses, an

individual's lack of consistency, or the existence of needs and certain situational constraints, are all factors which, in addition to cognitive differentiation and integration, can moderate the manifestation of values in real life behavior.

The interaction result that the group of individuals who attained a high level of fairness-reasoning plus hierarchically placed the value equality in a middle position on the Value Survey, exhibited significantly more attendance behavior at social justice events than did that group who attained a low level of fairness-reasoning plus hierarchically placed the value equality in a middle position, was an unexpected finding.

A reasonable, though speculative, interpretation for the interaction finding can be offered when consideration is given to past research with middle ranked values (Rokeach, 1973) combined with the theoretical position that a person's individual needs are "cognitively represented as values" (Rokeach, 1973, p. 20; 1979, p. 3).

Rokeach (1973) reports that those values ranked as most and least important changed the least from test to retest; those ranked in the middle change the most. Such a U-shaped relationship with regard to value stability suggests that respondents rank values at the high and low ends of the scale with considerably more confidence than those they rank in the middle. These middle values, unlike highly preferred or least preferred values, are likely those not strongly felt

about, those which vascillate position the most, those that the participant ranks with no strong pull to a highly preferred or least preferred position. Middle-positioned values, it is suggested, may be considered as those representing needs least affect-laden when contrasted with high or low positioned values. In the case of middle positioned values, the importance of content, in its own right, exerting a strong influence on behavior is diminished. Behavior here is likely more attributable to the structuring process which "reflects the internal patterning of social experience" (Kohlberg, 1964, p. 404). Thus, level of fairness-reasoning (as structure) exerts its greatest direct behavioral influence where content, seen as needs, is not powerful in the affective sense.

This situation can be contrasted to that of the highly preferred value. The affective loading of the highly preferred content of an individual's value system can have a strong influence on how she/he behaves. Positive values have been shown to have a powerful affect on the style and purpose of life (Allport, Vernon and Lindzey, 1960). In the case of the highly preferred values, how the persons reasons about the content is behaviorally subservient to the strong feeling about the content. Behavior, in such an instance, appears more likely influenced by the content than by the structuring process.

In the case where the value is least preferred, or

ranked low on a hierarchical list, the value, as a need, is likely being actualized (and thus satisfied). Here, the structuring process would be expected to interact with the content, and thus modify behavior, depending on whether the overt stimuli was seen by the person as a way to further actualize the need or value (Atkinson, 1978).

Understanding the value equality, then, as a cognitive transformation of a need with affective qualities, aids in providing a speculative interpretation of differential attendance behavior at social justice events dependent on level of fairness-reasoning for those participants who ranked the value equality in the middle of the Value Survey.

As presented in Table 16, as individuals progressively attended more social justice events, they tended to report their values as having been progressively more involved, though which values were progressively more involved is not reported. From the Scheffe procedure (Table 16), it can be seen that the significant difference among means for "value importance" existed between those individuals who attended no social justice events and every other group. Though significant differences among means in attendance behavior for one, two, or three social justice events was not found, Table 16 nonetheless presents a progressive trend toward greater reported value involvement as attendance behavior increased. This finding may be substantive or it may merely be an instance of consistency "after the fact" between

previous behavior and self-reported attributions concerning it. These participants know full well at the time they attribute value instrumentality that they have or have not attended social justice events and they have provided (anonymously) data on their personal value hierarchy also.

In hindsight, and as a post hoc explanation, the five values which emerged as the significant predictors of the social justice events "make sense" in terms of the content of the events, in terms of that philosophy of social cooperation upon which the DIT is based, and in terms of value theory. For example, that attendance at social justice events should elicit the value of a comfortable life, further described in parentheses on the Value Survey as "a prosperous life", is not out of keeping with Rawls's philosophy of social cooperation upon which the DIT is based.

People band together for mutual advantage - for raising the young, for protection, for a division of economic labor, for the pure pleasure of interpersonal stimulation, for sexual stimulation, and so on. Social cooperation makes a better life (Rest, 1979, p. 18).

For principled thinkers, to desire a comfortable and prosperous life for children, or for underdeveloped peoples in Third World countries, is not to give a comfortable life the hedonistic interpretation it might superficially convey.

For the social justice events to have elicited the value - courageous, parenthetically described on the Value Survey as

"standing up for one's beliefs", is not contrary to principled thinkers taking responsive action that brings a University's attention to its responsibility for providing a more socio-critical emphasis in course programs; or caring enough to support by their attendance, a report by church representatives that calls for a church organization's re-commitment to espoused ideals of justice.

For social justice events to have elicited the value wisdom, described parenthetically as "a mature understanding of life", is congruent with the principled thinker's concern as to "how mutual expectations among cooperating individuals are established ... how the benefits and burdens of social cooperation are to be distributed ..." (Rest, 1979, p. 20), those questions made concrete by being concerned about the rights of children, of Third World countries, and of university students who deserve intellectual and experiential stimulation with regard to such issues.

That the instrumental values of logical and intellectual generally merited significant negative valences (or low rankings) from those principled thinkers who attended social justice events (see Table 10), may be best understood in terms of value theory. Values may be understood as "cognitive transformations of needs" (Rokeach, 1973, p. 20). Individuals functioning at a principled level of fairness-reasoning are described as applying the principles of social cooperation in a logical, rational way (Rest, 1979,

p. 23) in addition to attaining DIT scores that reflect a more advanced form of thinking that encompasses and reintegrates the earlier forms of thinking (Rest, 1974, 6-3). Thus, for principled thinkers who are already being logical, parenthetically described on the Value Survey as "consistent, rational", and intellectual, described on the Value Survey as "intelligent, reflective", needs for such qualities would likely be very low. A further explanation of these values as significant and negatively weighted predictors of social justice-related behavior can be gleaned from those perspectives of pro-social and moral behavior which de-emphasize the logical, rational element. Rosenhan (1970, 1972) concludes that sustained commitment to pro-social causes, observed in a naturalistic context, seems to be based on affect, not cognition. Moore, Underwood and Rosenhan (1973) suggest that while linked to cognitive-development, altruism is also firmly associated with nonrational positive affect such as sympathy or empathy. Simpson (1976) notes that "morality is fundamentally irrational, a function of the person, and not simply of his/her capacity to think logically or learn concepts and norms" (p. 168). Thus, a low ranking of the values logical and intellectual for principled thinkers who attend social justice events is well in keeping with the theoretical perspective of the cited authors.

What then, in the end, can be said about the relation of verbally espoused moral statements, self-reported beliefs,

and the way a person lives her/his life? The present study shows that some (20%) of the variance in three justice-related behaviors can be accounted for by fairness-reasoning and values, the latter not even predictable in content. But what of the remaining variance? This issue is exceedingly complex. Further psychological processes seem to accompany the decision to behave or to act congruently with one's beliefs and fairness-reasoning level. Each one of these other processes acts as a further mediating variable or as a complicating factor in the relationship, hence each variable provides part of the explanation for discrepancies between fairness-reasoning, reported values, and action. The description of these other psychological processes that accompany the predictors of fairness-reasoning and beliefs is speculative, but many clues and suggestions come from the literature.

Research in social role-taking (Flavell, 1970, p. 1029ff) has pointed out the distinction between noticing that a particular situation calls for a particular kind of analysis (for example, the situation calls for a role-taking analysis, or calls for a moral analysis) and actually carrying out that analysis (drawing inferences about others, or deciding what is fair). Applying this distinction to the fairness-reasoning/value domain, differences in moral or specific value sensitivity can complicate the relation between fairness-reasoning, values and action (Rest, 1979).

Moral and value sensitivity seems to be a property of the early recognition processes in perceiving situations and events, whereas moral conceptualization (tapped in the DIT) or value importance (tapped in the Value Survey) seem to be more concerned with the organization and interpretation of elements once a moral dilemma or a value is presented (defining the crucial issues, justifying one alternative over another). If one is insensitive to noticing moral or value-laden dilemmas in the situations around them, then one's moral conceptualization and value system matter less in determining one's behavior.

Secondly, the Value Survey and the DIT obtain information about conscious-reflective thinking, but a person's behavior may be organized in ways that do not reflect her/his conscious-reflective thinking at all. Piaget in 1932 distinguished different "planes of mental life" (p. 85) - a reflective-conscious plane and an operative one. For instance, he reported that the actual pattern of cooperation in the children's marble playing was more advanced than the children's verbal reflections about cooperation. In actual play, children's activity was much more coordinated and structured according to the rules than would have been surmised from interviewing the children about rules. Piaget says, "Thought always lags behind action and cooperation has to be practiced for a long time before its consequences can be brought fully to light by reflective thought" (p. 64).

Piaget asserts that a structure of "rulefulness" in practical activity will appear before the person has a conscious realization of that structure that can be verbalized.

Another convincing example of this phenomenon is that children's speech at 2 years of age displays an operative knowledge of many grammatical rules, yet children are much older before they consciously realize and can discuss the rules of grammar that govern their speech patterns. One implication of this is that a person simply might not be conscious of his/her own operative structures, and hence self-report and verbalization may be an unreliable source of information about underlying organizational structures (Rest, 1979).

Thirdly, in an actual situation, two people may have the same understanding of a situation and the same plan of action, but one may have an iron will, courage and resolve, whereas the other person may fail to carry through. The two people differ in "ego strength." Krebs (1967) and Kohlberg (1969) report a study in which subjects at Stage 4 with low ego strength cheat more than subjects at Stage 4 with high ego strength - presumably the subjects with low ego strength were less able to carry out their beliefs than those with high ego strength. Low ego strength makes a person more vulnerable to situational pressures and distractions, and less able to carry out his/her ideals (Rest, 1979).

Fourthly, in his model of motivation, Atkinson (1978)

has identified the subject variable of expectancy as an essential one in predicting behavior. That is, the subject's perceived expectancy that performing a certain behavior (attending social justice events) is instrumental to his/her actualizing specific values (equality and a world at peace), is a necessary factor in the decision to perform the behavior.

In summary, a moral judgment test like the DIT gives us information about a subject's concepts of fairness and the Value Survey provides self-reported data about the value importance of 36 presented values. Together they are more successful in predicting behavior than either alone. But other psychological processes are involved in the linkage of these measured concepts to real life behavior. In identifying four of these processes, namely, moral and value specific sensitivities, the role of reflective thought in organizing behavior, the role of "ego strength" in executing a plan of action, and the factor of perceived expectancy in predicting behavior, it becomes more evident how each one complicates the relationship between fairness-reasoning, values and behavior, and how each one can provide an explanation for the attenuated relationship between fairness-reasoning, values and behavior.

C. Suggestions for Further Research

Possibly the best starting point in any suggestions for further research would be the shortcomings characterizing the original investigation.

Two experimental maneuvers are likely to contribute significantly to any replication of the present study. The first would be to increase the number of real life social justice behaviors measured. Any one instance of behavior is determined largely by the situation, and the prediction of such an instance needs to take into account certain and varied situational factors. Such situational concomitants would include the time, energy, deadlines and other priorities of those individuals enacting the behavior, and could override his/her general mode of behavior. To predict the average or usual behavior of a principled person with a high preference for the values equality or a world at peace, a sample of the "average" behavior is needed. In the present investigation, three instances of real life behavior provided the sample of average behavior used for prediction purposes. Increasing the number of real life behaviors would, without doubt, increase the validity of what we are calling average or usual behavior and decrease the situation-specific context of the behavior.

If indeed principled people who report high preferences for the values equality or a world at peace are being behaviorally consistent with their values in real life,

maximizing the numerical samples of real life behavior heightens the chances of validating the average and generally consistent behavior with self-report value preferences. In other studies, strong and reliable relationships have been demonstrated between self-report personality inventories and objective behavior, so long as the objective behavior is sampled over an appropriate level of generality and averaged over a sufficient number of occurrences (Epstein, 1979).

In addition to providing a more valid picture of average or usual behavior, and lessening the interfering situational factors of usual behavioral responses, the experimental maneuver of increasing the number of real life social justice behaviors measured would serve to decrease the error of measurement component in the behavioral measures (Epstein, 1979), increase the prediction of behavior from self-report measures (Fishbein and Ajzen, 1974), and widen the range of generality of results (Magnusson and Heffler, 1969). Thus, the empirical test of the level of fairness-reasoning as a cognitive structuring process which interacts with value content and moderates the manifestation of values in real life behavior, would be enhanced through increased numerical instances on the variable of real life behavior.

A second experimental maneuver that would significantly improve the statistical side of the present investigation would be to decrease the within-group variance of the mean scores of the values equality and a world at peace, thus

maximizing the chance of statistical significance in the analyses where differences between mean scores are examined. In the multiple regression analysis of the present study, for example, differences in the mean scores of equality and a world at peace for subjects who attended none, one, two or three social justice events were not found significant enough to warrant these values' inclusion in the regression equation. Decreasing the within-group variance would be most simply accomplished by increasing the sample size. To investigate the hypotheses of this study with a larger sample size and with other suggested improvements is recommended for further research.

Value usage, as moderated by cognitive-developmental processes, holds promise in its possibilities as an intriguing and researchable area. If the major thrust for this research is in the direction of predicting behavior from human values, other "missing links" of data still wait to be investigated. For example, a study of substantial value in the prediction of behavior from values would include an investigation of the role of affectivity.

As espoused by Rosenhan (1970, 1972), Moore, Underwood and Rosenhan (1973), Simpson (1976), Hoffman (1976) and Aronfreed (1976), affectivity is an important determinant of pro-social behavior. The replication of the present study with the additional measure of affective development (Simpson, 1976) or affective or trait empathy (Comrey, 1971)

should improve behavior prediction, and would prove a valuable contribution to the area of value theory and behavior.

A second "missing link" in terms of predicting behavior from value content is that variable of subject expectancy. Atkinson (1978), in his model of achievement motivation, holds that the expectancy that performance will lead to success (P_s), in addition to the motive to achieve (M_s), and the value of success at that particular task, or the incentive (I_n), make up those terms which hold predictive ability for determining an individual's tendency to achieve success (T_s).

In relating Atkinson's cited factors for predicting successful behavior to the present study, it becomes evident that at least one important additional variable can be borrowed in determining social justice behavior. The extent to which the individual, in sizing up the task before him, expects that his/her attendance-behavior will lead to the goal of actualizing the value equality or the value a world at peace, might well be essential to the prediction of behavioral actualization of the value. In other words, attendance-behavior at social justice events would be partly determined by a person's perceived expectance that, by participating in a student forum calling for university commitment to social justice principles, for example, he/she actualizes the highly preferred value of equality or a world

at peace. The independent variable of expectancy, then, would seem an important, additional predictor of the criterion variable of attendance behavior at social justice events.

One final direction for further research involves a closer look at effects of short-term experimental enhancement through value clarification procedures upon scores on the measure of fairness-reasoning, as seemed to be indicated by this study. Further studies may examine more intensively the conditions under which subjects select principled items on the DIT at a higher rate than his/her DIT score under standard conditions.

In conclusion, a cognitive development approach to predicting behavior from human values remains a noteworthy and promising area of research in value theory. An increased sample of real life behaviors, a greater number of participants, and serious consideration to the roles of 1) affectivity and 2) the perceived expectancy of specific behaviors as instrumental to value actualization, are recommended for future research in predicting value-behavior linkages.

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FOOTNOTES

1 F. Coffey, Personal Communication, June 3, 1979.

2 J.P. Dionne, Personal Communication, April 11, 1980.

3 Although this procedure differs from the more standard one of subdividing more independently the subjects into groups, a check of the average scores for two levels of fairness-reasoning across each equality level indicated comparable and similar scores.

PREVIOUSLY COPYRIGHTED MATERIAL

IN APPENDICES 1 and 2, LEAVES 159 to
170, NOT MICROFILMED.

159 - 162 - Appendix I. Value Survey, Form D. by Milton Rokeach, 1967.

MAY BE OBTAINED FROM

Halgren Tests
873 Persimmon Avenue
Sunnyvale, California 94087

163 - 170 - Appendix 2. Defining Issues Test (James Rest, 1972)

APPENDIX 3

SCORING SHEET FOR THE DEFINING ISSUES TEST

The scoring sheet for the Defining Issues Test
is available through Rest, J.R.

330 Burton Hall
Moral Research Projects
178 Pillsbury Avenue
Minneapolis, Minn. 55455

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APPENDIX 4

SOCIAL JUSTICE COMMITTEE
EVALUATION SHEET

APPENDIX 5

INTRODUCTION (VERBATIM) PREVIOUS TO COMPLETION
OF THE DIT AND THE VALUE SURVEY

APPENDIX 5

INTRODUCTION (VERBATIM) PREVIOUS TO COMPLETION
OF THE DIT AND THE VALUE SURVEY

My name is _____ and I'm a doctoral student in psychology at the University of Ottawa.

The research project that I'm presently working on involves values, specifically how people organize and use their values. The task at this point of the research is to collect data about values from large numbers of people.

The data I'm using comes from the results of people's responses to two questionnaires. One of the questionnaires is the Value Survey. (HOLD THIS UP) This survey asks the responder to select from a list of given values, the ones that are most important in her or his life. The second questionnaire is titled Opinions about Social Problems. (HOLD THIS UP) The task here is to select from a list what things, in the responder's opinion, are important to consider in making a decision about a social issue. Most people find these questionnaires interesting and thought-provoking to complete.

I would be very appreciative and grateful to any of you who would cooperate in completing these questionnaires. Let me stress that the research project is dealing with group trends. Your individual responses will be fed into a computer data bank with many others. (PASS OUT QUESTIONNAIRES)

You will notice that the front page of each questionnaire contains a place for information. In the space for name, I would like you to assign yourself a code number. This number can be your phone number, the number of your licence plate, the house number of your parents or best friend. It should be a number you can recall easily. Later you will be asked to complete a follow-up questionnaire and it will be necessary and important for you to use the same code. This will enable me to correlate these questionnaires with the one to be completed at a later time.

I would like each of you to write your code number now. You should write it twice, once on each questionnaire.

Now please find the questionnaire titled Opinions About Social Problems. Turn to the unnumbered page following page 7. Carefully tear this page out and pass it to me. (COLLECT THESE PAGES)

Value theory is still a developing one in the area of psychology. Hopefully, by next Fall, I will be able to share the results of this particular research project with you. Also at that time, if any of you should wish to compare your individual responses to these questionnaires with those of the larger group, and you can remember and provide me with your code number, I would be able to do this.

Are there any questions? If not, please begin. Remember to work thoughtfully and as an individual. It is your opinion that counts here.

APPENDIX 6

INSTRUCTIONS (VERBATIM) PREVIOUS TO COMPLETION
OF THE SOCIAL JUSTICE COMMITTEE EVALUATION SHEET

APPENDIX 6

INSTRUCTIONS (VERBATIM) PREVIOUS TO COMPLETION OF
THE SOCIAL JUSTICE COMMITTEE EVALUATION SHEETInstructions

The Social Justice Committee asks if you would take 2 minutes to complete a short questionnaire.

1. There is a space at the top of the sheet marked CODE NUMBER. You will remember that a student from the University of Ottawa was here last week with a value test. You were asked to use a code number then and to remember it. Please use the same code number on this sheet.

It is very important that you use the same code.

(If there is anyone who was not there last week for the value test, please disregard any instructions pertaining to code numbers as you complete the evaluation sheet.)

2. With regard to No. I(a), please check yes if you attended ANY of the events of the March 7 Day of Awareness on the Future of the Child.

ACTIVITY EVALUATION FOR SOCIAL JUSTICE COMMITTEE

CODE NUMBER _____ MALE _____ FEMALE _____ DATE _____

I. I have attended the following events sponsored by the Social Justice Committee:

a) Day of Awareness: The Future of the Child (March 7) Yes _____ No _____

b) "Impressions on Puebla" - Conference with Archbishop Quellet and
(Tuesday evening, March 27) Archbishop MacNeil

Yes _____ No _____

c) Forum: Follow-up action to the Day of Awareness
(Wednesday, 12:30 - 1:30 March 28)

Yes _____ No _____

II. Under each of the events below, please indicate the reason for your decision to attend or not attend.

1. I did/did not attend the Day of Awareness: The Future of the Child because....

2. I did/did not attend the conference "Impressions on Puebla" because...

3. I did/did not attend the Forum: Follow-up because...

III. Rate the extent to which you believe that any of your own personal values were involved in your decision to attend or not attend the above events.
Mark an X on the appropriate description on the scale below.

no	minimal	moderate	large	total
extent	extent	extent	extent	extent

A University of Ottawa research study involving the use of values on people's justice-related behaviors is being undertaken. If you have any objection to this evaluation form being used for this research purpose, please indicate below. Confidentiality will be respected. The interest in this research is with group trends and your responses are guaranteed personal anonymity.

APPENDIX 7

THE RANGE, MEAN, AND TRANSFORMED SCORES OF THE
ORDINAL VALUE SURVEY RANKINGS

APPENDIX 7

THE RANGE, MEAN AND TRANSFORMED SCORES OF
THE ORDINAL VALUE SURVEY RANKINGS

Rokeach Ranking (Terminal and Instrumental Values)	Normalized Interval- Level t-score
1	66.4
2	64.4
3	62.5
4	60.6
5	58.7
6	56.7
7	54.8
8	52.9
9	51.0
10	49.0
11	47.1
12	45.2
13	43.3
14	41.3
15	39.4
16	37.5
17	35.6
18	33.6
1 to 18	33.6 to 66.4
Range	
Mean	50.0
Variance	26.83

APPENDIX 8

RAW DATA FOR INDIVIDUAL PARTICIPANTS ON VALUE IMPORTANCE
RANKINGS, THE DEFINING ISSUES TEST (P-RAW AND P%), THE
TRANSFORMED SCORES OF THE VALUE RANKINGS FOR A WORLD
AT PEACE AND EQUALITY, AND ATTENDANCE BEHAVIOR AT
SOCIAL JUSTICE EVENTS

APPENDIX 8

RAW DATA FOR INDIVIDUAL PARTICIPANTS ON VALUE IMPORTANCE RANKINGS,
THE DEFINING ISSUES TEST (P-RAW AND PA), THE TRANSFORMED SCORES OF
THE VALUE RANKINGS FOR A WORLD AT PEACE AND EQUALITY AND ATTENDANCE
BEHAVIOR AT SOCIAL JUSTICE EVENTS

Identification Number	Value Importance Ranking	DIT Score (P-raw)	DIT Score (P %)	Transformed Score of A World at Peace Ranking	Transformed Score of Equality Ranking	Attendance- Behavior Score
1	1	33	56	49	47	1
2	4	40	67	49	57	2
3	4	44	73	36	53	1
4	3	35	58	39	41	1
5	1	31	52	47	57	0
6	1	6	10	57	39	0
7	5	38	63	53	39	2
8	1	34	57	41	47	0
9	4	33	56	53	49	1
10	4	43	72	41	47	3
11	2	37	62	57	61	0
12	4	35	58	39	49	1
13	4	33	56	39	47	1
14	0	38	63	49	51	2
15	3	31	52	49	47	1
16	4	40	67	36	59	2
17	3	38	63	49	65	0
18	4	34	57	36	39	0
19	5	33	56	49	63	1
20	4	35	58	51	41	0
21	4	42	70	49	53	2
22	1	33	56	55	39	0
23	5	38	63	36	61	0
24	3	38	63	36	47	0
25	2	35	58	47	49	0
26	3	40	67	34	39	0
27	3	38	63	53	34	0
28	3	35	58	34	53	1
29	2	32	53	36	59	0
30	0	36	60	39	51	0
31	3	33	56	53	55	0
32	4	31	52	57	36	1
33	1	37	62	65	38	0
34	4	37	62	49	36	1
35	4	42	70	49	59	1
36	1	33	56	61	47	0
37	4	36	60	39	36	2
38	4	30	63	49	47	0
39	4	33	56	49	39	0
40	1	33	56	34	57	1
41	0	39	65	47	34	0
42	4	31	52	49	63	2
43	2	38	63	53	59	0
44	5	31	52	63	47	3
45	3	39	65	53	65	2
46	5	33	56	47	39	1
47	4	40	67	36	61	1
48	3	34	57	55	34	1
49	5	36	60	57	39	0
50	2	34	57	53	63	0
51	4	36	60	36	43	2
52	4	36	60	49	34	2
53	4	31	52	36	47	0
54	4	36	60	57	34	3
55	4	45	75	34	53	3
56	4	37	62	47	55	0
57	2	32	53	39	61	2
58	4	43	72	39	55	0
59	3	40	67	53	36	1
60	2	31	52	34	57	0
61	3	33	56	63	65	0
62	5	33	56	63	39	0
63	5	34	57	63	34	0
64	0	35	58	34	61	0
65	0	43	72	57	39	0

Identification Number	Value Importance Ranking	DIT Score (P-row)	DIT Score (P %)	Transformed Score of A World at Peace Ranking	Transformed Score of Equality Ranking	Attendance-Behaviour Score
66	3	40	67	47	51	1
67	5	35	58	53	51	1
68	3	42	70	63	49	1
69	0	33	56	34	53	0
70	4	32	53	34	39	1
71	5	32	53	34	49	2
72	4	28	47	47	57	1
73	1	26	43	36	53	0
74	3	23	38	57	49	0
75	4	29	48	57	39	1
76	4	17	28	51	57	3
77	1	6	10	34	36	0
78	2	23	38	51	39	2
79	2	24	40	49	61	1
80	4	27	45	55	47	1
81	3	14	23	61	51	0
82	1	15	25	47	61	0
83	2	30	50	41	63	0
84	2	19	32	57	59	0
85	4	28	47	49	51	1
86	4	21	35	49	53	0
87	2	29	48	49	57	0
88	1	24	40	57	55	1
89	2	14	23	53	57	0
90	3	25	42	47	36	0
91	2	25	43	51	39	0
92	4	24	40	61	36	1
93	1	22	37	39	57	0
94	3	27	45	49	36	1
95	4	30	50	34	57	2
96	3	22	37	61	63	0
97	5	15	25	57	47	0
98	1	22	37	61	34	0
99	2	16	27	53	39	0
100	4	18	30	49	47	1
101	4	30	50	57	34	2
102	4	15	25	49	47	0
103	3	19	32	39	53	1
104	3	13	22	36	61	1
105	1	27	45	51	36	1
106	1	25	42	55	57	0
107	1	18	30	57	45	0
108	3	16	27	45	63	1
109	0	17	28	49	53	0
110	1	17	28	34	36	0
111	1	25	42	49	51	0
112	3	14	23	51	41	1
113	3	14	23	36	51	0
114	1	28	47	51	36	0
115	4	13	22	36	39	1
116	3	30	50	34	53	0
117	5	28	47	47	55	0
118	3	27	45	61	63	1
119	3	20	33	66	65	1
120	2	29	49	34	51	0
121	3	23	38	39	51	0
122	0	28	47	63	39	0
123	1	26	43	53	34	0

Identification Number	Value Importance Ranking	DIT Score (P-row)	DIT Score (P %)	Transformed Score of A World at Peace Ranking	Transformed Score of Equality Ranking	Attendance- Behavior Score
124	3	28	47	51	61	1
125	1	26	43	53	36	0
126	2	30	50	55	47	0
127	4	30	50	36	55	2
128	4	18	30	47	34	0
129	1	28	47	57	34	0
130	0	29	48	34	53	0
131	2	30	50	65	47	0
132	4	23	38	45	53	1
133	4	10	17	53	63	0
134	4	17	28	36	61	2
135	3	29	48	57	61	1
136	1	29	48	47	55	0
137	5	27	45	53	49	0
138	4	24	40	36	41	1
139	4	26	43	47	57	3
140	2	25	42	45	49	0
141	1	19	32	53	49	0
142	4	29	48	36	53	0
143	2	22	37	34	36	0
144	4	23	38	53	36	1
145	4	26	43	55	41	1
146	3	21	35	36	39	0
147	3	30	50	36	49	1
148	3	18	30	57	55	1
149	4	23	38	34	36	0
150	4	17	28	49	55	0
151	4	8	13	53	39	2
152	3	21	35	49	51	0
153	4	13	22	53	63	2
154	4	20	33	66	36	0
155	1	29	48	36	53	0
156	4	17	28	34	57	0
157	3	22	37	49	55	1
158	5	28	47	47	63	1
159	2	19	32	57	39	0
160	4	20	33	47	53	1
161	0	21	35	47	57	0
162	3	4	6	49	36	0
163	4	24	40	36	59	0
164	5	30	50	51	53	2
165	4	30	50	57	39	1
166	1	30	50	39	55	0
167	2	18	17	53	51	0
168	1	15	25	55	49	0
169	1	23	38	39	57	0
170	1	20	33	34	53	0
171	0	29	48	47	41	0

APPENDIX 9.

CORRELATION MATRIX FOR DIT SCORES AND
THIRTY-SIX VALUES

	Happiness	Inner Harmony	Mature Love	National Security	Pleasure	Salvation	Self- respect	Social Recog- nition	True Friend- ship	Wisdom
Diff Score	0.05755	-0.03140	0.11635	-0.15860	0.10385	0.06745	-0.08554	-0.01875	-0.01687	-0.06195
A Comfortable Life	-0.07725	-0.08570	0.01873	-0.15249	0.07879	0.04383	-0.18481	0.04824	-0.08250	0.01721
An Exciting Life	-0.05452	-0.00116	-0.10693	-0.00167	-0.02784	-0.03420	-0.13983	0.03539	-0.01576	-0.08825
A Sense of Accomplishment	-0.20043	-0.22642	-0.07493	0.04832	-0.11256	-0.07877	-0.02752	0.05267	-0.12515	-0.00491
A World at Peace	-0.14929	-0.19487	-0.14774	-0.00121	0.02243	-0.01114	-0.05509	-0.00375	0.04807	-0.12519
A World of Beauty	-0.09385	-0.16822	-0.02882	-0.12378	-0.08411	-0.10122	-0.03150	-0.05183	-0.02557	0.03998
Equality	-0.01889	-0.14490	-0.11761	-0.15932	-0.06104	-0.06632	-0.03478	-0.00264	-0.06509	0.07231
Family Security	-0.21662	-0.08120	-0.23135	0.18842	0.06081	-0.19656	-0.06605	-0.08801	0.03895	0.03989
Freedom	0.07770	-0.02826	-0.02237	0.01121	-0.10147	-0.15606	0.07959	-0.08613	0.04248	0.02889
Happiness	1.00000	0.04065	0.06345	-0.13904	0.08009	-0.13276	0.12106	-0.06845	0.05735	-0.09568
Inner Harmony	0.04065	1.00000	0.13061	-0.05874	0.11955	-0.06240	0.00695	-0.06928	-0.08705	0.00698
Mature Love	0.06345	0.13061	1.00000	-0.10055	0.05974	-0.06829	-0.17016	-0.11054	0.09315	-0.06390
National Security	-0.13904	-0.05874	-0.10055	1.00000	-0.20680	0.07554	0.08042	-0.15801	0.00995	-0.05275
Pleasure	-0.08009	0.11955	0.05974	-0.20680	1.00000	-0.07596	0.10177	-0.21677	0.04160	-0.07998
Salvation	-0.13276	-0.06240	-0.06829	0.07554	-0.07596	1.00000	-0.04708	0.00971	-0.13284	-0.07998
Self-respect	0.12106	0.00695	-0.17016	-0.08042	-0.18177	-0.04708	1.00000	-0.05004	-0.24914	-0.15272
Social Recognition	-0.06845	-0.06928	-0.11054	-0.15801	-0.21677	0.00971	-0.05004	1.00000	-0.24914	-0.15272
True Friendship	0.05735	-0.08705	0.09315	0.00995	0.04160	-0.24374	-0.13284	-0.24914	1.00000	0.38979
Wisdom	-0.09568	0.00698	-0.06390	-0.05275	-0.10801	-0.07998	-0.08563	-0.15272	-0.38979	1.00000
Ambitious	-0.11312	0.05878	-0.15410	0.03385	-0.04292	0.02991	0.07436	-0.02348	-0.22885	0.08112
Broadmindedness	0.11816	-0.05230	-0.02960	0.07757	-0.01411	-0.00648	-0.04013	0.01198	0.04160	-0.05892
Capable	-0.18888	0.05863	0.03080	0.10811	-0.03582	0.04553	-0.19607	0.15148	0.01018	-0.06700
Cheerful	0.07533	-0.01994	0.06396	-0.04761	-0.11330	0.03803	0.08938	0.10189	-0.18345	-0.00855
Clean	-0.06016	0.07072	0.15684	0.00695	-0.16374	0.03033	-0.08101	-0.09335	-0.02236	0.20091
Courageous	0.11841	0.01284	0.20689	-0.12318	0.06086	-0.08032	0.01101	-0.02728	-0.02190	-0.00122
Forgiving	0.03852	0.05169	-0.00917	-0.11121	0.08991	-0.10266	-0.00135	-0.05330	0.07254	-0.01597
Helpful	0.05978	0.00626	-0.07288	-0.04337	-0.11835	0.00592	0.01234	0.12549	0.04796	-0.12596
Honest	-0.03851	0.03143	0.06475	-0.01905	-0.03801	0.00276	-0.08423	-0.11127	0.05335	0.02478
Imagination	-0.05617	-0.05547	0.03299	-0.02665	-0.01569	0.06385	0.09141	0.03955	0.00665	-0.03249
Independent	-0.05794	-0.14943	0.06377	0.16094	0.04412	0.08489	-0.14686	-0.06139	0.03485	-0.02665
Intellectual	-0.09942	0.03609	0.08068	0.02961	-0.00207	0.06696	-0.03638	-0.07450	0.07417	0.09621
Logical	0.08951	-0.06269	0.06557	-0.05977	-0.04042	-0.03397	-0.04080	-0.07761	0.04761	-0.07267
Loving	0.08994	0.05176	-0.14057	-0.03432	-0.03199	-0.03693	-0.01777	0.03302	0.04714	-0.09765
Obedient	-0.04720	-0.03256	-0.08215	0.01630	0.11438	-0.01126	0.06756	-0.02277	0.00695	-0.11765
Polite	-0.02949	0.00798	0.01627	-0.03961	-0.13946	-0.05209	0.11186	-0.08699	0.07120	-0.05262
Responsible	0.04307	0.12398	-0.20645	-0.04260	0.01822	0.11326	0.07021	0.02784	-0.18702	0.11515
Self-controlled	-0.00892	-0.12124	-0.09556	-0.03588	0.00368	0.03961	0.10483	-0.01373	0.01704	-0.01459

APPENDIX 10

UNSTANDARDIZED REGRESSION COEFFICIENTS FOR THE LEVEL OF
FAIRNESS-REASONING (DIT SCORES) AND TERMINAL AND
INSTRUMENTAL VALUES CONTRIBUTING TO THE REGRESSION
EQUATION

APPENDIX 10

UNSTANDARDIZED REGRESSION COEFFICIENTS
FOR THE LEVEL OF FAIRNESS-REASONING (DIT SCORES)
AND TERMINAL AND INSTRUMENTAL VALUES
CONTRIBUTING TO THE REGRESSION EQUATION

Variable	Unstandardized Regression Coefficients
Level of Fairness- Reasoning (DIT Scores)	0.18362
Logical	-0.19496
A Comfortable Life	0.17776
Intellectual	-0.18828
Courageous	0.12269
Wisdom	0.16834
An Exciting Life	0.85122
A World of Beauty	0.10587
National Security	0.72789
Ambitious	-0.14903
Self-controlled	0.10372
Loving	0.74713
Mature Love	0.10978
Social Recognition	0.79168
Cheerful	0.64109
Self-respect	0.73140
Freedom	0.51643
Happiness	-0.58941
Honest	-0.78360
Independent	-0.52915
Broadminded	-0.65667
Forgiving	0.28937
Family Security	-0.37571
Equality	0.36303
Clean	-0.25292
Capable	-0.26908
Salvation	-0.14079
Helpful	-0.13052
Inner Harmony	0.19225
A Sense of Accomplishment	0.12788
Imaginative	0.84958
(Constant)	3.294931