

Moral Recognition Versus
Spontaneous Production of Moral
Reasoning: A Cross-Sectional
Investigation of 15-72 Year Olds

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Curriculum Studiorum

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ABSTRACT

Moralization was measured by Kohlberg's and Rest's assessment strategies and instruments in groups of 15-18, 19-29, 30-49 and 50-72 year olds. These two instruments were operationalized as spontaneous production of moral reasoning (KMMS) and moral recognition (PSCORE), respectively. Results of this study indicated that KMMS and PSCORE were consistently similar in their relationship with measures of age, sex, length of education, socioeconomic status, religion and amount of social participation. However, regressions, factor analysis and discriminate analysis revealed differences between KMMS and PSCORE to warranting the conclusion that Kohlberg's measure of moral reasoning and Rest's measure of moral reasoning, measure different theoretical constructs within the same general moralization theory, and thus, should not be used interchangeably.

Furthermore, when KMMS and PSCORE were divided into their respective high, medium and low ranges, the comparison group which resulted not only substantiated this view but also pointed towards some general inconsistencies in moralization theory itself.

INTRODUCTION

The issue of morality is one of the most important concerns in society today. People are, more than ever before, concerned with capital punishment, euthanasia, abortion, and civil liberties. Until the 1960's, research within these areas had been left to disciplines such as philosophy or theology. The contribution of psychology focused upon the more empirical measures of moral behaviour which were operationally defined as honesty, cheating, generosity, altruism, stealing, lying and resistance to temptation. The results of such investigations, which based their rationale on the conventions of the times, have shown that when morality was based upon cultural relativity, it led to inconsistent and inconclusive results and that the relationship between these operational definitions was situationally specific.

An alternative approach to the assessment of morality became prominent during the mid-1960's. This approach conceptualized morality as a measure of the reasoning underlying moral judgments. In this frame of reference, it is not the norms of any particular society which dictate a course of one's actions but rather the reasoning processes utilized in the justification of an action alternative. This cognitive developmental theory had numerous advantages over cultural relativist theory in that it utilized the findings of universality and consistency in logical developmental stages and conceptualized moral development as a horizontal decalage to cognitive development.

The present project will utilize the cognitive developmental strategy in the assessment of moralization processes, through the theoretical rationale of Lawrence Kohlberg (1969a) and James Rest (1974a). These two researchers, together and independently, have consolidated their approaches to morality within the same general theoretical orientation. However, each has a different method of assessment. The opportunity to investigate moralization within the same theoretical orientation but with differing views towards assessment methodologies, becomes appropriate.

Both Kohlberg and Rest operationalized moralization as the ability to make moral judgments. However, Kohlberg's strategy for its assessment involved responding to a series of standardized, and hypothetical moral dilemmas. The result of this method revealed a measure of the subject's spontaneous production of moral reasoning based upon one's own internal frame of reference. In essence, it was a type of assessment procedure which provided information about the individual's thought structure or reasoning processes without the influence of others.

However, moral judgments "in a vacuum", are seldom encountered. Most often, moral judgments are made with the influence of others and thus with a given frame of reference. James Rest (1974a, 1974b, 1974c, 1975a) and his colleagues have extensively researched this area and have devised an alternative method of assessment. Similar to Kohlberg, the subject was provided with a series of hypothetical moral dilemmas. However, Rest presented a series of prototypic statements which were designed to give the subject a more structured

frame of reference. The results of Rest's data gathering procedures led to a definition of morality which was labelled as moral recognition.

To date, the integration of these two methodological strategies has not been utilized systematically in the assessment of one's moral structure.

It is the purpose of this investigation not only to explore such a relationship but also to investigate the influence of various demographic variables on one's moral structure, across four age groups.

Chapter one is a review of the moralization literature within the framework of cognitive developmental theory. This chapter begins by reviewing the historical perspectives on morality which led up to today's thinking in the area. Secondly, it presents a review of the relevant validating literature with respect to numerous subject relevant variables. Finally, it presents a statement of the hypotheses to be tested.

Chapter two will describe the subjects for the project as well as the instruments, strategy for data collection and procedures for scoring.

Chapter three will delineate a statistical presentation of the results of this project with respect to the hypotheses outlined at the end of chapter one. Beginning with a further breakdown of the subject's characteristics, this chapter will then present the data relevant to the secondary hypothesis by formal hypothesis testing through analysis of variance. Since the data gathered from these secondary hypotheses will provide

supporting evidence for the major hypothesis under study. The major hypothesis will follow. This major hypothesis will be examined through the use of univariate and multivariate stepwise regressions, factor analysis and discriminant analysis. Finally, an attempt to further understand the nature of Kohlberg's and Rest's instruments will be made through regressions.

Chapter four will discuss these findings with respect to the secondary hypothesis and relate them to the major hypothesis under investigation. Further, these data will be used to delineate further areas of study.

CHAPTER I

REVIEW OF THE LITERATURE

This chapter will present a review of the literature relevant to this project. It will begin by delineating the basic historical and modern day perspectives on moralization. Secondly, it will delineate the cognitive developmental position as it applies to Lawrence Kohlberg's theoretical frame of reference. Thirdly, it will review the various ways in which moralization has been researched. Fourthly, it will discuss the major and secondary hypotheses to be investigated in this study.

1. Theories of Moralization

Historically, there seems to be three psycho-philosophical doctrines of moral development which have been present throughout history and underlie much of today's thinking in the area. In modern psychology they relate to the basic theoretical perspectives of the psychoanalytic, behavioural and cognitive-developmental schools.

The first theoretical position, conceptualized by the "original sin" perspective, viewed moralization as the acculturation of the child by parental transmission of socially acceptable moral standards. It's present day model can be seen within the general psychoanalytic school and its focus on super-ego development. Conformity to the specific conventionality of one's specific culture was seen as the highest form

of moral development; the logical extension of which led to the notion that conventionality was synonymous with morality and anything outside of conventionality was immoral. This idea pointed to situationally specific non-universal definitions of morality as defined by cultural relativist theory.

The second theoretical position, conceptualized by the "tabula rasa" perspective held that the infant was neither moral nor immoral. The child's mind was thought to be a blank slate onto which the specific environment was imprinted. From this perspective, everything was environmentally relative; the logical extension of which, like the original sin doctrine, implied that no universal definition of morality was possible. It's present day model can be seen within the general behavioural and social learning schools of thought.

The third conceptualization of morality was the concept of "innate purity". The adult society was seen as a corrupting influence and thus, the emphasis was upon minimizing adult intervention. The logical extension of this perspective was opposite to the previous. Adult conventionality was seen as corruptive and immoral and thus, nonconventionality constituted man's highest moral attainment.

However, the innate purity viewpoint had been modified somewhat by modern cognitive developmental theory (Dewey, 1909; Piaget, 1932 and Kohlberg, 1958, 1963, 1969a, 1969b), in which there was an emphasis placed upon a natural, universal, and sequential passage through a series of stages in moral growth. These stages generally consisted of a pre-conventional, or a more egocentric perspective, a conventional, or societally based rule perspective and a post-conventional, or a

principled orientation; all of which parallel and decalage from universal logical developmental reasoning stages.

These historical perspectives can also be viewed with respect to the kinds of data that were used in the analysis of morality. These data types can be divided into content-form and process-structure perspectives. The content-form perspective is that orientation which utilized moral behaviour (i.e. action alternatives) as the major data source. The process-structure perspective is that which utilized the reasoning and justifications which underlie the action alternative as the major data source.

To exemplify this differentiation more clearly, one could pose the dilemma of whether it was right, or just, for a husband to steal to save his wife's life. If one posed this dilemma to a child, and likewise, to an adult, one might obtain the affirmative in both instances; "yes", it is right to steal. The action alternative, in terms of what one would do, chosen by the child and adult were exactly the same. On the basis of this data, the child and the adult were of the same moral orientation. However, if one inquired as to why the action alternative was chosen and investigated the justification of what ought to be done, one may more precisely understand the structure involved in the reasoning. For example, the adult, who responded in terms of "yes", when asked to justify his response, may justify stealing in terms of the principle that man's right to life is greater than man's right to property. The child, who similarly responded "yes", when asked to justify his response may justify stealing in terms of his wife not liking him any more.

Hence, there might be markedly different moral reasoning associated with exactly the same behaviour.

The difficulty which arose when one attempted to isolate morality using the content approach seemed to be that these behaviourally defined virtues were only labels by which one awarded praise or blame to others and was relative to the perspective value of the labeler. Further, they were labels which only described a person externally in terms of his impact on and his relation to a particular society, culture or group. The labels neither gave an indication of how the person thought, nor how he justified value statements, and thus, no universal statements could be made on this basis (Kohlberg, 1969b).

To further clarify this issue, Lehrer (1967) adapted Grinder's (1961) ray gun experiment to test resistance to temptation and cheating behaviour in children. Grinder originally programmed his ray gun to result in a marksmanship score just below what was needed to win an authentic U.S. Army identification bracelet. The only way these 12 year old children could win was to cheat. Grinder reported that 80% of the children cheated. Lehrer reproduced the exact same experimental conditions except that the prize was changed to an authentic 1,000 dollar electronic computer. She found that only 15% of the children cheated as opposed to the 80% that Grinder reported. Since the prize was the only difference, Lehrer concluded that the prize awarded influenced the cheating behaviour; that when honesty or cheating behaviour was the operational definition of morality, the results were inconsistent and non definitive.. This was similar to the results reported by Hartshorne and May (1928-30)

thirty years previous, which alluded to the ambiguousness and complexity of morality when operationalized by situationally specific variables.

It appears, then, that one could have difficulty in isolating morality solely by the content or form of one's moral behaviour. Kohlberg (1969b) stated that there is "... no valid psychological definition of moral behaviour in the sense that no observation or categorization of behaviour from the outside ... can define its moral status in any psychologically valid sense" (p. 8).

It follows from these examples that the content of one's moral behaviour assessed morality only as a situationally specific variable, defined by a particular set of societal conventions or values. However, by doing so, it negated the notion of a universal morality common to all societies. From the conventional morality point of view, stealing to save a life would be just as immoral (rejects the norms of society) as one who doesn't steal because of fear of punishment. Therefore, a naive hedonistic orientation would be just as far removed from conventional morality as would morality conceived of in terms of universal internal principles of conscience. These latter two orientations then become synonymous.

Tests of morality which assessed such virtues as stealing, lying, cheating, honesty, altruism and the like, in fact, defined morality solely by culturally defined virtues. Thus, man's highest moral achievement remained at a conventional level.

Since moral reasoning as a cognitive structure was rarely investigated by content or behaviourally oriented researchers, the moral research remained inconsistent and inconclusive.

From this analysis, it seemed that the difficulties within the content-virtue orientation warranted avoiding this rationale in assessing moralization. However, an alternative to this approach which stated that the justification and reasoning processes behind choosing the action alternative was the data basic to studying moralization, became appropriate.

The following portions of this chapter will focus on this alternative approach through a review of the cognitive developmental position, and a delineation of its validating literature and methods of assessment as they are relevant to this project.

2. Summary of the Cognitive Developmental Theory of Moralization

During the early 1900's, John Dewey (1909) stated his position on morality and its relevance to the child's educational processes. He emphasized that the central role in the development of morality was through thought and the active organization of experiences. He assumed that growth in moral reasoning was facilitated by providing situations in which a person could actively organize and re-organize experiences. Within this theoretical position, Dewey had postulated three levels of moral development consisting of a pre-moral or pre-conventional level in which moral behaviour was generated from bio-social impulses, a conventional level where group standards were emphasized, and an autonomous level where conduct was guided by reflection and inner standards.

However, Dewey's position remained largely speculative until the 1920's when Jean Piaget attempted to investigate morality through natural observations and interviews with respect to the young child's orientation towards rules (Piaget, 1932).

Piaget defined three stages in the development of children's moral judgments. They consisted of a pre-moral stage, where there was an absence of rule awareness, a heteronomous stage where there was a strict obedience to rules, and a respect for and submission to authority, and autonomous stage where rules were considered to serve a purpose and where obligation was based upon reciprocity and fairness (Kohlberg, 1975b).

While adhering to the basic ideas of Dewey and Piaget, Kohlberg (1958, 1963a, 1964, 1969a, 1974, 1976b) investigated the natural development of moral reasoning processes from childhood through adulthood, and generated a stage developmental theory of moral development which came under the rubric of the cognitive-developmental school of thought (Looft, 1973). According to Kohlberg's theory (1975a) there were three levels of moral reasoning through which all individuals potentially may traverse. The levels were pre-conventional, conventional and post-conventional and each was subdivided into two separate and distinct stages. Stages one and two were pre-conventional; stages 3 and 4 were conventional and stages 5 and 6 were post-conventional.

Level one (pre-conventional) individuals orient towards consequences. They interpret labels of good / bad and right / wrong in terms of the physical or hedonistic consequences of their

actions. However, stage 1 individuals orient towards punishment and obedience and view moral judgments of right and wrong as emanating from or based upon the physical consequences of action. Thus, obeying the law is neither based upon respect, nor the objective, impersonal or ideal judgment. Rather, it indicates an orientation towards not being punished or towards satisfying one's own needs first and thus they are characterized as one-way interactionists. Stage 2 persons, on the other hand, were "instrumental relativists" who view right action as that which satisfies one's own needs first and confuses them with the needs of others who were instrumentally important to that individual. Thus, they are two way interactionists in the sense that others are attributed with the same thoughts and feelings as the self.

Level two (conventional) persons reflect a concern with obeying and maintaining the expectations of others. At stage three the individual has adopted conforming motives in making his moral judgments and views being right and/or wrong as defined by societal codes and laws. Roles are defined by society and conformity to them is labeled as good.

Stage four persons maintain an orientation towards authority, rules and social order for its own sake. Right action is judged according to its consistency with the laws and rules which are set down by the social institutions (i.e., government, church, school). Thus it implies a wider societal perspective than the stage three individual whose perspective is group oriented.

The final level in Kohlberg's typology is the post-conventional

level and is labeled as autonomous or principled. This individual is characterized by a concern with universal principles, such as trust, justice, personal conscience, contract fulfilment and interpersonal respect. Movement into the post-conventional level of development occurs at the time when the individual is able to recognize the constraints within his conventional reasoning. At this point, the person has incorporated a set of principles which are self-generated and which dictate the goodness of actions, regardless of societal sanctions. This does not mean to imply a return to a pre-conventional mode of reasoning where one is oriented towards egoistic self-satisfaction at the expense of societal standards, but rather, it is the incorporation of the principles upon which the law is based and thus, provides the individual with the opportunity to deal more effectively with moral dilemmas across all situations and issues with or without legal sanctions (Kohlberg, 1968). The stage five orientation generally defines right action in terms of individual rights and critically examined standards with an emphasis upon contractual and/or legal commitments to these standards (i.e., constitution of the United States). The stage six individuals orient towards universal ethical principles which define right actions by decisions of conscience in accordance with self-generated principles which come before the law. Individuals who reason at the post-conventional level view societally based laws as necessary and as serving the needs for principled trust and justice rather than defining these concepts in terms of a concrete situation. Where the law conflicts with the principle, the principle is to be served over

the law. These principles are abstract (i.e., golden rule) and not concretely fixed by an institution (i.e. ten commandments).

The following is a review of the validating literature based upon Kohlberg's cognitive-developmental theory of moralization.

3. Guttman Quasi-Simplex

Intercorrelation Matrix

To provide evidence of whether stages are developmental or merely alternative modes of reasoning which are adopted as a frame of reference in light of cultural teaching, parental influence, religion, and the like, many developmentalists (Scheuessler and Strauss, 1950; Wohlwill, 1960; Kohlberg, 1958, 1963, 1969a; Kramer, 1968) have used a scaling technique called the Guttman quasi-simplex matrix. Conformity to this matrix pattern using the percentage of subjects' stage responses demonstrates that the association between two qualitatively different reasoning processes decreases as the two become more separated in the developmental sequence or stage hierarchy.

That is, fifty percent or more of an individual's responses typically fall into a modal or dominant stage with a lesser amount distributed around adjacent stages, decreasing as one moves farther away from that modal stage. An individual's response profile, then, would generally represent a pattern consisting of the dominant stage in which he is presently, a pre-modal adjacent stage from which he is leaving but

still continues to use to some degree, and a post-modal stage to which he is moving but has as yet not consolidated.

That other stage responses decrease in frequency as one moves farther away from the modal stage not only adds additional support for the hypothesis of developmental stages but also suggests that each stage represents a hierarchical reintegration of previous stages. That is, while subjects typically indicate difficulty in comprehending the reasoning at stages above their own, they do not demonstrate comprehension difficulty at stages below their own. Thus, there ought to be higher response frequencies in lower stages, relative to the modal stage, than response frequencies at higher stages. This pattern would then support the idea that one has passed through and understood lower stages more effectively than higher ones, the latter of which the individual has not as yet traversed (Kohlberg, 1969a; Rest, Turiel and Kohlberg, 1969).

In Kohlberg's (1958) initial study of subjects between the ages of 10 and 16, he reported that the data from these subjects was usefully fitted to this type of matrix. Further, Kramer (1968) in his study of adults, found that 83% of his data conformed to this type of matrix pattern.

This pattern (Kohlberg, 1969a) can be visualized from figure 1 in Appendix E.

4. Invariant Sequentiality

To further test the developmental position of Kohlberg's typology, there have been various studies which have attempted to assess the invariance and sequentiality of moral stages: a pattern necessarily most important in a developmental model.

The major study in this area, was conducted by Turiel (1966) who assessed the stage responses of 44 seventh grade boys. After determining the subjects' dominant stage, each subject was exposed to reasoning concepts at differing levels from their own modal level. Following the exposure, they were retested using a parallel interview schedule. Turiel hypothesized that "...subjects exposed to reasoning corresponding to a stage directly above their dominant stage would be influenced more than those exposed to reasoning corresponding to a stage further above" (p. 612). A second hypothesis was that if movement was hierarchical in nature, as Kohlberg's theory assumed, then the lower stages would be rejected by the subjects. Further, as the hierarchy notion would assume, the higher stages would be preferred as more satisfactory.

Turiel divided his subjects into three groups and one control group. Group I was exposed to reasoning one stage below their own dominant stage (-1). Group II was exposed to reasoning one stage above (+1). Group III was exposed to reasoning two stages above (+2) while the control group was not exposed to any treatment but received pre-and post-testing. The results demonstrated that the most influential treatment was exposure to +1 reasoning while the least

influential was to +2 reasoning. The control group showed no change.

From this study and others that followed (Turiel, 1967, 1972, 1973, 1974; Kuhn, 1976; Holstein, 1973b) it may be concluded that Kohlberg's stages formed successively advanced cognitive orientations towards moral reasoning and that individuals were more likely to progress from a lower to a higher stage than they were to jump any intervening stages. Further, Turiel concluded that the attainment of each higher stage was a reorganization or reintegration of the preceeding stages and not merely additions to them.

In addition to the above supporting evidence, the invariance-sequentiality issue was also investigated from the perspective of moral education. Generally, this technique was aimed at facilitating movement through the moral stages by exposing subjects to discussion groups where a group leader stressed the arousal of cognitive-moral uncertainty with the simultaneous presentation of alternative judgments, one stage (+1) above the subject's assessed dominant stage. The effectiveness of this type of educational technique has been demonstrated at the junior and senior high school levels (Blatt, 1969; Blatt and Kohlberg, 1970) with university students (Speicher, 1973) and in specialized classes such as social studies (Fenton, et. al, unpub; Fenton, 1974), sex education (Gilligan, 1974) and correctional institutions (Scharf and Hickey, 1974).

Specifically, Blatt (1969) studied a class of 11-15 year old males and females and reported a significant increase in his experimental treatment (i.e. discussion groups) as compared to a control group who received no discussions and another control group which

discussed moral dilemmas without a group discussion leader. Neither sex nor I.Q. differences were reported significant.

In another study, Blatt and Kohlberg (1970) led moral discussions in Sunday school classes of 11 and 12 year olds for three months. A significant number (50%) of the subjects advanced one full stage while 10% moved up two stages. Further, the recorded gain remained after a three month and 12 month follow up. In the first control group, 90% remained the same and 10% moved up one stage after a six-month follow up.

In view of the above reports on the issue of sequentiality, it was demonstrated that not only do Kohlberg's stages conform to developmental invariance but also, when techniques to manipulate invariance were implemented, the stages remained sequentially invariant.

5. Comprehension-Hierarchy

Another source of validation research on Kohlberg's moralization theory was the issue of comprehension and hierarchy of stages. That is, to show that the stages are developmental, one must demonstrate that the stages are hierarchical as manifested in their comprehensibility.

"To say that there are hierarchical stages of moral judgment implies that a new stage does not replace a previous stage, nor is it added to it, but rather, that it transforms elements of lower stages into a new, more differentiated and integrated structure" (Rest, 1970 p. 1).

Rest, Turiel and Kohlberg (1969) looked at the stage issue from this point of view, investigating the notion that individuals

should be able to comprehend every stage below and including their own dominant or modal stage. They tested two groups of children between the ages of 10.6-12.3 and 13.4-14.6 years about their understanding of, and preference for, various moral evaluations. Subjects were required to rate moral responses in terms of which were important and which were not. The assessment procedure, rather than being based upon spontaneous production, (i.e. ones own internal frame of reference without the influence of others) as in the classical Kohlbergian assessment methodology, was modified in terms of moral recognition (i.e. moral evaluations made with reference to responses made by others). The responses that subjects rated as worse than their own were consistently one stage below (-1) their own modal stage. Further, those responses rated as better than their own were those which were consistently one stage above (+1); even though more difficult to understand and paraphrase. For example, subjects who preferred(+1) statements seemed to understand their implications 43% of the time while subjects who indicated (+2) preference understood and comprehended their issues and implications only 28% of the time. Thus, the further away from the dominant modal stage, the more difficult the comprehension. It could also be inferred that movement may be seen as being upward in the sequence in that although modally at one stage, the trend in terms of preference was toward the next stage in the hierarchy.

Thus, there seems to be a progressive desire to understand, prefer and move towards a higher stage and

"...generally, the higher the stage, the wider the scope of conceptualization of social interaction, the less situation bound and concrete the basis for moral judgment and the less arbitrary and coercive the basis for social interaction". (Rest, 1974f, P. 33)

These findings were not only interpreted as supportive of Kohlberg's stage theory, but also have given the impetus for further research in the area of moral comprehension, recognition and preference (Rest, 1968, 1973, 1974a, 1974b, 1974c, 1975a, 1975b). As an outgrowth of this study, Rest, et. al. (1974b) have formulated an alternative operational definition of morality as well as an alternative method of assessment which has contributed greatly towards defining a more comprehensive moral profile. This method of assessment, called the Defining Issues Test, will be utilized in this project. A more detailed description will be presented in a following portion of this chapter.

Thus far, the major literature concerning the cognitive-developmental approach to moralization has been presented. The following section of this chapter delineates the various assessment methodologies, or data gathering procedures relevant to this project.

6. Methodological Issues in Morality Research

Using Cognitive Developmental Theory

The issue of whether different tasks assess different levels of effectiveness within the same general area is not a new one. Davis, Sutherland and Judd (1961) found that subjects score higher

on recognition measures than on recall measures. Piaget and Inhelder (1956) and Olson (1968) found that children recognize a shape before being able to reproduce it. Furthermore, Frazier, Bellugi and Brown (1963) found that children can comprehend sentences which they cannot themselves generate.

Similarly, a critical question in moralization research is whether different data gathering techniques within the same theoretical model would effect the results.

According to Rest (1974d) there seemed to be five major types of data gathering strategies used in morality research. Individuals may be presented with spontaneous, open-ended interviews where the subject was required to produce an ordered response to an open-ended hypothetical dilemma in which no right or wrong answer exist and then to justify that position (spontaneous production). The subject may be asked how appealing certain individual moral issues were and, in a sense, this was a statement of moral preference or choice (moral evaluation). The individual may be required to paraphrase or indicate an understanding of a moral issue (moral comprehension). Subjects may be required to read statements and then be administered a test of their ability to reproduce them (moral recall). Lastly, the subject may be asked to select one of many given moral issue related statements and then to match it to the original issue (moral comprehension by matching).

That is, whether one's moral reasoning processes were assessed via spontaneous production of one's own frame of reference a la Kohlberg, or by Rest's recognition-comprehension measure, the method

of assessment might make a difference, even within the same theoretical orientation. The following portion of this chapter will delineate the assessment strategies of both Kohlberg and Rest.

6A. Lawrence Kohlberg's strategy towards the assessment of morality

Kohlberg's strategy of data gathering required subjects to respond to hypothetical stories of a moral nature. After responding initially with an action alternative, subjects were asked to justify their responses. The subjects responses were then classified into one of six stages through a complex scoring procedure requiring extensive training.

Kohlberg's method, although structured in the sense that the subject must respond to a standardized set of probing questions after the initial choice was made, was relatively more open-ended than previous researchers (Piaget, 1932). Furthermore, Kohlbergian dilemmas were complex and multifaceted in that the justification for the action alternative utilized the subjects own frame of reference without a given structure. Thus, the justification for one's responses might lead to the inclusion of numerous moral issues. One difficulty within the Kohlbergian methodological strategy lay in the complexity and tediousness of the scoring process itself. Sometimes there was incomplete information concerning one's justification to clearly define the subject's stage, even with a trained scorer. Further, although the most recent scoring guide (Kohlberg, Gibbs, Colby, Speicher-Dubin and Power, 1976a) simplified these

difficulties to a great extent, suffice it to say that the problem continued to exist.

Another limitation of Kohlberg's method of assessment was based upon the psychometric issues of reliability and construct validity (Rest, 1975b, Kurtines and Greif, 1974). These authors had independently criticized Kohlberg from two basic points of view. Firstly, although interrater reliability had been established by Kohlberg and his colleagues well within the 80's, there has been little reported in the area of test-retest reliability. Secondly, while longitudinal studies, age studies, cross-cultural studies, sequentiality studies and comprehension-hierarchy studies provided construct validity for the theory as a whole, some methodological flaws inherent within them would indicate that these results should not be considered as definitive.

Further, Kohlberg refined and revised his scoring system at regular intervals, which although a credit to the method, still fails to provide appropriate psychometric data, particularly since earlier studies utilized earlier manuals.

The relative advantages of the Kohlbergian technique has been that it has led to the consistent and systematic study of moral development through the creation and definition of more precise knowledge about moral judgment processes (Rest, 1974d). Since Kohlberg's dilemmas were both unfamiliar and hypothetical and since they were applicable to all age groups across the life span, this technique lent itself to the present study.

However, Kohlberg's Moral Maturity Test may not be as effective by itself, as

it may be in conjunction with an alternative method and instrument, since it yielded information about only one aspect of moral reasoning; spontaneous production. Thus, an additional method of assessment was needed to broaden or expand the investigation of morality. This inclusion was moral recognition.

6B James Rest's strategy towards the assessment of morality

In an attempt to objectify Kohlberg's theoretical approach to morality, James Rest (et. al. 1974b, 1974c) and his colleagues developed an alternative instrument which was based upon Kohlberg's stage theory. The Defining Issue Test (DIT) has been extensively researched by numerous authors (Costango, Cole, Grumet and Farnhill, 1973; Buchanan and Thompson, 1974; Carroll, 1974; Coder in press, McGeorge, 1975).

In comparison to Kohlberg's spontaneous production of moral reasoning "in a vacuum", Rest (1974b) assumed that moral judgments were rarely hypothetical and rarely encountered in this fashion. He went on to note that, in fact, most judgments and decisions made by an individual are made in consultation with others. "...hardly ever is one aware of a dilemma without also hearing someone's moral judgment of it" (P. 8). Further, he implied that the role of others was extremely critical in decision-making processes.

The DIT instrument extracted stage prototypic statements from Kohlberg's (1958) original data and presented them to the subject after he chose an action alternative. Rather than seeking a

justification of the response, the subjects were then required to rate twelve prototypic statements in order of importance and then to rank order the four most important statements in order of preference. Thus, if the subject comprehended and appreciated the underlying structure of one of the statements, he indicated his preference for it.

The advantages of the DIT method were numerous. It was a relatively standardized administration which was not open-ended and thus, minimized the problems of verbal fluency. Further, it allowed the subject to classify himself as to his stage, and eliminated the scoring complexities found in Kohlberg.

Although this test was relatively new, it seemed to possess psychometric superiority to Kohlberg's. For example, test-re-test reliability yielded .81 over two weeks. Discriminant validity was found between high school students, college students and graduate students. High correlations were obtained with measures of moral comprehension. Longitudinal studies indicated forward sequentiality (Rest, 1975b), and a .68 correlation with Kohlberg's measure was reported (Rest, et. al. 1974b).

Thus, while the research supported Kohlberg's stage theory in general, it also suggested that, because of the inadequate reports on psychometric attributes of Kohlberg's method, Rest's superiority in data collection provided a more reliable and valid method of assessing moral development.

However, while Kohlberg's method of spontaneous production assessed only one part of a moral profile and by itself might be inadequate,

Rest's measure assessed only recognition and this too, by itself might be inadequate.

The two measures combined allowed for a more comprehensive understanding of a person's moral profile. In fact, Rest (1974f) stated that "...a really complete description of the subject's location in a developmental sequence would give the subject's stage as assessed in a spectrum of tasks" (P. 14-15).

7. Subject Relevant Variables

It is one of the purposes of this investigation to explore the relationship between the data obtained from measures of moral recognition as compared to the data obtained from measures of spontaneous production. Further, this investigation was designed to explore this relationship as it may be influenced by several subject relevant and demographic variables such as sex, socioeconomic status, education and religion

Within the past twenty years several of these variables have been investigated with respect to their relationship to moral development. However, the majority of this research has been conducted with children and rarely have there been studies utilizing adolescents through old age. Further, the majority of the research had been investigated using Kohlbergian type methodology. Since this investigation added Rest's assessment strategy and since this project was designed to investigate moralization processes within these latter years, it would appear that these variables take on re-newed importance.

The following portion of this chapter will review these

variables and their relevance to this project will be discussed.

7A. Sex as a moderator variable

The literature on the moral development of children has extensively examined the nature and importance of sex as a variable. Generally speaking, the majority of these results indicated that sex is of minimal importance in influencing one's moral maturity (Bull, 1969; Graham, 1972; Loughran, 1967; Whiteman and Crozier, 1964). The following is a review of the major studies.

Rybash, Sewell, Rodin and Sullivan (1975) reported an absence of sex differences in the moral reasoning of kindergarten children. Similarly, Berndt and Berndt (1975) concluded that there were no significant differences on six measures of moral reasoning in groups of 5, 8 and 11 year olds. Tenure (1975), in her study relating altruism, and empathy to moral reasoning in 4 and 5 year olds, using Lee's (1971) adaptation of Kohlberg's measures, found no sex differences.

Berg-Cross (1975) found no sex differences in 153 Grade 1 students on Piagetian type moral judgments.

Rubin and Schneider (1973) found no sex differences in moral reasoning of 55 seven year old subjects. Within the same age range, Chandler, Greenspan and Barenboim (1974), Elmer and Rushton (1974) and Rushton (1975) found an absence of significant sex differences.

White (1969), in a cross-cultural study found 12-14 year old Bahamian males to be more advanced than females. However, in earlier age ranges (7-8, 9-10 and 11-12) White reported no significant sex

differences.

Kohlberg (1964), found that sex differences were not apparent until adolescence and then tended to favor males more so than their female counterparts. In line with this, Keasey (1971) found U.S. males more advanced than females by the age of 11 years. LeFurgy and Woloshin (1969) reported no sex differences in 13 year old high school students. Saltzstein, Diamond and Belenky (1972) found 13 year old males showing a greater amount of stage 1, 2, 4 and 5 than females who were predominantly stage 3. On the other hand, however, Holstein (1973a) found 13 year old females more advanced than males but by the age of 16, she found that these males were more advanced than females. Finally, McMahan (1975) reported no sex differences in 18 year olds as did Weisbroth (1970) using 21-39 year olds.

These studies indicated that the issue of sex differences in moral reasoning was unclear and contradictory. The general trend in the younger ages suggested the absence of significant sex differences, while at approximately 12-14 years, some differences have sporadically emerged.

However, as one moved into the middle and older age ranges, the research on sex differences became quite rare and even non-existent in the latter portions of the life cycle.

Since this project began at the 16 year level, where inconsistencies seemed to exist, the investigation of the sex factor would seem to take on more importance.

7B. Social class as a moderator variable

The critical issue with respect to the question of social class differences in moral development focused on whether different experiences encountered, (i.e. economic, cultural or social) either facilitated or retarded moral development or whether it represented the transmission of a specific value system different from the value system of other groups, cultures or classes.

This perspective has been used as a method of viewing social class differences, in the sense that higher class values were assumed different from lower class values and thus, moral evaluations may be referred to as a sub-cultural value system (Boehm and Nass, 1962).

In contrast to this perspective, the developmentalist orientation emphasized that class differences can be seen as opportunities favourable to the development of social concepts because of richer stimulation potential as opposed to the memorization of specific value systems. If the latter were true, the higher social class, or group, would be more mature than the lower group and that age trends found in all groups should be accelerated in the higher group. That is, if social status differences were a result of cultural teachings and transmission of different sub-cultural value systems, then it might be expected that age trends would not be consistent: that they would divert over the spectrum of value systems as each class, culture or group learned its own set of values instead of a natural and universal developmental pattern. Following the notion of universality, if group differences were found, they should be found consistently across

tasks. If middle class subjects formed an intentionality orientation earlier than lower classes, they should also form a sense of subjective responsibility earlier than lower classes. Since this was not reported to be the case, it cannot be assumed that social class by itself was the influencing factor (Kohlberg, forthcoming).

The notion that different cultures and environmental opportunities differentially stimulated moral reasoning was suggested (Harrower, 1934; Piaget, 1947; and Lerner, 1937). This idea related to lower classes and primitive cultures as stressing constraint and authority orientation as opposed to middle class structure which did not. However by examination of the childrearing literature, there was doubt to his interpretation. Havinghurst and Davis (1955) reported that there was more middle class constraint while Sears, Maccoby and Levin (1957) suggested that there was more lower class constraint. Further, Bronfenbrenner (1962) suggested that these differences may be due to generational changes, while Kohlberg (forthcoming) suggested differences in operational definitions between middle class permissiveness and lower class indifference. Further, if the higher moral maturity found in middle class children when compared to lower class children were due to child rearing practices or permissiveness within that class, then within class, moral maturity would vary according to degree of permissiveness.

There is further inconsistency in the morality-social class issue. Lerner (1937b) noted that lower class children were higher on the authoritarian end of the peer-authority continuum than their middle class counterparts, while Kugelmass (1966), comparing the moral

reasoning of democratic oriented kibbutz children in Israel to city raised children, reported no apparent differences. Krebs (1965) found no difference in the moral judgements of popular versus unpopular children on measures of intentionality.

Further if it is assumed that different social classes teach different value systems, it would then follow that different cultures might also teach different values. Thus, if one social class transmitted the same value system as a specific culture, then these two groups should manifest the same moral orientations. Secondly, if these two systems were different, then their moral orientations would be different.

Kramer (1968) using a Kohlbergian type assessment looked at moralization in relation to socioeconomic status with the perspective that it was not necessarily the status which was associated with different levels of morality but rather that social status may reflect a perspective that one has of society and it is that perspective of society which influences moral development.

Graphic analysis of Kramer's (1968) data concerning the socioeconomic class issue can be found in Figure 2 in Appendix E.

By examination of Kramer's (1968) data, it appeared that by age 16, the profiles were generally the same through

the first four stages. Stage 5 and 6, however, seemed to indicate greater usage in the middle class subjects as opposed to lower class subjects and this pattern remained consistent throughout the ages assessed.

Although the same general trends were reported throughout Kramer's analysis, there does seem to be some difference in the relative percent of stage usage. Thus, it can be concluded that it is likely that no precisely defined systematic relationship between socioeconomic status and spontaneous production of moral reasoning would be found. However, it is not known whether there would be any differences in measures of moral recognition, and thus, the inclusion of socioeconomic status becomes warranted as an important variable for investigation within this project.

7C. Religion as a moderator variable

There have been relatively few cognitive-developmental oriented studies which focused on the importance of religion as it is related to moralization processes. These few studies, however, indicated a common practice to examine religion with respect to particular religious sects, frequency of religious service attendance, participation in various religious groups, and observance of religious traditions and customs. These definitions were then utilized in showing whether one's moral development was associated with a particular religion. However, it was not clear whether religion was defined as a system of practices

or behaviours and thus a form of moral behaviour or whether it defined religion as a concept of religious attitudes and thus a form of moral evaluation. If religion was used as a system of behaviours then the issues of the moral judgment--moral action controversy must be explained. Similarly, if religion was defined as a system of attitudes then the issues of degree and relativity must be explained.

Johnson (1974a, 1974b) investigated the relationship between moral judgments using the Defining Issues Test and a measure of religious knowledge (collection of beliefs). His results yielded insignificant correlations between religious knowledge and principled moral reasoning and intelligence ($r=.16$) using 8th, 9th, 10th and 11th graders from private Lutheran schools in Philadelphia. In fact, with intelligence partialled out of the analysis the correlation was lowered suggesting that it was I.Q. and not religious knowledge which was associated with moral reasoning. Johnson concluded that "Religious orientation is not related to principled moral judgment" (P. 12).

It seems, however, that Johnson's conclusions may be correct but only in so far as it reflected principled morality. His findings indicated that religion was not significantly correlated with "principled" (i.e. Stages 5 and 6) moral reasoning. Since he failed to report whether any of his subjects indicated exceptional stage usage, one has no way of assessing whether religion was correlated with any of the lower stages (1-4) of moral reasoning. It was quite possible that religion, as defined in the Johnson study, was associated with morality but not the higher forms of morality.

Further, it was often implied that religion and morality are

associated in that the more frequent the religious participation (system of behaviours), the higher one's morality (cognitive structure). From this perspective, religion would seem to be the basis of morality.

However, since moral behaviour (system of practices) and moral reasoning (cognitive structure) are not consistent with one another, it would seem, then, that religious behaviour (system of practices) and religious reasoning (cognitive structure) would not be consistent with one another. If the definition of moral behaviour is that which is consistent with principled moral reasoning, and as Johnson concludes, religion was not associated with principled morality, then it cannot be expected that participation or behavioural definitions of religion would be significantly associated with principled morality or moral behaviour. Further, there was evidence that indoctrination towards a system of practices and beliefs hinder the development of morality (Allen, 1974). If religion did in fact serve as a basis for morality, then it can be inferred that religion, taught through indoctrination techniques, may be seen to hinder moral growth rather than facilitate it. This compounds the question of whether or not religion generates morality. However, from numerous and very recent and unpublished pilot projects, James Fowler (1974a, 1974b, 1975a, 1975b) suggested quite the opposite sequence: that the morality was the basis of religion. If moral development decalaged from cognitive development (Colby, 1973; Fritz, 1973) then, on the basis of Fowler's studies, religious, or faith development may be seen to decalage to moral development. Fowler, utilizing similar kinds of interview techniques to Kohlberg's dilemmas, but using religious content, reported that there are six

stages in faith development which decalage to, and parallel Kohlberg's six stages of moral development. The critical question is whether moral development preceeded and thus caused faith development, or vice versa. Although Fowler's data cannot answer this question at present, it can be hypothesized that development to a given moral stage came before development to the parallel faith stage (Kohlberg, 1974a). Further, it seemed logical to assume that universal moral principles cannot be derived from faith because not all people's faith is the same.

Fowler's work pointed to the difficulties in previous reports of religion as it is associated with morality. The issue seemed to be that morality and religion in some way convaried, at least in children. The danger in this assumption was that the decline in religiosity may then be associated with a similar decline in morality, as well as with a decline in cognitive structure. That is, morality as a system of judgments, serviced religion and fluctuated with it. However, cognitive processes have not usually been demonstrated to show such variability. Thus, if it were true that religion forced fluctuation and that morality has been demonstrated to decalage to cognitive structure, then cognitive structure must then fluctuate, which has been demonstrated not to be the case.

In fact, Hartshorne and May (1928-30) found no conclusive evidence that children who went to Sunday School classes were more or less honest than those who did not. Bull (1969)

used frequency of church attendance as his measure of religiosity in 9-17 year olds. He reported that his correlations with moral reasoning were too low to make any definitive statements. However, he concluded that frequency of attendance was a useful enough measure of religious conviction to relate to moral variables. The variables he used, however, were cheating, lying, and stealing to name a few. This complicated Bull's statements even more in that he used behaviours to predict behaviours to infer judgments. Further, when Bull interviewed subjects on religion and morality he reported no consistent relationships between religion (system of behaviours) and moral judgments (cognitive structure). Graham (1972) in his review of religion and morality stated that "... Bull's findings were...very tenuous and do not provide much support for the importance of religion in individual moral development" (P. 253).

Intuitively, it seemed that religion as a cognitive system may be related to morality (a system of cognitive judgments) in some way. However, neither measures of frequency of church attendance, eating Kosher foods nor taking or not taking birth control pills were appropriate measurement devices of religion as a cognitive system.

There was another difficulty which entered into the religion-morality issue. It was the assumption that the more religious one was, the higher one's morality would be. One may attend religious services every day while another may not attend at all, and this neither gives a true indication of religiosity nor morality. One can assume that as in morality, religion must answer the question why.

For example, the commandment which states "Thou shalt not kill" can be responded to in terms of "why" on numerous grounds: a) deference to authority, b) societal expectations, c) law and order, d) socio/legal commitments, and e) dignity of human life in terms of the person's own worth (atheistic) or in terms of a person in the image or likeness of God (organized religion).

Further, it cannot be disregarded that agnosticism or atheism, defined as a lack of organized religion, must then be associated with lowered morality. In fact, it may well be that there are as many highly moral people who were not religious as those who are.

Thus, the attendance-participation (system of behaviours) operational definition of religion cannot be utilized as an indication of morality even though it was often used to define religiosity, at least during the early and later childhood ages.

The evidence on the whole suggests that there may be something which was involved in religious forces and moralization but that "something" seemed to rest in the area of cognitive structure (system of judgments) rather than religious practice (system of behaviours).

It has been sufficiently demonstrated that there are age trends in the development of morality (Kohlberg, 1969a). However, there have, at present, been few systematic investigations utilizing the post-adolescent years. This oversight might be crucial to an understanding of the religion-morality issue. In fact, Kramer (1968) concluded that in adulthood, moral actions may become more consistent with moral reasoning. Thus, one may infer that measures of religious practice may be an appropriate avenue of investigation of morality in the sense

that spontaneous moral reasoning may be related to religious saliency while moral recognition may be related to religious behaviours, particularly in the later years.

7D. Age as a moderator variable

Chronological age has not typically attracted as much attention as a major variable in moralization theory as it has in other aspects of developmental research. In fact, exact age-stage relationships in moral development were extremely rare as it was not considered as essential to developmental theory as was, for example, invariant sequentiality. Further, it was logically difficult to assume that all stage 3's are 12 years old or that all 12 year old's were stage 3. However, there have been reports of general age trends in the development of children's moral judgments in the United States (Kohlberg, 1963; Kramer, 1968), Taiwan, Mexico, Yucatan and Turkey (Kohlberg, 1963; Kohlberg, 1970; Muss, 1975). Generally speaking, from the cross-cultural literature these findings suggested that the frequency of moral judgments at stages 1 and 2 seem to dominate up to 10 years of age and then begin to decrease in frequency as chronological age increases. Stages 3 and 4 seem to increase with age until around 13 years and then level off. Stages 5 and 6 were last to appear, emerging at around 13-16 years, and generally remaining at the lower end of the continuum. Figure 1 below represents an example of approximate age-stage relationships reported in these cross-cultural findings (Kohlberg, 1969a).

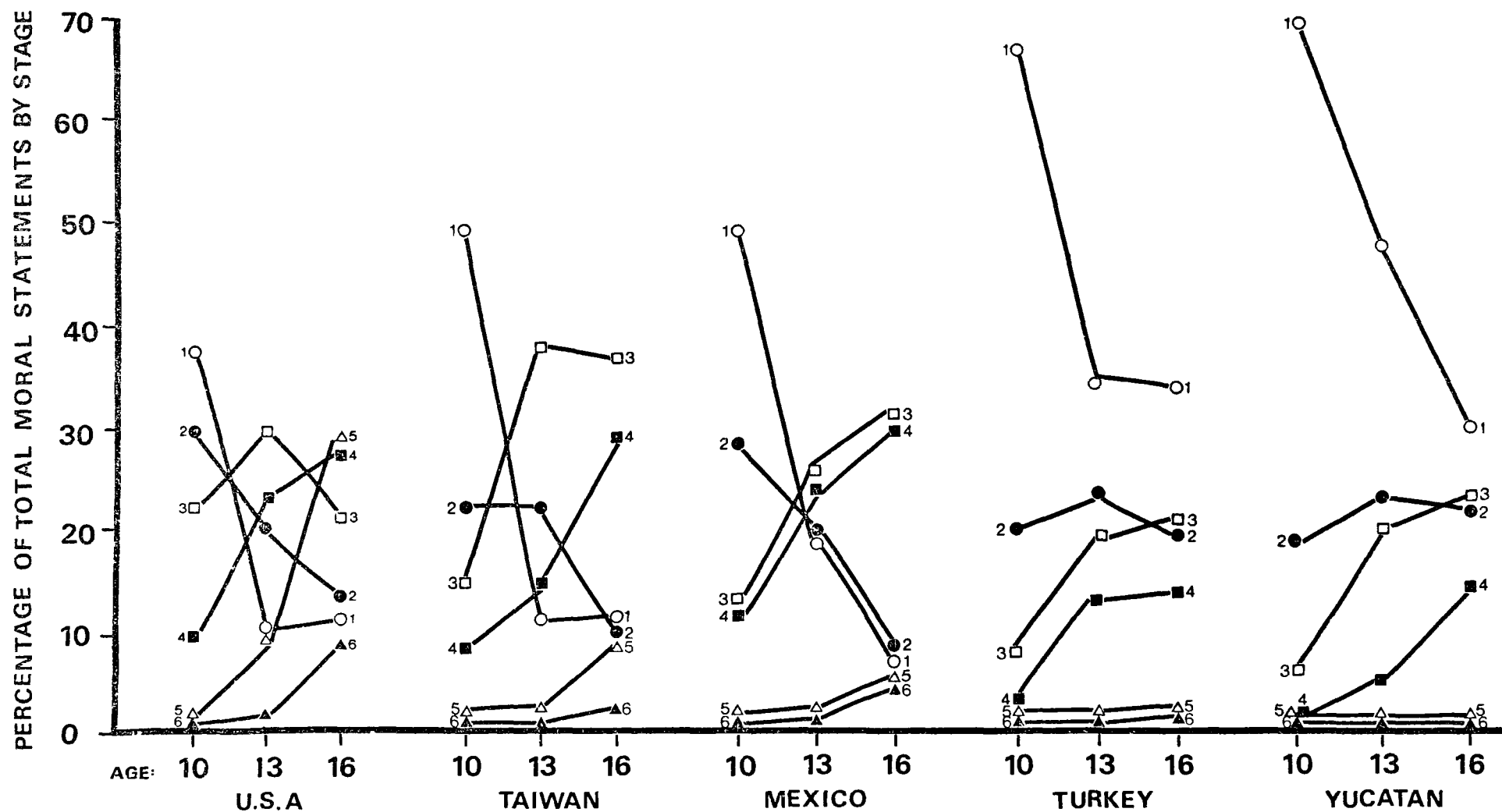


Figure 1. Age-stage relationships of spontaneous production of moral reasoning in five nations.

One can see from this figure that the order of stage appearance until adolescence was very much the same in all cultures presented. However, as one matured, chronologically, there seemed to be some emerging differences. For example, at age 13, stage 3 appears most frequently utilized in the U.S., Taiwan and Mexico, whereas in Turkey and Yucatan, the order of most frequent usage remained consistent with the response pattern at age 10. Further, the United States children at age 16, had almost reversed the response pattern seen at age 10, whereas in Taiwan and Mexico, stages 3 and 4 were most frequent at age 16. Although sequentiality remains invariant in all subjects, in Turkey and Yucatan, there was still no movement with respect to the frequency of responses at 16 years when compared to responses at age 10.

The pattern, therefore, in North America, seemed to be consistent with the literature in childhood years. However, the pattern in adolescence seemed to throw the age-stage relationship issue into some uncertainty, particularly as one moved from childhood to adolescence.

Consistent with this idea, Mitchell (1974) stated that,

"To provide a specific blueprint which outlines the structure of moral growth during the adolescent years is not feasible. The more one investigates the nature of morality, the more one is likely to conclude that no blueprint shall ever exist. However, general trends in moral growth do exist". (P. 123)

That is, the only clear age trend in adolescence suggested a lessening of concrete egocentricity toward a more flexible and abstract orientation which paralleled cognitive growth. Bloom (1964)

noted that there was moral growth from pre-conventionality to conventionality in adolescent years for a majority of adolescents. Kramer's (1968) findings suggested that one reason for moral growth at this time may be due to psychological crises simultaneous with cognitive growth during these years. Further, due to the transitional nature of the adolescent era, this period of development may be most optimal for moral intervention. Blatt and Kohlberg (1969) suggested that moral judgments at the end of adolescence were predictable ($r = +.92$) to adulthood, while they were less predictable to adulthood ($r = +.24$) at the beginning of this period. Kramer's (1968) study also suggested that moral stage at 16 years was a significant predictor of morality at 25 years. Another reason for the lack of clarity within these age findings might be suggested from the notion that it was not feasible to postulate specific age changes because of the regulating effect placed on moral stages by logical-cognitive stages (Colby, 1973; Fritz, 1973), as well as the more idiosyncratic nature of the moral developmental decalage from the logical-cognitive stages.

The implications which can be drawn from the few studies in adult moralization (Kramer, 1968; Kohlberg and Kramer, 1969c; Kohlberg, 1973) suggested that the possibility of new developmental stages in adulthood is remote. This implication further implied that the way in which one thought about moral issues during adolescence was most likely the way in which one will moralize as an adult. The obvious criticisms of this statement can be seen by the virtue-content oriented researcher but may seem quite appropriate to the cognitive developmentalist whose theoretical rationale was based upon

logical reasoning stages and the concept of horizontal decalage.

With these implications in mind, statements concerning moral development after age 16 are speculative, as they were based upon few systematic studies. The lack of systematic evaluations left the issue of adult moralization open for investigation. This lack of clarity becomes even more understandable in light of various crucial and relevant variables which are assumed important for that age group such as marriage, vocation, children, renewed commitments and the like.

8. Summary and Statement of Hypotheses

It has been previously reported that moralization research during the childhood years seemed to yield consistent results by numerous researchers. During the adolescent years these research reports became relatively less frequent and their conclusions became relatively less precise. The frequency of research reported during adulthood became even less frequent and the results from these studies were inconsistent and inconclusive, particularly as they pertained to the subject relevant variables reviewed earlier.

Furthermore, these researchers only utilized a Kohlbergian type methodological strategy, without including a measure of moral recognition. Therefore these types of findings yielded information basic to the spontaneous production of moral reasoning. Further, it yielded information about one aspect of a person's moral profile which was based solely upon one's own internal frame of reference.

It appears, however, from reviewing the literature on Kohlbergian type research, that spontaneous production of moral reasoning, at least when applied to the adolescent and adult age ranges, resulted in many inconsistent and inconclusive results.

In this light, it was thought that an additional measure of moralization processes might lead to more definitive conclusions within these age ranges. This additional measure was developed by Rest (1974b) and his colleagues and was designed to elicit information about a person's moral recognition.

It was thought that when a measure of recognition was used in conjunction with a measure of spontaneous production, the results would then yield a more comprehensive understanding of various aspects of one's moral structure.

To date, this research strategy has yet to be systematically utilized.

It is the major purpose of this investigation to further understand through a developmental perspective, the relationship between spontaneous production of moral reasoning (Kohlberg) and moral recognition (Rest). Further, a secondary purpose of this investigation is to explore the relationship of these measures of moralization, both together and independently, to such subject relevant variables such as age, sex, socioeconomic status, religion and educational level.

On the basis of the above review of the relevant literature as well as the speculations previously described, the following hypotheses, stated in their null form, will be investigated:

Major hypothesis:

1. There is no relationship between the data gathered by Kohlberg's spontaneous production method and Rest's recognition method.

To provide supporting evidence for the major hypothesis, the following secondary hypotheses will be investigated.

2. There are no significant differences between the four age groups utilized when measuring either spontaneous production or recognition.
3. There are no significant differences between males and females, when measuring either spontaneous production or recognition.
4. There are no significant differences between the level of subjects education, when measuring either spontaneous production or recognition.
5. There are no significant differences between socioeconomic status, when measuring either spontaneous production or recognition.
6. With respect to either spontaneous production or recognition, there are no significant differences between religious sects, measures of religious participation or measures of religious saliency.
7. There are no significant differences between levels of social participation, when measuring either spontaneous production or recognition.
8. There is an independent morality factor underlying the data.

This chapter presented a review of the cognitive developmental literature on moralization with regard to moralization theory, subject relevant variables, and the rationale for their inclusion in this study. Finally, a description of the null hypotheses to be tested were delineated in the form of major and secondary hypotheses.

The next chapter will present a description of the participants who served as subjects for this study as well as a delineation of the research instruments and procedures for data collection.

CHAPTER II

RESEARCH METHOD

Chapter II will present the research strategy used to test the hypotheses stated at the end of chapter one. It will present a description of the participants with respect to how they distributed on several demographic and subject relevant variables. Secondly, it will present a description of the instruments and data gathering procedures utilized and, thirdly, it will present a summary of the scoring procedures.

Participants

Two hundred seventy one participants, 133 males and 138 females distributed within each of the following age ranges; 15-18, 19-29, 30-49 and 50-72 served as the subject pool for this project.

The participants were obtained from the general Ottawa, Ontario region and the data were gathered between the dates of March, 1976 and December, 1976, inclusively. All subjects reported English as their home spoken language and participated on a volunteer basis. Participants within the 15-18 year old range were obtained from a large urban high school, as well as from an equally large rural high school both located in the Ottawa area. The 102, 15-18 year olds obtained a mean chronological age of 16.22 years and a standard deviation of .55 years. Participants within the ages of 19-29 were obtained from degree granting programs at Ottawa University, Ottawa, as well as its extension schools in Deep River, Ontario and Cornwall, Ontario. Further subjects were obtained from Carleton University and St. Patricks College in Ottawa.

the 99, 19-29 year olds obtained a mean chronological age of 23.60 years and a standard deviation of 3.20 years. Middle aged participants, aged 30-49, were similarly obtained from the aforementioned higher educational institutions with a majority enrolled in either night courses of continuing adult education or in courses of personal interest. The 46, 30-49 year olds obtained a mean chronological age of 35.76 years and a standard deviation of 5.25 years. Finally, participants within the age range of 50-72 were obtained through adult education courses offered through the Ottawa Public School System. The 26 participants within this age range obtained a mean chronological age of 57.14 years and a standard deviation of 5.22 years. The unequal numbers in each group were retained in order to utilize as much of the available data as possible, although equalizing group sizes with respect to age was attempted. Table 1 presents a summary of the distribution of subjects and their age group placement.

Sex of participant was determined to be a relevant subject variable and thus, attempts at equalizing groups with respect to sex was made. Because of the nature of the population available, equalizing groups according to sex was accomplished in the younger ages. However, with respect to the latter age groups, this became more difficult. Table 1 summarizes the distribution of participants with respect to age group placement, controlling for sex.

A measure of socioeconomic status for each participant was determined from a socioeconomic index of occupations in Canada (Blishen, 1968). On the basis of the 1961 census, Blishen evaluated a list of occupations which were ranked with respect to level of

education, financial income and prestige characteristics. With this measure, each participant was given a ranking which was used as a measure of socioeconomic status. However, most participants within the 15-18 and 19-29 year range were full-time students and had to be classified as such since the Blisshen Scale does not rank full-time students. Table 1 below describes the distribution of subjects with respect to age group and socioeconomic status, controlling for sex.

Years of education was determined to be a relevant subject variable which was considered for examination. The distribution of subjects with respect to their age group and their education, controlling for sex can be found in table 1 below.

Religion was another subject variable included within this study. Because of the nature and complexity of this variable, religion was subdivided into measures of religious sect, religious participation and religious saliency. Tables 2, 3 and 4, delineates the distribution of subjects with respect to these measures.

Various other subject relevant and demographic variables were measured. These included measures of social participation, marital consistency, financial stability and job consistency. The distribution of subjects with respect to these variables is summarized in table 5.

Further, measures which were related to parental characteristics were obtained. Summarized in tables 6 and 7, they included mother's and father's education and mother's and father's socioeconomic status, respectively.

TABLE 1

Distribution of Subjects with Respect to Age Group
Placement on Several Variables

Age Group	Age		Sex		Educ.		SES		N
	$\bar{x}$	σ	M	F	$\bar{x}$	σ	$\bar{x}$	σ	
15-18	16.20	.55	51	51	10.80	.54	48.08	15.00	102
19-29	23.60	3.20	48	49	17.44	2.09	54.31	14.53	97
30-49	35.76	5.25	20	26	17.60	2.42	63.54	10.67	46
50-72	57.74	5.22	14	12	17.17	5.89	55.24	14.66	26

TABLE 2

Distribution of Subjects with Respect to Age
Group Placement by Religious Sect

Age Group	Other	Protestant	Catholic	Jewish	Agnostic	Atheist	Row Total and Row %
15-18	1	12	82	3	3	1	102 37.6%
19-29	3	41	32	4	11	6	97 35.8%
30-49	2	15	17	0	11	1	46 17.0%
50-72	1	22	2	0	1	0	26 9.6%
Total	7	90	133	7	26	8	271
COL % =	2.6%	33.2%	49.1%	2.6%	9.6%	3.0%	100.0%

TABLE 3

Distribution of Subjects with Respect to Age
Group Placement by Religious Participation

Age Group	Never	Yearly	Monthly	Weekly	Daily	Row Total and Row %
15-18	15	13	6	60	8	102 37.6%
19-29	40	26	10	19	2	97 35.8%
30-49	19	5	5	16	1	46 17.0%
50-72	9	3	4	9	1	26 9.6%
Total	83	47	25	104	12	271
COL % =	30.6%	17.3%	9.2%	38.4%	4.4%	100.0%

TABLE 4

Distribution of Subjects with Respect to Age
Group Placement by Religious Saliency

Age Group	None	Little	Average	More Than Average	A Great Deal	Row Total and Row %
15-18	9	11	42	31	9	102 37.6%
19-29	45	22	13	14	3	97 35.8%
30-49	23	1	7	14	1	46 17.0%
50-72	7	6	6	6	1	26 9.6%
Total	84	40	68	65	14	271
COL % =	31.0%	14.8%	25.1%	24.0%	5.2%	100.0%

TABLE 5

Distribution of Subjects by Age Group With Respect
to the Means and Standard Deviations on Several Variables

Age Group	Social Participation		Marital Consistency		Financial Stability		Job Consistency	
	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ	$\bar{x}$	σ
15-18	24.564	9.139	Too Young		Full Time Student		Full Time Student	
19-29	21.835	8.490	6.598	3.301	46.505	46.055	47.663	46.951
30-49	19.826	9.125	4.854	2.963	8.442	3.781	7.068	1.620
50-72	21.481	8.505	4.400	1.803	11.680	2.135	10.080	18.634

TABLE 6

Distribution of Subjects with Respect to Age
Group and Years of Father's and Mother's
Education, Controlling for Sex of Subject

Age Group	Sex	FaEduc		MaEduc		N
		$\bar{x}$	σ	$\bar{x}$	σ	
15-18	M	14.06	6.77	13.35	4.81	51
	F	15.38	6.41	12.30	5.60	51
19-29	M	11.77	4.18	11.77	4.18	48
	F	13.12	4.56	13.12	4.56	49
30-49	M	10.90	5.50	11.75	3.80	20
	F	11.00	5.95	9.46	3.39	26
50-72	M	16.43	11.11	10.71	5.62	14
	F	11.42	5.65	13.25	6.34	12

TABLE 7

Distribution of Subjects with Respect to Age Group
and Father's and Mother's Socioeconomic
Status, Controlling for Sex of Subject

Group	Sex	FaSES		MoSES		N
		$\bar{x}$	σ	$\bar{x}$	σ	
15-18		48.08	14.93	46.81	12.90	102
	M	47.61	15.31	48.04	13.42	51
	F	48.57	14.83	45.89	12.28	51
19-29		47.84	14.00	46.99	12.15	97
	M	46.89	12.95	46.80	11.94	48
	F	48.78	15.02	47.17	12.47	49
30-49		41.49	11.61	44.01	12.29	46
	M	40.62	11.34	43.70	12.69	20
	F	42.16	11.99	44.25	12.23	26
50-72		50.25	16.88	49.96	17.11	26
	M	53.22	16.06	50.58	15.61	14
	F	46.85	17.08	47.74	19.33	12

Instruments

Phase I: Measure of spontaneous production of moral reasoning

The Kohlberg Moral Maturity Test (KMMT), consisting of three hypothetical moral dilemmas (Standard Form A 1975-1976) was administered to all participants. Each dilemma or conflict situation contrasted a human need or welfare serving act in opposition to socio-legal demands (Appendix A). The individual's solution to each of the dilemmas, with respect to an action alternative was elicited. This was followed by a series of standardized open-ended probing questions which served to elicit a more detailed understanding of the participants reasoning and the judgmental processes utilized in decision making. These administrations were completed in rooms assigned by the professor, teacher or administrator at each school or institution in the study. The completion of the KMMT varied in length from 60-90 minutes. The scoring of these protocols included a moral maturity score (KMMS) as well as a stage score. Precise scoring methodology is described in more detail subsequently.

Phase II: (A) Measure of moral preference and recognition

Rest's Defining Issues Test (RDIT) was administered to each participant one day after the completion of the KMMT. Each participant was presented with six hypothetical moral dilemmas similar to those utilized by Kohlberg (1958) in his original manual. After choosing an action alternative based on the dilemma, the participant was then presented with twelve stage prototypic criterion concepts bearing upon the resolution of that dilemma. For instance, the dilemma of whether or not

a husband, Heinz, should steal an over-priced drug from the druggist who invented it, to save his dying wife because he had not enough money (Appendix B), was presented. The participant, rather than being asked to spontaneously produce and justify a response (i.e. to steal or not to steal), was asked to consider, for example, such concepts as whether or not the community's laws were going to be upheld, or whether the law in this case was getting in the way of the most basic claim of any member of society, or if the druggist's rights to his invention had to be respected. In considering the presented 12 criterion concepts, the participant was then required to indicate how important each issue was in deciding what ought to be considered. Further, the participants then were required to rank order what they considered to be the four most important issues in resolving the dilemma.

This procedure was repeated across six moral dilemmas and yielded a moral recognition score in the form of a "P" score. The "P" score was defined as the relative usage frequency of principled (stages 5 and 6) reasoning within the entire RDIT profile.

Completion of RDIT varied in length from 60-90 minutes, and was completed in the same setting as was the KMMT. The scoring of the RDIT will be discussed in more detail in a subsequent portion of this text.

A decision to administer the KMMT prior to the RDIT was made. The usual procedure for this type of research would be to divide each age group in half and administer the KMMT and then the RDIT to the first half and the RDIT and then the KMMT to the next half, thereby counterbalancing

and controlling for order effects. However, counterbalancing techniques were not utilized in this project. First, this would halve the number of subjects in each age group so that the strength and confidence in the statistical findings would be low, particularly in the latter group where the sample size was already quite low.

Secondly, counterbalancing was not utilized for more theoretical reasons. As stated previously, the operational definition of the KMMT was a measure of spontaneous production of moral reasoning. That is, the data obtained from the KMMT was based upon one's own internal frame of reference, without the influence of an imposed structure. With this in mind, the presentation of the RDIT prior to the KMMT would provide a frame of reference and thus, preclude the operational definition of spontaneous production.

Thus, although it seemed most appropriate to utilize counterbalancing in this study, the limited sub-sample sizes in the latter age groups as well as the necessity to maintain the operational definition, provided alternative rationalizations for the appropriateness of the research method utilized in this study.

Phase II: (B) Measure of subject relevant and demographic variables

To provide basic demographic data, the Edwards (1963) Life History Biographical Information Questionnaire (Appendix C) was utilized. This questionnaire provided information concerning age, sex, religion, education and socio-economic status. Further, information relevant to older age groups, such as marital consistency, financial stability, job consistency

and social participation was also elicited. It was decided that a modification of this questionnaire include data which measured religious participation and religious saliency and various parental variables such as mother's and father's education and mother's and father's occupation. Thus, the administration and its modifications yielded information concerning age, sex, socioeconomic status of participant and his parents, educational level of participant and his parents, religious sect, religious participation, religious saliency, financial stability, job consistency, marital consistency and social participation.

This questionnaire was administered immediately after the completion of the RDIT.

Scoring

Scoring was not attempted until all data from the entire project was obtained. All raw data was coded by a research assistant to insure blind analysis. Further, the KMMT was scored by the Centre for Moral Education at Harvard University and the RDIT was scored by a computer program provided by Dr. Rest.

KMMT

Each of the profiles was initially coded by the research assistant to insure blind analysis. After this was completed, the entire set of protocols was scored at Harvard University, Centre of Moral Education, by one of the authors of the manual who is a senior research assistant at Harvard University. Scoring of spontaneous moral judgment protocols was obtained by utilizing the Standard Scoring Manual for Part A (Kohlberg, Gibbs, Colby and Speicher-Dubin, Power, 1976a). Subject's responses were classified according to dominant stage, as well as stage

mixtures, where applicable. Further, a Moral Maturity Score (KMMS) was assigned to each participant. Simply, the KMMS is the sum of the products of the percentage of responses at each stage multiplied by its ordinal value or stage number.

Since the KMMS provided a more precise measurement of moral judgment than stage scores, the KMMS was utilized throughout the analysis.

RDIT

Scoring moral recognition and preference measures required that the subject rate each stage prototypic statement and then rank order what they considered to be the four most important issues in resolving the moral dilemmas presented. Via this procedure, calculation of the "...relative importance attributed to principled moral considerations..." (Rest, DIT Manual, Sect 2, p. 2) was derived and labelled as the individual's "P" score. The "P" score, then, was derived from the ratio of the frequency of responses which fell into stages 5 and 6 to the entire set of responses in the profile.

Further, through Rest's (1974a) standardized normative data, there was provided a measure of "exception stage usage" for each subject. This measure was defined in terms of the responses at a particular stage which equaled or exceeded one standard deviation above the mean for responses at that particular stage. However, since "PSCORE" provided a more precise measurement of moral recognition than exceptional stage usage, the PSCORE was utilized throughout the analysis.

After appropriate coding procedures were completed, the RDIT was scored by computer program which was provided by Dr. Rest for this project. Analysis of the RDIT and modification of Dr. Rest's program for

use in this project was accomplished with the aid of a second research assistant.

Edwards Biographical Data

Demographic data including age, sex, education, socioeconomic status, marital consistency, job consistency, financial stability and measures of religion were coded into numerical substitutes as directed in the biographical questionnaire, by the research assistant, to insure completely blind analysis by both the researcher and computer programmer.

Subjects' occupations, and parental occupations were coded as per the revised Blishen Scale (1968). Within this category, students, both high school and university, as well as housewives were not mentioned in the Blishen occupational scale. Therefore, additional coding was added to include this form of data which differentiated working from non-working. For variables such as financial stability, marital consistency and job consistency, additional codings were added to differentiate high school participants as too young to be married from those who were single. Further, additional codings were added to differentiate those subjects with a full-time occupation (financially independent) from those who were full-time students (financially dependent).

CHAPTER III

PRESENTATION OF RESULTS

This chapter will report the results of this project and the statistical methods utilized to obtain them, as they related to both the major and secondary hypotheses under investigation. The results section will begin by presenting a further breakdown of the distribution of the participants with respect to the subject relevant variables outlined in chapter one.

As previously indicated in chapter one, there are both major and secondary hypotheses under investigation. However, for purposes of greater illustration and clarity, and to provide further support for the major hypothesis, the secondary hypotheses will be presented first while the major hypothesis will be investigated subsequently.

Thus following the presentation of a further breakdown of the participants, formal testing of hypotheses two to eight were performed through the use of analysis of variance and the Scheffe Test. Through this type of statistical procedure which tested morality hypotheses separately as they related to all variables in question, it was anticipated that decisions about significant differences between criterion groups could be made. These decisions could then be used in support of decisions relevant to the major hypothesis.

Subsequent to the separate analyses of variance, step-wise univariate regressions were performed to determine the effect of numerous variables on KMMS and PSCORE and thus, to examine the

hypothesis of whether the data obtained from these two instruments were related to any specific type or pattern of variables. This procedure was performed using KMMS as the dependent variable with PSCORE as one of the independent variables as well as with PSCORE deleted. Similarly, PSCORE was utilized in the regression with KMMS as an independent variable and with KMMS deleted. Further, this type of analysis was performed using the entire subject pool as well as age groups separately and thus, will provide a more developmental orientation.

To further investigate the nature of these inter-relationships, multivariate step-wise regression techniques were utilized using KMMS and PSCORE as dependent variables. This procedure was performed because the consideration of whether or not the two morality instruments provided data which was independent or interrelated was still open for investigation. Thus, KMMS and PSCORE were considered simultaneously as dependent variables to determine the effect of the subject relevant variables. This procedure was performed using the entire subject pool as well as age groups separately and thus, maintained the developmental perspective.

In order to examine hypothesis eight which stated that there is an underlying morality factor, factor analysis will be performed. The number of factors and the relative magnitude of the factor loadings will enable a decision to be made with respect to the hypothesis in question.

Discriminant analyses were performed not only to confirm previous findings but also to determine how strong the relationships were when reapplied to the data. Thus, this statistical approach would add a

qualifying aspect to the data.

Further, to more precisely understand the nature of the indices of morality both together and independently and to further examine the major hypothesis in this study, univariate regressions of KMMS on PSCORE were performed. These regressions were performed over the entire subject pool as well as by group, thus maintaining a developmental perspective.

An alternative attempt to further understand these morality indices on a more theoretical level was made through a redefinition of both KMMS and PSCORE into their respective high, medium, and low ranges. On this basis, K-P comparison groups were formed.

1. Further subject analyses

To describe the relationship between the participants within this study using the subject relevant variables, analyses of variance were performed. Age group by sex was investigated and the results, as shown in table 8, indicated that the assignment of subjects to different age groups with respect to sex, did not yield a significant effect.

Analysis of variance was also performed to investigate the relationship between the level of subject's education and his age group status, removing sex effects. On this basis, the expected difference was found in that there were differences between level of education and age group placement ($p = < .01$). However, the sex effect as well as interaction were non-significant. Table 9 summarizes these results.

To further describe the age group by education differences, the Scheffe Test was performed because it was the most conservative of the available spectrum of range tests. Thus, it was used as convention throughout this analysis. The results indicated that there was a significant difference between the 15-18 year olds and all other groups ($p = < .05$). Table 1 in Appendix D presents a summary of this analysis.

Analysis of variance was performed to further define the relationship between socioeconomic status of participant with respect to age, removing sex effects. These analyses as indicated in table 10 ,

TABLE 8

Analysis of Variance Performed
On Sex

Source	df	MS	F	
Between Sex	1	.0156	.0167	NS
Within Sex	269	.9331		
Total	270			

NS: non-significant

TABLE 9

Analysis of Variance Performed on
 Subject's Education x Age
 Group x Sex

Source	df	MS	F
Age Group	3	932.655	157.044 **
Sex	1	5.560	0.936
Age Group x Sex	3	3.029	0.51
Residual	257	5.939	
Total	264	16.427	

** : $p < .01$

yielded significant effects for age group, SES ($p = < .01$) and SES by sex ($p = < .01$). The interaction between group and sex was non-significant.

To further examine the age group by SES differences, the Scheffe Test was performed. The results of these findings yielded significant differences between the 15-18 year olds and the 30-49 year olds with respect to SES but failed to do so between other groups ($p = < .05$). Table 2 in Appendix D delineates the results of this analysis.

With respect to the way in which the subjects distributed across variables relevant to their background, i.e. parental education and parental socioeconomic status (Blisshen, 1968), several analyses of variance were performed.

Table 11 presents an analysis of father's educational level by subject's age group placement, controlling for sex. In this regard, father's education was distributed significantly differently across groups ($p = < .05$) but not across sex for main effects. The two way interaction was non-significant.

To further examine these group differences, Scheffe's test was performed. The results, summarized in table 3 in Appendix D indicated that group differences were between 15-18 year olds and 30-49 year olds ($p = < .05$).

Mother's educational level with respect to subject's age group, controlling for sex, yielded non-significant main effects for age group and sex. However the age group by sex interaction was significant ($p = < .05$). Table 12 presents the results of this

TABLE 10

Analysis of Variance Performed on Subject's
Socioeconomic Status x Age Group x Sex

Source	df	MS	F
Age Group	3	2566.060	12.549 **
Sex	1	1475.354	7.215 *
Age Group x Sex	3	283.683	1.387
Residual	257	204.483	
Total	264	237.859	

** : $p < .01$

* : $p < .05$

TABLE 11

Analysis of Variance Performed on Father's
Educational Level x Subject's Age Group x Sex

Source	df	MS	F
Age Group	3	160.729	3.630 *
Sex	1	17.019	0.384
Age Group x Sex	3	65.564	1.481
Residual	257	44.281	
Total	264	45.716	

* $p < .05$

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TABLE 12

Analysis of Variance Performed on Mother's
Educational Level x Subject's Age Group x Sex

Source	df	MS	F
Age Group	3	58.740	2.565
Sex	1	0.013	0.001
Age Group x Sex	3	62.253	2.719 *
Residual	257	22.898	
Total	264	23.668	

* : $p < .05$

analysis.

This seemingly anomalous result may be accounted for by sampling variation.

Analysis of father's socioeconomic status as it was related to the participants age group revealed a significant relationship ($p = < .05$), while sex revealed no significant effect. Age group by sex interaction revealed no differences. Table 13 below summarizes the analysis of variance performed.

To further investigate the relationship between age group and father's socioeconomic status, Scheffe's Test was performed. Table 4 (Appendix D below suggested that no differences existed when the conservative Scheffe Test was utilized.

Similar analyses were performed with respect to mother's socioeconomic status. Significant relationships were found neither for main effects nor interaction. Table 14 below presents a summary of these findings.

To summarize the additional analyses, in regard to the subject relevant and demographic variables, it appeared that in general, there were age group effects without sex effects or interactions.

2. Hypothesis testing of morality

scores, two types, by subject relevant variables

The following section presents the results of this study with respect to separately investigating the relationship between morality scores, two types, and subject relevant and demographic variables, as outlined at the end of chapter one.

TABLE 13

Analysis of Variance Performed on Father's
Socioeconomic Status x Subject's Age Group x Sex

Source	df	MS	F
Age Group	3	702.570	3.382 *
Sex	1	54.261	0.261
Age Group x Sex	3	67.045	0.323
Residual	257	207.713	
Total	264	211.041	

* : $p < .05$

TABLE 14

Analysis of Variance Performed on Mother's
Socioeconomic Status x Subject's Age Group x Sex

Source	df	MS	F
Age Group	3	166.894	0.975
Sex	1	49.705	0.290
Age Group x Sex	3	42.289	0.247
Residual	263	171.124	
Total	270	169.259	

Kohlberg's Moral Maturity Score (KMMS) was used to investigate the hypothesis that spontaneous production of moral reasoning was related to the subject's age group. Table 15 below presents the means and standard deviations with respect to KMMS by age group, controlling for sex.

Table 16 presents the analysis of variance performed on this data, showing a significant effect of age group ($p = < .01$). However, in regard to KMMS, sex was non-significant. The two way interaction between age group and sex was also non-significant. Table 5 (Appendix D), revealed significant KMMS differences between the 15-18 year old subjects and all other groups ($p = < .05$), using the Scheffe Test.

Similarly, moral recognition (PSCORE) was analysed with respect to age group and sex. Table 17 presents the means and standard deviations generated in this analysis.

Analysis of variance was then performed to test the hypothesis that PSCORE was related to age group, controlling for sex. Table 18 reflected this analysis. With regard to these findings, PSCORE yielded a significant age group effect ($p = < .01$) while neither the main effect for sex nor the interaction of sex with age group was significant.

To determine the nature of the group differences found, the Scheffe Test was performed. The findings, summarized in table 6 (Appendix D) below, resulted in group differences between the 15-18 year olds and all other groups ($p = < .05$).

Thus, in general, it appeared from the data presented that there were significant main effects for age group on KMMS and PSCORE. However, significance was neither achieved for sex nor interactions.

TABLE 15

KMMS Breakdown of Means and Standard
Deviations x Age Group x Sex

Age Group	Sex	$\bar{x}$	σ	N
15-18		279.363	38.799	102
	M	282.020	41.174	51
	F	276.702	36.485	51
19-29		350.112	53.509	97
	M	351.592	61.329	48
	F	348.633	44.948	49
30-49		355.804	54.389	46
	M	358.800	63.159	20
	F	353.500	47.751	26
50-72		367.923	50.897	26
	M	384.643	57.494	14
	F	348.417	34.785	12
Total		326.246	60.532	271

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TABLE 16

Analysis of Variance Performed on
KMMS x Age Group x Sex

Source	df	MS	F
Age Group	3	121791.062	52.036 **
Sex	1	3718.562	1.589
Age Group x Sex	3	2004.434	0.856
Residual	264	2340.522	
Total	271	3664.217	

** : $p < .01$

TABLE 17

PSCORE Breakdown of Means and
Standard Deviations x Age Group x Sex

Age Group	Sex	$\bar{x}$	σ	N
15-18		25.768	11.344	102
	M	26.013	13.106	51
	F	25.522	9.384	51
19-29		43.827	14.073	97
	M	46.701	13.720	48
	F	40.953	13.970	49
30-49		42.644	16.615	46
	M	41.083	14.552	20
	F	43.846	13.010	26
50-72		34.808	15.743	26
	M	30.952	16.114	14
	F	39.307	14.676	12
Total		35.993	15.546	271

TABLE 18

Analysis of Variance Performed on
PSCORE x Age Group x Sex

Source	df	MS	F
Age Group	3	6251.152	36.358 **
Sex	1	68.363	0.398
Age Group x Sex	3	428.158	2.490
Residual	264	171.932	
Total	271	241.684	

** : $p < .01$

Subject's educational level was hypothesized to be related to spontaneous production of moral reasoning. Table 19 gives a breakdown of educational level by KMMS.

To test the hypothesis, analysis of variance was performed. The results reported in table 20, indicated a significant main effect of educational level ($p = < .01$). However, interactions were not significant for education by age group or education by sex as it pertained to KMMS.

To further investigate the nature of the education by KMMS relationship, the Scheffe Test was performed. Due to the highly conservative nature of the Scheffe Test, the results, as shown in table 7 (Appendix D), indicated that these differences did not exist at the .05 level.

Similarly, PSCORE was investigated to determine the nature of the relation of moral recognition to the educational level of the subject. Table 21 reflects a breakdown of means and standard deviations of PSCORE with respect to educational level.

Analysis of variance performed on this data suggested that PSCORE was related to the subjects educational level ($p < .01$). However, two way interaction between education and age group, and education and sex proved to be non-significant. These results are summarized in table 22 below.

To define the nature of the education main effect, the conservative Scheffe Test was performed resulting in nonsignificant findings at the .05 level. Results of this analysis are presented in Table 8 (Appendix D).

TABLE 19

KMMS Breakdown of Means and
Standard Deviations on Educational Level

Educational Level	$\bar{x}$	σ	N
Grade School	217.00	0.0	1
High School	288.315	47.725	111
College	350.730	53.737	89
Post Grad	355.000	50.793	65

TABLE 20

Analysis of Variance Performed on KMMS
 x Subject's Education x Age Group x Sex

Source	df	MS	F
Education	3	92817.625	40.506 **
Age Group	3	27031.895	11.797 **
Sex	1	4316.625	1.884
Educ. x Age Group	4	701.488	0.306
Educ. x Sex	2	2641.489	1.153
Age x Sex	3	2168.017	0.946
Residual	249	2291.477	
Total	265	3578.1464	

** : $p < .01$

TABLE 21

PSCORE Breakdown of Means and
Standard Deviations on Educational Level

Educational Level	$\bar{x}$	σ	N
Grade School	15.000	0.0	1
High School	26.171	11.756	111
College	42.397	14.025	89
Post Grad.	43.616	14.570	65

TABLE 22

Analysis of Variance Performed on
PSCORE x Subject's Education x Age Group x Sex

Source	df	MS	F
Education	3	6191.590	35.133**
Age Group	3	236.732	1.343
Sex	1	62.145	0.296
Educ. x Age Group	4	29.264	0.166
Educ. x Sex	2	51.736	0.249
Age Group x Sex	3	335.489	1.904
Residual	249	176.235	
Total	265	244.022	

** : $p < .01$

Thus, KMMS and PSCORE seemed to be related to education but not to sex, or interactions. With respect to the findings in both KMMS and PSCORE by education, it can be observed that an $N = 1$ emerged in the grade school group for each analysis. Subsequent analyses were performed deleting that group. Results of non-significant findings were maintained in both.

Socioeconomic status was hypothesized to be related to spontaneous production of moral reasoning (KMMS). To investigate this hypothesis, the following breakdown of means and standard deviations were calculated and are presented in table 23.

Analysis of variance was performed on this data to test the relationship. These findings yielded a significant main effect of SES ($p < .05$) but non-significant for SES by age group or SES by sex interactions. Table 24 presents a summary of this analysis.

To investigate the KMMS by SES relationship, the Scheffe Test was performed resulting in a non-significant relationship at the .05 level. Table 9 (Appendix D) presents the results of this test.

Similarly, PSCORE was used to test the relationship between moral recognition and socioeconomic status. To investigate this hypothesis, the following breakdown of means and standard deviations was generated and are presented in table 25.

Analysis of variance was performed to test the hypothesis. The findings with respect to this relationship yielded a significant main effect for SES ($p < .05$). Further, a significant relationship between PSCORE and SES by sex interaction was found ($p < .01$). Table 26 presents the results of this analysis.

To further investigate the relationship between PSCORE and

TABLE 23

KMMS Breakdown of Means and Standard
Deviations on Socioeconomic Status

SES Level	$\bar{x}$	σ	N
High	333.6189	57.8137	126
Middle	322.3145	62.3023	124
Low	307.1904	57.8137	21
Total	326.3984	60.5931	271

TABLE 24

Analysis of Variance Performed on KMMS
 x Socioeconomic Status x Age Group x Sex

Source	df	MS	F
SES	2	8192.754	3.416 *
Age Group	3	111334.250	41.415 **
Sex	1	4703.625	1.961
SES x Age Group	5	2764.808	1.153
SES x Sex	2	905.655	0.396
Age Group x Sex	3	3793.562	1.582
Residual	254	2398.652	
Total	270	3671.464	

* : $p < .05$

** : $p < .01$

TABLE 25

PSCORE Breakdown of Means and Standard
Deviations on Socioeconomic Status

SES Level	$\bar{x}$	σ	N
High	36.4811	15.5535	126
Middle	36.6532	15.1646	124
Low	28.5714	16.7018	21
Total	35.9469	15.5568	271

TABLE 26

Analysis of Variance Performed on PSCORE
 x Socioeconomic Status x Age Group x Sex

Source	df	MS	F	
SES	2	621.249	3.698	*
Age Group	3	6029.660	35.888	**
Sex	1	34.582	0.206	
SES x Age Group	5	121.342	0.722	
SES x Sex	2	822.490	4.895	*
Age Group x Sex	3	345.908	2.059	
Residual	254	168.014		
Total	270	242.014		

* : $p < .05$

** : $p < .01$

SES, the Scheffe Test was performed, yielding no significant results, as presented in table 10 (Appendix D).

After these analyses had been collected, it was decided that the interaction between SES and education, as they related to KMMS and PSCORE, be made. In the case of KMMS, as presented in table 27 below, a lack of any significant interactions was found. Similarly, in the case of PSCORE, there were some significant findings, as presented below in table 28. However, with respect to the interaction of interest, non-significance was again indicated.

The relationship of KMMS and PSCORE with subject's level of education and socioeconomic status was also examined through stepwise univariate regression.

In the case of KMMS, subject's education entered the regression equation first and socioeconomic status entered second. However, socioeconomic status was non-significant and thus does not appear in the equation. The final regression was significant at the .01 level ($F_{1,269} = 96.92358$). The regression equation was:

$$\text{KMMS} = 214.84320 + 7.87962 (\text{Subeduc})$$

In the case of PSCORE similar results were obtained. Subjects educational level entered first and socioeconomic status entered second. Again, socioeconomic status was not significant, and thus, does not appear in the equation. The final regression equation was significant at the .01 level ($F_{1,264} = 78.09816$). The regression equation was:

$$\text{PSCORE} = 8.54752 + 1.83111 (\text{Subeduc})$$

TABLE 27

Analysis of Variance Performed on KMMS
 x SES x Age Group x Sex x Education

Source	df	MS	F	
SES	2	6028.234	2.588	
Age Group	3	108425.937	46.542	**
Sex	1	5287.125	2.269	
Education	3	7486.937	3.214	*
SES x Age Group	5	1934.694	0.830	
SES x Sex	2	2304.264	0.989	
SES x Educ.	3	286.754	0.123	
Age Group x Sex	3	2573.896	1.105	
Age Group x Educ.	4	982.427	0.422	
Sex x Educ.	2	2537.762	11.089	
Residual	237	2329.643		
Total	267	3578.146		

* : $p < .05$

** : $p < .01$

TABLE 28

Analysis of Variance Performed on PSCORE
 x SES x Age Group x Sex x Education

Source	df	MS	F	
SES	2	604.958	3.657	*
Age Group	3	5905.926	35.700	**
Sex	1	26.727	0.162	
Education	3	503.582	3.044	*
SES x Age Group	5	375.231	2.268	*
SES x Sex	2	1057.324	6.391	*
SES x Educ.	3	259.525	1.569	
Age Group x Sex	3	349.319	2.112	
Age Group x Educ.	4	174.837	1.057	
Sex x Educ.	2	101.435	0.613	
Residual	237	165.434		
Total	265	244.022		

* : $p < .05$

** : $p < .01$

In general, KMMS and PSCORE seemed to be consistently related to education and socioeconomic status, although education appeared to be most important. Age group, sex, and interactions between the two variables proved non-significant in each case.

To investigate the hypothesis concerning the relationship of morality to religion, KMMS and PSCORE were tested separately using measures of religious sect, religious participation and religious saliency. Due to the nature of this data, several types of analyses were performed.

Table 29 below presents a breakdown of the means and standard deviations across all religious subdivisions with respect to KMMS.

Analysis of variance was performed on KMMS by religious sect. Presented in table 30, this analysis revealed that there was a significant difference between the way spontaneous production of moral reasoning was distributed across religious groups ($p < .01$). To further examine this relationship, the Scheffe Test was employed. The results of this test, presented in table 11 (Appendix D) indicated that the significant differences found to exist were with respect to Catholics versus Agnostics and Athiests ($p < .05$).

Similarly Table 31 summarizes the means and standard deviations of PSCORE broken down by all religious subdivisions.

Analysis of Variance was performed on this data to determine the effect of religious sect on PSCORE. The results, presented in table 32, indicated a significant relationship between these two variables ($p < .01$).

TABLE 29

KMMS Breakdown of Means and Standard
Deviations for Religious Subdivisions

Religious Subdivisions	Value Label	$\bar{x}$	σ	N
Religious Sect	Other	327.875	68.774	8
	Protestant	337.856	55.302	90
	Catholic	306.714	52.402	133
	Jewish	342.429	68.257	7
	Agnostic	356.269	71.680	26
	Athiest	407.000	63.823	8
Religious Participation	Never	351.542	68.180	83
	Yearly	318.021	53.265	47
	Monthly	321.400	57.349	28
	Weekly	310.240	52.833	104
	Daily	335.750	50.984	12
Religious Saliency	None	350.679	67.776	84
	Little	336.475	50.592	40
	Average	300.882	49.853	68
	More than Average	316.938	56.151	65
	A great Deal	319.786	53.805	14

TABLE 30

Analysis of Variance Performed on
KMMS x Religious Sect

Source	df	MS	F
Between ReSect	5	28060.7969	8.754 **
Within ReSect	266	3205.5937	
Total	271		

** $p < .01$

TABLE 31

PSCORE Breakdown of Means and Standard
Deviations x Religious Subdivisions

Religious Subdivisions	Value Label	$\bar{x}$	σ	N
Religious Sect				
	Other	35.418	15.397	8
	Protestant	38.463	14.928	90
	Catholic	41.065	13.841	133
	Jewish	36.906	16.844	7
	Agnostic	47.948	14.356	26
	Athiest	51.043	19.063	8
Religious Participation				
	Never	41.446	14.692	83
	Yearly	40.106	16.888	47
	Monthly	33.532	14.687	28
	Weekly	30.738	14.642	104
	Daily	31.806	12.578	12
Religious Saliency				
	None	42.619	14.692	84
	Little	35.209	16.888	40
	Average	34.093	14.687	68
	More than Average	30.719	14.642	65
	A Great Deal	31.309	12.578	14

TABLE 32

Analysis of Variance Performed on
PSCORE x Religious Sect

Source	df	MS	F
Between ReSect	5	1863.0874	8.821 **
Within ReSect	266	211.2035	
Total	271		

** $p < .01$

The Scheffe Test was performed to further define the nature of this relationship. The results, similar to those previously reported with KMMS, indicated that Catholics were significantly different from Protestants, Agnostics and Athiests ($p < .05$). These results are summarized in table 12 (Appendix D).

KMMS was hypothesized to be related to religious participation. To investigate this hypothesis, analysis of variance was performed, resulting in significant differences ($p < .01$). These results are presented in table 33 .

To further define this relationship, the Scheffe Test was employed, resulting in significant KMMS differences between those who reported their participation as weekly and yearly from those who reported their participation as never ($p < .05$). Table 13 (Appendix D) presents a summary of this analysis.

PSCORE was also investigated with respect to its relationship with the subject's reported religious participation. To test this relationship, analysis of variance was utilized, indicating significant results ($p < .01$) as presented in table 34 .

To further define the nature of these differences, the Scheffe Test was performed, yielding significant differences between the PSCORES of those subjects who reported weekly participation from those who reported participation as yearly and never ($p < .05$). Table 14 (Appendix D) summarizes these results.

To determine the relationship between spontaneous production of moral reasoning (KMMS) and the degree of importance religion played in the subject's life (religious saliency), analysis of variance was

TABLE 33

Analysis of Variance Performed on
KMMS x Religious Participation

Source	df	MS	F
Between RePart	4	21148.00	6.204 **
Within RePart	266	3408.6616	

** : $p < .01$

-

TABLE 34

Analysis of Variance Performed on
PSCORE x Religious Participation

Source	df	MS	F
Between RePart	4	1624.3594	7.343 **
Within RePart	266	221.2253	
Total	270		

** : $p < .01$

performed. The results, presented in table 35 below indicated a significant difference ($p < .01$).

To further examine the nature of this relationship, the Scheffe Test was used, resulting in a significant difference in KMMS between those subjects who reported their saliency as average and more than average versus those subjects who reported their saliency as none ($p < .05$). Table 15 (Appendix D) summarizes these results.

PSCORE was similarly investigated to determine the nature of its relationship with the degree of one's religious saliency. The results of the analysis of variance used to test this relationship yielded significance ($p < .01$) between these variables. Table 36 summarizes this analysis.

The Scheffe Test was performed to further investigate the nature of this relationship. The results, presented in table 16 (Appendix D), indicated a significant difference in the PSCORES for those whose saliency was more than average versus those who reported saliency as none ($p < .05$).

To further assess the interaction between morality scores and religious subdivisions, analysis of variance was performed separately using KMMS and PSCORE as dependent variables and all religious subdivisions as independent variables.

In the case of KMMS, a significant main effect was found for religious sect as indicated in the one-way analysis of variance presented previously ($p < .01$). However, although achieving significance in previous one-way analyses, religious participation and religious saliency did not achieve significance here. This was due in part, to the fact that these variables were not independent of religious sect

TABLE 35

Analysis of Variance Performed on
KMMS x Religious Saliency

Source	df	MS	F
Between ReSal	4	26068.00	7.817 **
Within ReSal	266	3334.74	
Total	270		

** : $p < .01$

TABLE 36

Analysis of Variance Performed on
PSCORE x Religious Saliency

Source	df	MS	F
Between ReSal	4	1518.4072	6.8145 **
Within ReSal	266	222.8198	
Total	270		

** : $p < .01$

and removing the effect of one variable diminished the effect of the other variables. Further, for all two-way interactions, no significance was found. Table 37 below summarizes these results.

Similarly, analysis of variance was performed on PSCORE as the dependent variable and religious sect, religious participation and religious saliency as independent variables. Table 33 reveals a significant main effect found for religious sect ($p < .01$). However, although significant in one way analyses reported previously, PSCORE by religious participation and PSCORE by religious saliency did not achieve significance. All two way interactions yielded non-significant findings.

The relationship of KMMS and PSCORE on religious sect, religious participation and religious saliency were examined using stepwise univariate regression. The coding scheme used for the independent variables was as follows:

Religious Sect:

- 1) Other
- 2) Protestant
- 3) Catholic
- 4) Jewish
- 5) Agnostic
- 6) Athiest

TABLE 37

Analysis of Variance Performed on
KMMS x Religious Subdivisions

Source	df	MS	F
Religious Sect	5	13915.047	4.520 **
Religious Participation	4	4089.646	1.329
Religious Saliency	4	6371.344	2.070
ReSect x RePart	11	5203.324	1.691
ReSect x ReSal	5	848.073	0.276
RePart x ReSal	12	2509.895	0.816
Residual	229	3077.5936	
Total	270	3671.4636	

** : $p < .01$

TABLE 38

Analysis of Variance Performed on
PSCORE x Religious Subdivisions

Source	df	MS	F
Religious Sect	5	837.13	4.164 **
Religious Participation	4	375.926	1.870
Religious Saliency	4	146.131	0.727
ReSect x RePart	11	360.965	1.796
ReSect x ReSal	5	162.112	0.806
RePart x ReSal	12	334.82	1.666
Residual	229	201.024	
Total	270	242.014	

** : $p < .01$
-

Religious Participation:

- 1) Never
- 3) Yearly
- 5) Monthly
- 7) Weekly
- 9) Daily

Religious Saliency:

- 1) None
- 2) Little
- 3) Average
- 4) More than average
- 5) A great deal

In the case of PSCORE, the order of inclusion of independent variables was: (1) religious participation, (2) religious sect and (3) religious saliency. The final regression was significant at the .01 level ($F_{3,267} = 11.02$). The regression equation was:

$$\text{PSCORE} = 39.97 - 1.05 (\text{Repart}) + 1.51 (\text{Resect}) - 1.50 (\text{Resal})$$

For KMMS the order of inclusion was: (1) Religious saliency, (2) Religious sect, and (3) Religious participation. Again, the final regression was significant at the .01 level ($F_{3,267} = 7.03$). The regression equation was:

$$\text{KMMS} = 341.51 - 1.98 (\text{Repart}) + 4.56 (\text{Resect}) - 7.69 (\text{Resal})$$

Because of the importance of age group membership in previous analysis, forward stepwise regressions were done including age group as an independent variable. For dependent variable PSCORE, the order of inclusion was: (1) Age group, (2) Religious participation (3) Religious sect and (4) Religious saliency, resulting in the following significant equation ($p < .01$ level, $F_{4,266} = 15.21$):

$$\begin{aligned} \text{PSCORE} = & 25.42 + 4.68 (\text{age group}) - 0.79 (\text{repart}) \\ & + 2.42 (\text{resect}) - 0.92 (\text{resal}). \end{aligned}$$

Using KMMS as a dependent variable, religious participation did not enter the equation. The variables entered in the order: (1) age group, (2) religious sect and (3) religious saliency and the regression was significant at the .01 level ($F_{3,267} = 43.48$). The final regression equation was:

$$\begin{aligned} \text{KMMS} = & 237.41 + 33.42 (\text{age group}) + 11.13 (\text{resect}) \\ & - 3.83 (\text{Resal}) \end{aligned}$$

As an attempt to examine the multivariate structure of the data, several discriminant function analyses were performed. Table 39 summarizes the results obtained.

Generally speaking, the results above indicated that discrimination between age groups is more effective using morality scores whereas religious subdivisions seem not to be as different on morality scores.

TABLE 39

Results of Discriminant Analyses Performed on
Religious Subdivisions and Subject's Age Group

Criterion Variable	1st Variable Entered	2nd Variable Entered	3rd Variable Entered	4th Variable Entered	5th Variable Entered	% Correct Classification
Age Group	KMMS	PSCORE	ReSect	ReSal	RePart	59.04%
ReSect	ReSal	Age Group	KMMS	RePart	PSCORE	50.55%
ReSal	RePart	ReSect	KMMS	Age Group	PSCORE	52.77%
RePart	ReSal	ReSect	PSCORE	KMMS	Age Group	56.09%

Since the amount of an individuals interaction and participation with his social environment was hypothesized to be reflected in his measures of moralization, this was tested with the following results. Table 40 below presents the breakdown of means and standard deviations by social participation with respect to KMMS.

Analysis of variance was performed on KMMS using social participation and age group as factors to determine the nature of the relationship between spontaneous production of moral reasoning and the amount of social participation.

As indicated in Table 41 , social participation yielded non-significance main effect. Further, age group by social participation interaction was non-significant. Thus, KMMS appeared to remain independent of both age and social participation.

PSCORE was also investigated to determine the relationship between moral recognition and social participation. Table 42 presents a breakdown of means and standard deviations by social participation with respect to PSCORE.

Analysis of variance was performed to test this relationship. As indicated in Table 43 below, a non-significant main effect for social participation was found. Further, the age group by social participation interaction was similarly non-significant.

Thus, KMMS and PSCORE appeared to be unrelated to social participation.

As stated previously, the secondary hypotheses were investigated first to provide supporting evidence to test the major hypothesis. In that regard, the relationship between KMMS and subject relevant variables and PSCORE and subject relevant variables were consistently similar. In the case of both KMMS and PSCORE, significant effects for age group, education, socioeconomic status and religion (three measures) were found. More precisely, with respect to education and socioeconomic, the significant findings were cast into doubt by the results of the respective Scheffe tests which indicated non-significance. Further, an inconsistent pattern arose with respect to three religion measures in the regression equations, suggesting that KMMS and PSCORE may be measuring different theoretical constructs.

Non-significance was obtained for both KMMS and PSCORE as they related to sex and social participation.

3. Univariate multiple regression

To determine the nature of the interrelationships using KMMS and PSCORE separately as dependent variables and subject relevant measures as independent variables, univariate step-wise multiple regression was utilized (SPSS, 1975). It was anticipated from this analysis and the others that followed

TABLE 40

KMMS Breakdown of Means and
Standard Deviations x Social Participation

Variable Lable	$\bar{x}$	σ	N
High Social Participation	332.831	61.998	71
Average Social Participation	327.313	58.173	131
Low Social Participation	318.043	63.530	69

TABLE 41

Analysis of Variance Performed on
KMMS x Age Group x Social Participation

Source	df	MS	F
Age Group	3	116647.187	47.904 **
Soc. Part	2	18.344	0.008
Age Group x Soc. Part	6	1775.049	0.729
Residual	259	2435.006	
Total	270	3671.464	

** : $p < .01$

TABLE 42

PSCORE Breakdown of Means and
Standard Deviations x Social Participation

Variable Lable	$\bar{x}$	σ	N
High Social Participation	37.089	15.529	71
Average Social Participation	36.909	16.176	131
Low Social Participation	32.947	14.147	69

TABLE 43

Analysis of Variance Performed on
PSCORE x Age Group x Social Participation

Source	df	MS	F
Age Group	3	6120.141	34.006**
Soc. Part	2	44.771	0.249
Age Group x Soc. Part.	8	46.786	0.260
Residual	259	179.973	
Total	270	242.014	

** : $p < .01$

that the major hypothesis under study could be investigated. Through this technique, it was possible to examine the effects of numerous subject relevant variables on KMMS and PSCORE independently. Further, it enabled the examination of the hypotheses related to specific types or patterns of variables which had similar or different effects on the morality measure in question. Because of the age group differences established in previous analysis, overall as well as age group regressions were performed. At each step in the regression building process, a cheque for significance was made and only those variables which contributed significantly were included in the presentation of the analysis.

To examine the interrelationship of spontaneous production of moral reasoning with all relevant variables, KMMS was used as a dependent variable in univariate stepwise multiple regression. Across all groups, subject's education, PSCORE and financial stability entered the equation significantly at the .01 level ($F_{1,251} = 45.2135$). The final regression equation was:

$$\text{KMMS} = 231.5538 + 4.18544 (\text{Subeduc}) + 1.19023 (\text{PSCORE}) \\ - 0.1881 (\text{FinStab})$$

This same technique was performed by age group resulting in the following equation, significant at the .01 level ($F_{1,97} = 20.8346$). For age group 15-18 years, PSCORE and mother's education appeared in the equation:

$$\text{KMMS} = 212.52583 + 1.50144 (\text{PSCORE}) + 2.22927 (\text{MaEduc})$$

For age group 19-29 years, only religious sect appeared in the equation which was significant at the .01 level ($F_{1,84} = 8.06541$).

$$\text{KMMS} = 313.86157 + 12.43551 (\text{ReSect})$$

For age group 30-49 years, only PSCORE entered the equation significantly at the .05 level ($F_{1,41} = 5.90995$). The final regression equation was:

$$\text{KMMS} = 295.33723 + 1.41793 (\text{PSCORE})$$

For age group 50-72 years job consistency and religious saliency appeared in the regression equation. The final regression equation, significant at the .05 level ($F_{1,22} = 7.854505$) was:

$$\text{KMMS} = 424.73275 - 1.95110 (\text{JobCon}) - 17.37073 (\text{ReSal})$$

The previous regressions included PSCORE as a relevant variable. However, to determine the relative effect of PSCORE in the equations, stepwise univariate regressions were performed excluding PSCORE across all groups and by group.

Differing only slightly from previous analysis for the entire sample, subjects education, religious sect and financial stability

entered the equation significantly at the .01 level ($F_{1,251} = 35.66134$).

The final regression equation was:

$$\begin{aligned} \text{KMMS} = & 226.11361 + 5.96695 (\text{SubEduc}) + 8.26141 (\text{ReSect}) \\ & - 0.23394 (\text{FinStab}) \end{aligned}$$

For age group 15-18 years, the order of inclusion without using PSCORE was quite similar to when it was included. In this case, mother's education was the only variable to appear. The final equation, significant at the .01 level ($F_{1,98} = 11.48787$) was:

$$\text{KMMS} = 249.30997 + 2.39020 (\text{MaEduc})$$

For age group 19-29 years the regression equation, significant at the .01 level ($F_{1,98} = 11.48787$) was identical to when PSCORE was included in the analysis. Again the final regression equation was:

$$\text{KMMS} = 313.86157 + 12.43551 (\text{ReSect})$$

For age group 30-49 years, the regression was non-significant without including PSCORE. The final equation was ($F_{1,41} = 2.28069$):

$$\text{KMMS} = 328.67658$$

Identical equations were generated for age group 50-72 years when PSCORE was not included. The final regression equation, significant

at the $< .05$ level ($F_{1,22} = 7.85405$) was:

$$\text{KMMS} = 424.73275 - 1.95110 (\text{JobCon}) - 17.37073 (\text{ReSal})$$

To note the interrelationship between moral recognition and all other variables the next step in the univariate regression analysis was to utilize PSCORE as the dependent variable and all other variables, including KMMS as the independent variables. Analyses were performed across all groups and then by group.

Across all groups, KMMS, subjects education and religion participation entered the regression equation at significance level $< .01$ ($F_{1,251} = 40.64460$). The final regression equations was:

$$\begin{aligned} \text{PSCORE} = & 1.52348 + 0.07843 (\text{KMMS}) + 1.05961 (\text{SubSES}) \\ & - 0.91151 (\text{RePart}) \end{aligned}$$

For age group 15-18 years, only KMMS entered the regression. The final regression equation, significant at the $< .01$ level ($F_{1,98} = 25.963$) was:

$$\text{PSCORE} = 11.91146 + 0.13496 (\text{KMMS})$$

In the case of the 19-29 year olds, religious sect, mother's SES, subject's education and marital consistency appeared in the equation at the $< .05$ level ($F_{1,81} = 5.40914$). The final regression equation was:

$$\begin{aligned} \text{PSCORE} = & 38.27604 + 3.12918 (\text{ReSect}) + 0.35596 (\text{MaSES}) \\ & - 0.26578 (\text{SubEduc}) - 0.93012 (\text{MarCon}) \end{aligned}$$

In the case of the 30-49 year old group, only KMMS entered the regression equation. The final regression equation, significant at the $< .01$ ($F_{1,41} = 5.90995$) level was:

$$\text{PSCORE} = 11.03095 + 0.08885 (\text{KMMS})$$

Finally, in the case of the 50-72 year old age group a non-significant regression equation resulted. The final regression ($F_{1,23} = 2.509$) was:

$$\text{PSCORE} = 19.35809$$

As in the case of KMMS reported previously, the next step in the univariate regression analysis was to delete KMMS from the variable list to determine its relative importance.

In the case of the entire sample, the regression equation was similar to that which included KMMS. The final regression equation, significant at the $< .01$ level ($F_{1,251} = 31.61250$) was

$$\begin{aligned} \text{PSCORE} = & 9.61441 + 1.65531 (\text{SubEduc}) - 0.89441 (\text{RePart}) \\ & + 1.87325 (\text{ReSect}) \end{aligned}$$

In the case of the 15-18 year olds the first variable entered was non-significant after KMMS was deleted. The final regression equation ($F_{1,98} = 2.82729$) was:

$$\text{PSCORE} = 11.58087$$

Identical regression equations were generated without including KMMS, in the case of the 19-29 year old age group. The final regression equation, significant at the $< .05$ level ($F_{1,81} = 5.40914$) was:

$$\begin{aligned} \text{PSCORE} = & 38.27604 + 3.12918 (\text{ReSect}) + 0.35596 (\text{MaSES}) \\ & - 0.26578 (\text{SubSES}) - 0.93012 (\text{MarCon}) \end{aligned}$$

Age Group 30-49 years, deleting KMMS, yielded a non-significant regression equation. The final equation was ($F_{1,41} = 3.27349$).

$$\text{PSCORE} = 47.84146$$

Similarly, age group 50-72 years yielded non-significance as it had when KMMS was included. The final regression equation was ($F_{1,23} = 2.50929$):

$$\text{PSCORE} = 19.35809$$

Table 44 below presents this analysis in summarized form.

TABLE 44

Summary of Univariate Regressions Performed Using KMMS and
PSCORE Separately as Dependent Variables and
Independent Variable Sets for Total
Sample and By Age Group

Dependent Variable and Description of Independent Var- iable Set	Order of Inclusion						P
	Age Group	Constant	1st Variable Entered	2nd Variable Entered	3rd Variable Entered	4th Variable Entered	
KMMS on all Variables for Total Sample and by Group	Total	231.5538	SubEduc (+4.18544)	PSCORE (+1.19023)	FinStab (-0.1881)		<.01
	15-18	212.5258	PSCORE (+1.50144)	MoEduc (+2.22927)			<.01
	19-29	313.8616	ReSect (+12.43551)				<.01
	30-49	295.3372	PSCORE (+1.41793)				<.05
	50-72	424.7328	JobCon (-1.95110)	ReSal (-17.37073)			<.05
KMMS on all Variables with- out PSCORE for Total Sample and by Group	Total	226.1136	SubEduc (+5.96695)	ReSect (+8.26141)	FinStab (-0.23394)		<.01
	15-18	249.3099	MoEduc (+2.39020)				<.01
	19-29	313.8616	ReSect (12.43551)				<.01
	30-49	328.6766	JobCon (-1.95110)	ReSal (-17.37073)			<.05
							<.05
PSCORE on All Variables	Total	1.52348	KMMS (+0.07843)	SubEduc (+1.05961)	RePart (-0.91151)		<.01
	15-18	11.91146	KMMS (+0.13496)				<.01
	19-29	38.27604	ReSect (+3.12918)	MoSES (+0.35596)	SubEduc (-0.26578)	MarCon (-0.93012)	<.05
	30-49	11.03095	KMMS (+0.08885)				<.01
	50-72	19.35809					NS

TABLE 44

(Continued)

Dependent Variable and Description of Independent Var- iable Set	Order of Inclusion						P
	Age Group	Constant	1st Variable Entered	2nd Variable Entered	3rd Variable Entered	4th Variable Entered	
PSCORE on all Variables with- out KMMS for Total and by Age Group	Total	9.61441	SubEduc (+1.65531)	RePart (-0.89441)	ReSect (+1.87325)		<.01
	15-18	11.58087					NS
	19-29	38.27604	ReSect (+3.12918)	MoSES (+0.35596)	SubSES (-0.26578)	MarCon (-0.93012)	<.05
	30-49	47.84146					NS
	50-72	19.35809					NS

4. Multivariate multiple regression

To further examine the interrelationship between KMMS and PSCORE, multivariate multiple regression techniques were utilized (Anderson, 1958). Using KMMS and PSCORE as dependent variables, it was thought that an explanation of the simultaneous variation and covariation in terms of the various subject relevant and demographic variables may be found. Since the previous results suggested that KMMS and PSCORE were not identical measures of morality, this technique was employed to further investigate their similarities and differences.

At each step in the forward building process, a check for significance was made and only variables which contributed significantly were included in the presentation of the results.

Thus, multivariate regressions were performed across all groups as well as by group to maintain the developmental perspective. In the case of the entire sample, the order of inclusion was subjects education (SubEduc), age group and religious sect (ReSect). The final regression equation was significant at $p < .001$. The regression equation was:

$$\begin{array}{rcccccc}
 \text{KMMS} & & 182.92 & 4.69 & 22.09 & 10.19 & \text{SubEduc} \\
 & = & & + & & & \text{Age Group} \\
 \text{PSCORE} & & 0.68 & 1.72 & 0.96 & 2.61 & \text{ReSect}
 \end{array}$$

In the case of the 15-18 year olds, only mothers education (MoEduc) entered the equation. The final regression equation, significant at $p < .001$ level was

$$\begin{array}{rcccc}
 \text{KMMS} & & 247.02 & 2.59 & \\
 & = & & + & \text{MoEduc} \\
 \text{PSCORE} & & 25.01 & 0.06 &
 \end{array}$$

For the age group 19-29 years, four variables were included and the regression equation, significant at $p < .001$ level, was:

$$\begin{bmatrix} \text{KMMS} \\ \text{PSCORE} \end{bmatrix} = \begin{bmatrix} 357.85 \\ 32.92 \end{bmatrix} + \begin{bmatrix} 11.13 & -0.90 & -0.87 & 1.05 \\ 2.78 & -0.16 & 0.45 & -0.21 \end{bmatrix} \begin{bmatrix} \text{ReSect} \\ \text{SubSES} \\ \text{MoSES} \\ \text{FaSES} \end{bmatrix}$$

Multivariate regression performed on age group 30-49 years yielded non-significance at the first step in the equation. The final regression equation was:

$$\begin{bmatrix} \text{KMMS} \\ \text{PSCORE} \end{bmatrix} = \begin{bmatrix} 355.80 \\ 42.64 \end{bmatrix}$$

At age group 50-72 years, two variables entered the equation and was significant at $p < .01$ level. The final regression equation was:

$$\begin{bmatrix} \text{KMMS} \\ \text{PSCORE} \end{bmatrix} = \begin{bmatrix} 333.85 \\ 8.11 \end{bmatrix} + \begin{bmatrix} -31.65 & 37.37 \\ 9.98 & 5.39 \end{bmatrix} \begin{bmatrix} \text{Sex} \\ \text{ReSect} \end{bmatrix}$$

5. Factor analysis

Factor analytic techniques (Lawley and Maxwell, 1971) were performed to examine the underlying factorial structure of the data by postulating unknown factors. In this case, a six factor marimax solution was found to be sufficient to explain this data.

The six factors which emerged were (1) Subject and parental socioeconomic status, (2) a factor which contrasted socioeconomic status versus KMMS, (3) a factor contrasting parental education factor versus KMMS, (4) a factor which contrasted subjects' socioeconomic status versus PSCORE, (5) a factor which contrasted morality with generalized participation, and (6) an independent morality factor, two types. Table 45 below summarizes the factor loadings obtained in this analysis and the percentage of variation explained by each factor, relative to the total variation.

6. Discriminant analysis

Discriminant analyses (SPSS, 1975) were performed to further examine the underlying nature of the data. These analyses were computed for age group, KMMS and PSCORE breakdown.

Due to the consistent results of age group as an important variable, discriminant analysis with age group as a criterion variable on KMMS and PSCORE was computed. The results indicated that KMMS was the better discriminator with respect to PSCORE when attempting to predict subjects age group, particularly as it related to 15-18 year olds.

Further discriminant analyses were computed using the three theoretical levels of Kohlberg's typology (KLEVEL) as the criterion variable on all measures. Eight variables entered the discriminant

TABLE 45

Varimax Rotated Factor Loadings (.05)
of Entire Data Pool

Variable	Subject & Parental SES	SES vrs KMMS	Parental Education vrs. KMMS	Subjects SES vrs PSCORE	Morality vrs general par- ticipation	Morality
Age Group	-0.064	0.103	-0.136	0.648	-0.217	0.658
Subject's SES	5.589	13.637*	0.477	1.097	0.971	4.012
Sex	-0.008	0.115	-0.003	-0.002	-0.027	-0.017
Father's Educ.	4.777	0.048	1.845	-0.295	-0.074	-0.109
Mother's Educ.	2.499	0.106	4.139	0.259	0.196	0.002
Father's SES	14.086	2.458	-0.697	0.289	0.716	-0.313
Mother's SES	9.003*	0.262	1.569	0.419	-0.243	0.386
Religious Sect	-0.031	0.005	-0.052	-0.429	-0.237	0.096
Religious Par- ticipation	0.007	-0.179	-0.012	0.355	-2.303	-0.534
Religious Saliency	-0.043	-0.041	-0.035	0.148	1.096	-0.240
Subjects Educ.	0.029	0.566	0.089	0.415	-0.654	2.900
Social Par- ticipation	0.258	-0.580	0.871	-0.330	*1.470	-1.042
KMMS	2.767	-3.171	-2.375	-0.369	-7.557	43.933
PSCORE	-0.341	-0.876	0.464	-3.963	-2.720	10.140
% of variability explained by each factor relative to the total variation	7.41	4.34	0.65	0.39	1.60	43.91
Eigenvalues	347.618	203.629	30.328	18.491	75.263	2059.564

with PSCORE entering first. The percentage of correct classification was sufficient for levels one and three. To examine the relative influence of PSCORE on this finding, the same discriminant was performed deleting PSCORE from the analysis. The result was a substantial decrease in the percentage of correct classification.

Discriminant analyses were performed using Kohlberg's six stages (KSTAGE) on all variables. With respect to KSTAGE, PSCORE entered the discriminant third. Deleting PSCORE from the analysis, the percentage of correct classification decreased slightly.

When PSCORE was broken down into three levels (PLEVEL), KMMS entered the discriminant third. Upon deletion of KMMS, the percentage of correct classification decreased.

Table 46 summarizes the results of the discriminant analyses by presenting overall and by group breakdowns.

7. Kohlberg-Rest

The various attempts at combining a measure of spontaneous production of moral reasoning (KMMS) with a moral recognition (PSCORE) were through the use of regression equations and a redefinition of KMMS and PSCORE.

7a. Regression equations

Initially, the regression of KMMS on PSCORE was examined across all age groups and by age group.

In the case of the entire sample, PSCORE entered the equation at the $< .01$ significance level ($F_{1,269} = 82.41412$). The final regression equation was:

$$\text{KMMS} = 258.59417 + 1.59010 (\text{PSCORE})$$

TABLE 46

Summary of Discriminate Analyses with Various Morality Breakdowns

Crit. Var.	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	% Correct Classification			
GP on PSCORE, KMMS	KMMS	PSCORE										Gp.1 86.3	Gp.2 38.8	Gp.3 23.9	Gp.4 53.8
												Overall		55.51	
KLEVEL with PSCORE and all variables	PSCORE	Seduc	Resect	Maed	Marcon	Repart	Maoc	Subocc				Level I 88.5	Level II 62.7	Level III 71.4	Total 65.61
KLEVEL (without PSCORE and all variables)	Seduc	Resect	Maed	Marcon	Repart							Level I 69.2	Level II 52.7	Level III 57.1	Total 58.89
KSTAGE with PSCORE on all variables	Seduc	Marcon	PSCORE	Resect	Age GP	Maed	Jobcon	Finstab	Subocc	Repart	Maoc	ST.2 76.9	ST.3 43.8	ST.4 70.1	ST.5 71.5
												Overall		54.94	
KSTAGE without PSCORE	Seduc	Marcon	Resect	Age GP	Maed	Subocc	Repart	Jobcon	Finstab			ST.2 76.9	ST.3 41.8	ST.4 65.7	ST.5 57.1
												Overall		52.17	
PLEVEL (3 levels with KMMS on all variables)	Seduc	KMMS	Age GP	Repart	Finstab	Marcon						Level I 74.4	Level II 52.7	Level III 70.0	
												Overall		64.82	
PLEVEL (3 levels) without KMMS on all variables	Seduc	Repart	Age GP	Finstab	Marcon	Subocc	Jobcon					Level I 76.7	Level II 40.9	Level III 70.0	
												Overall		60.87	

However, the measure of the amount of variance accounted for by this equation was sufficiently to warrant its tenuousness ($R^2 = .25$).

In the case of the 15-18 year old age group PSCORE was entered significantly at the .01 level ($F_{1,100} = 27.57503$). The final regression equation was:

$$KMMS = 238.38925 + 1.59010 (PSCORE).$$

The amount of variation explained by this equation was similarly low ($R^2 = .22$). For the age group 19-29 years, PSCORE was non-significant and the R^2 was .03. The final regression equation was:

$$KMMS = 322.66282$$

For the 30-49 year olds, PSCORE was significant at the .05 level ($F_{1,44} = 6.34238$) resulting in the following equation:

$$KMMS = 295.33723 + 1.41793 (PSCORE)$$

The R^2 for this equation was .13.

Finally, for the age group 50-72 years, PSCORE was non-significant, resulting in the following equation:

$$KMMS = 349.73595$$

The R^2 for this equation was .03. Table 47 presents the results of this analysis in a summarized format.

TABLE 47

Regressions of KMMS on PSCORE For
Total Sample and by Age Group

Dependent Variable KMMS	Age Group	Constant	PSCORE	P	R ²
	Total	258.59417	+1.88622	<.01	.25
	15-18	238.38925	+1.59010	<.01	.22
	19-29	322.66282	+0.64231	NS	.03
	30-49	295.33723	+1.41793	<.05	.13
	50-72	349.73595	+0.52250	NS	.03

Regressions of KMMS on PSCORE, although statistically significant, in general, yielded R^2 figures which reflected a very small amount of variation explained by the regression equations. Thus, an alternative measure was derived by dividing KMMS and PSCORE into scores of high, medium and low ranges. For KMMS, the high range was a score from 400-600. The medium range was a score between 300-399 and the low range was a score between 100 and 299. These scores corresponded roughly to the post-conventional, conventional and pre-conventional levels as theoretically conceived in Kohlberg's theory. For PSCORE, the breakdown was more arbitrary in that PSCORE neither related to a theoretical level nor stage. Thus, the breakdown used was simply to divide PSCORE into a high PSCORE, ranging from 66.68 to 80.00, a medium PSCORE, ranging between 33.33 and 66.67, and a low PSCORE being less than 33.33. Thus, nine KP (KMMS-PSCORE) groups emerged. They are: (1) high KMMS - high PSCORE (HH), (2) Medium KMMS - Medium PSCORE (MM), (3) Low KMMS - Low PSCORE (LL), (4) High KMMS - Low PSCORE, (HL), (5) Low KMMS - High PSCORE (LH), (6) High KMMS - Medium PSCORE (HM), (7) Medium KMMS - High PSCORE (MH) (8) Medium KMMS - Low PSCORE (ML) and (9) Low KMMS - Medium PSCORE (LM).

Crosstabulations were computed (SPSS, 1975) to visualize the joint frequency distributions of the four age groups and the nine KP groups. (Results of χ^2 analysis yielded a significant difference ($\chi^2_{21} = 170.86288$) at the $p < .01$ level). Table 48 presents a summary of these crosstabulations.

TABLE 48

Crosstabulations on Age Group by
KMMS-PSCORE (KP) Group

KP Group	Age Group	15-18	19-29	30-49	50-72	Row Total	Row %
	KP Group No.						
HH	(1)	0	3	3	0	6	2.2
MM	(2)	11	48	24	4	87	32.1
LL	(3)	53	1	1	1	56	20.7
HL	(4)	0	2	2	5	9	3.3
LH	(5)	0	0	0	0	0	0.0
HM	(6)	1	16	5	6	28	10.3
MH	(7)	0	4	0	1	5	1.8
ML	(8)	22	18	9	9	58	21.4
LM	(9)	14	5	2	1	22	8.1
Column Total		101	97	46	27	271	
Column %		37.3	35.8	17.0	10.0		100

CHAPTER IV

DISCUSSION OF RESULTS

Chapter four summarizes the results of this study and discusses them with respect to the hypotheses outlined in chapter one. Further hypotheses emanating from these results will be examined.

As stated previously, secondary hypotheses were reviewed and tested prior to the major hypothesis in order to provide supporting evidence and also to ensure clarity of discussion.

Thus, chapter four will initially review and discuss the results of the independent hypothesis testing of all secondary hypotheses and subsequent to that will review and discuss the major hypothesis under consideration.

1. Formal hypothesis testing

Hypothesis two stated that there will be no differences between age groups on the measure of spontaneous production of moral reasoning (KMMS). Significant differences were found and were shown to exist between 15-18 year olds and all other groups. Thus, the decision to reject the null hypothesis of age group equality was made.

Although significant differences existed between the groups specified, figure 2 below illustrates a pattern consistent with the notion of an upward trend in KMMS with chronological age. In contrast to these findings, the previous literature (Kramer 1968) suggested the possibility of regression during the university years. Two comments with respect to this issue of regression are appropriate. Firstly, no regression in spontaneous production of moral reasoning was found in the present study. Secondly, Kramer's finding of regression was reviewed by Kohlberg (1973a) who suggested that the regression was

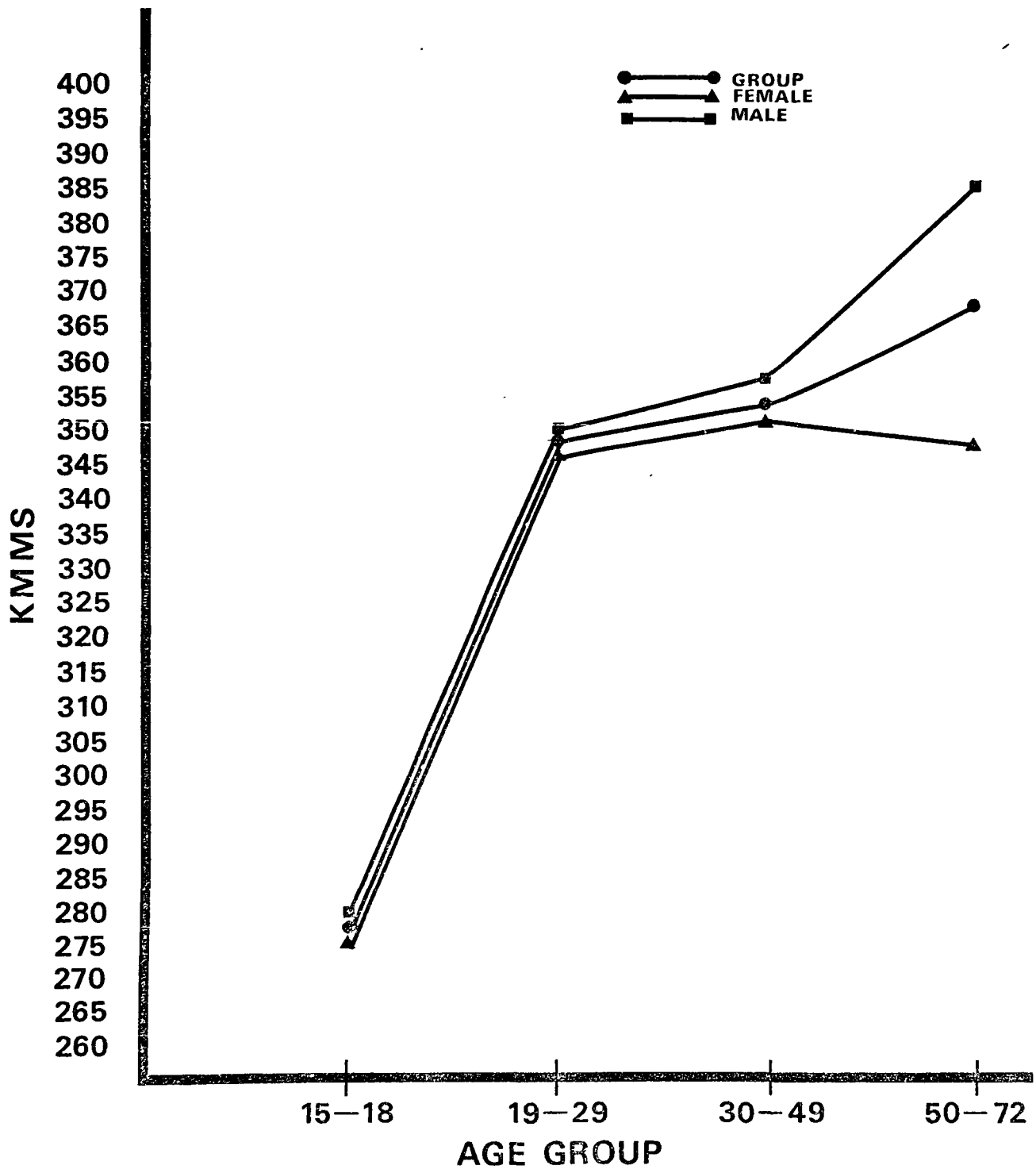


Figure 2. KMMs across four age groups.

reflective of scoring difficulties existing in earlier manuals, which were more content oriented relative to the newest manual used in this project where the orientation focused more on process.

Hypothesis two further stated that there will be no differences between age groups on moral recognition (PSCORE). Based on the results, the null hypothesis was rejected. Conservatively speaking, however, the age group differences reflected strongest significance between 15-18 year olds and 19-29 year olds. Kramer's findings suggested that something happens during the university years to allow for regression in the moral reasoning process. However, in the present study there was not a regression but rather a sudden increase in moral recognition during those years. More precisely, the pattern (figure 3) of age group means on PSCORE suggested the following:

Fifteen-eighteen year olds seemed to be much lower than the other groups. However, 19-29 year olds and 30-49 year olds scored markedly higher, followed by a sharp decrease in 50-72 year olds. Thus, while Kramer reported regression during university years, using KMMS, the results of this study indicated no KMMS regression during those years but did indicate a general lowering of PSCORE in 50-72 year olds. Due to its curvilinear nature, this pattern might argue in favor of regression, although not significant statistically. Further, this notion must be viewed with caution because of the cross-sectional nature of this study and because sample sizes were small in some groups.

An explanation of these trends concerning KMMS and PSCORE did not warrant any definitive statements. However, on the basis of the data obtained some hypotheses may be made.

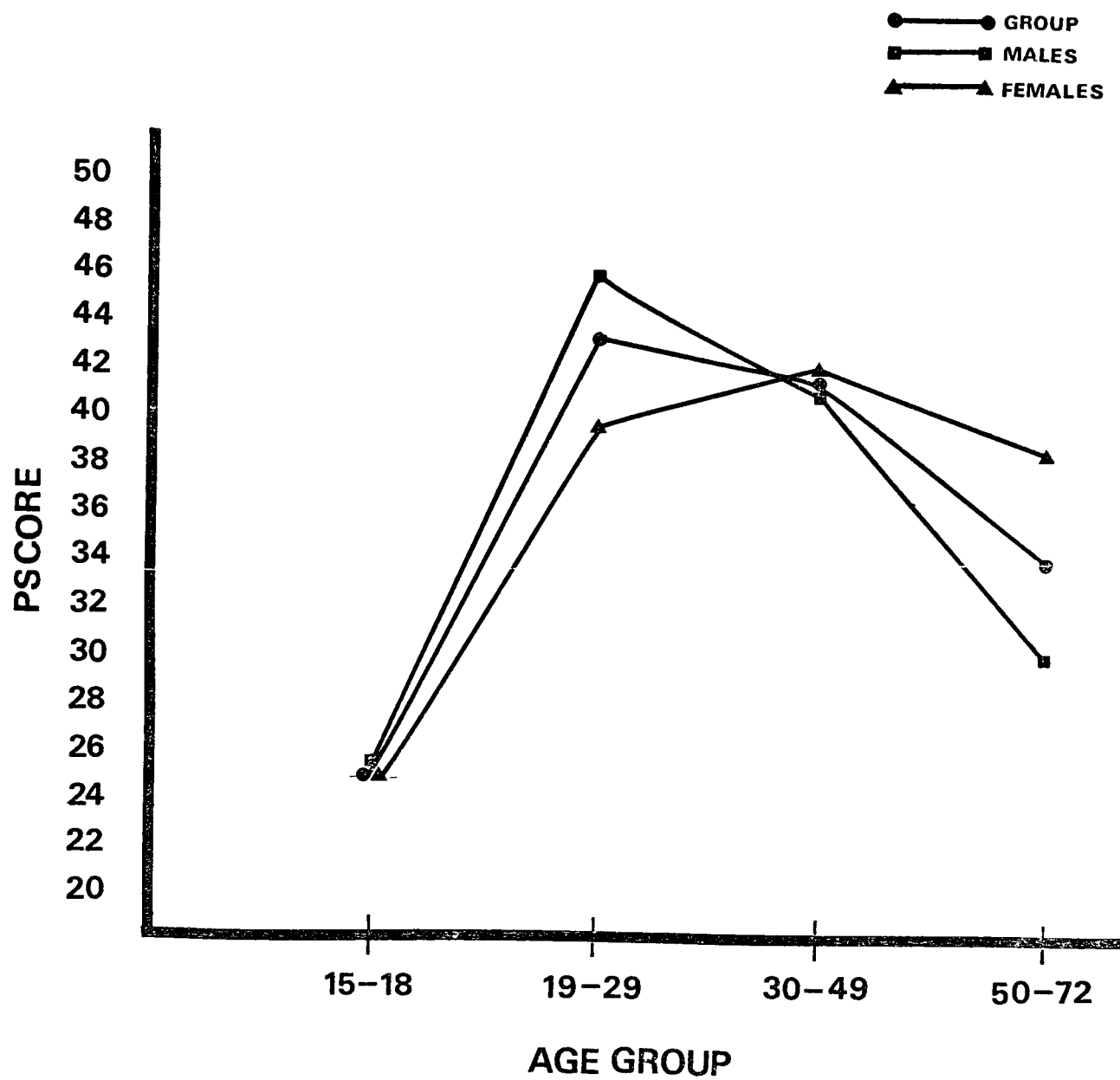


Figure 3. PSCORE across four age groups .

If KMMS was conceptualized as developmental and based upon a horizontal decalage to logical reasoning stages (Colby, 1973; Fritz, 1973) then, it is logical to conclude that structural regression in moral reasoning would be inconsistent with cognitive developmental theory and therefore, most unlikely.

However, the literature offers no statements with respect to the relationship between logical reasoning stages and PSCORE. Since a general lowering of moral recognition scores was observed, and assuming that extraneous factors were not operating, it could be hypothesized that moral recognition is not grounded in reasoning stages. Going one step further, moral recognition may not be as internally consolidated as KMMS and therefore, may be more sensitive to the outside environment.

With respect to hypotheses three and four, there was a failure to reject the null hypothesis of no sex differences. This was found to be the case of both KMMS and PSCORE.

In this study, for KMMS, there seemed to be a trend for males to score higher than females across all age groups tested (figure 2), although statistically nonsignificant.

In the case of moral recognition, sex differences were similarly non-significant. However, unlike the male-female trends in KMMS, the PSCORE findings were more variable in this regard (figure 3). Males scored higher than females in groups 15-18 and 19-29 but the trend was reversed in the 30-49 years where males fell below their female counterparts. Further, from 30-49 to 50-72 years, there was a continued fall in PSCORE for males while the decline in females at the same age was relatively less marked. Thus, the decision to fail to reject the null hypothesis of

equality of sex with respect to both measures of morality was asserted.

Hypotheses 1/4 stated that measures of spontaneous moral production and moral recognition would not differ with respect to the subject's level of education. Results of this analysis using KMMS, suggested that education was a significant factor. Because of the previous significant results on age group, the interaction of education by age group was computed and found to be non-significant, as it was for sex interaction. Thus, education was, by itself important, regardless of age group or sex. To further qualify this finding the conservative post hoc test performed suggested that these differences did not exist. However, it was observed that the higher the educational level, the higher the KMMS. Although these findings were non-significant when a conservative viewpoint was taken, it suggested that the relation between KMMS and education must be qualified by more research.

In the case of moral recognition (PSCORE) some similarities with KMMS were observed. Like KMMS, educational level was significantly different based on PSCORE. Further, these differences, through the use of a conservative post-hoc test were cast into doubt. However, although statistically non-significant, it was observed that as one moved up the educational scale, there was an associated increase in PSCORE. Thus, although rejecting the hypothesis of no education differences with respect to PSCORE was made, the relation of PSCORE with education needs further refining.

To explain the morality-education findings, a case can be made for a non-systematic relationship existing between education and KMMS on the basis that spontaneous production of moral reasoning has been

shown to be an aspect of the cognitive-structural domain while the same position cannot be made about education. In the case of PSCORE, however, Rest (1974a) has shown that the type of education as well as the level of education was related to PSCORE. Thus, it was more theoretically consistent to suggest PSCORE varying with the type and length of education, than to make the same statement of KMMS. Further, on this basis, it could be suggested that Kohlberg's and Rest's assessment instruments measured different aspects of the moralization process with respect to education.

In any case, the decision with respect to the hypothesis in question must be made with reservation and further qualified by research involving the educational process as well as educational content and length of education.

Hypotheses five dealt with socio-economic status and its relationship to the measures of moralization. In this project there were significant differences between socioeconomic groups with respect to KMMS which indicated an upward trend in the KMMS scores with the higher SES groups. However, using a more conservative post-hoc test to examine this finding, these results were cast in doubt. There may well be a relationship between the KMMS scores of different socioeconomic status groups but these results must be considered with caution and thus, the decision to reject the null hypothesis of KMMS equality based on SES groups must be qualified by more research.

Similarly, PSCORE was analysed to test the relationship between socioeconomic status groups and moral recognition. The results of this analysis revealed that there were PSCORE differences between the different

SES groups.

In viewing the PSCORE by SES group differences, conservative post-hoc tests proved non-significant. Thus, the decision to reject the null hypothesis of equality of moral recognition based on participants socioeconomic status was viewed with caution. In observing the trend of PSCORE responses, a different pattern of PSCORES as opposed to KMMS on SES groups emerged. That is, while there was an increase in KMMS scores as one moves upward in SES groups, the patterns of PSCORE was not as clearly defined, particularly between middle and high SES groups. The commonality however, between KMMS and PSCORE with respect to SES groups indicated that in both cases, the lower SES group scored lower on both morality indices.

Because of the inconclusiveness of the education and SES findings, additional analyses were made to further examine these relationships. With respect to the SES by education interaction on KMMS and PSCORE, no relationship was found to exist. Further, regressions of KMMS and PSCORE with education and SES were performed indicating the relative importance of education over SES in predicting both KMMS and PSCORE.

Although these additional findings seemed to reflect that educational level was of greater importance relative to SES, these findings should be viewed with cuation, in light of previous results.

Hypotheses six was related to the question of whether the two morality measures were related to the three religion measures.

With respect to the measure of religious sect and KMMS, significant differences were found to exist between organized religion versus un-organized religion (agnostics and athiests). More specifically, on the

basis of the evidence in this project, the largest difference was between Catholics versus agnostics and athiests (figure 4).

In the case of PSCORE, similar results were obtained with respect to religious sect in that the Catholics were differentiated from Protestants, agnostics and athiests. Figure 5 below illustrates these results and further, implies that the amount of organization inherent in a religion was an important factor affecting moral recognition.

For religious participation, significant differences were found to exist for both KMMS and PSCORE. In the case of KMMS, using the conservative post-hoc test, religious participation differentiated between those who reported that they participated on a "weekly" and "yearly" basis from those who reported that they "never" participated (figure 6). For PSCORE, the differences were observed to exist between "weekly" versus "yearly" and "never". It can be observed that conservatively speaking, the major differences which existed were between extreme groups, i.e., those who made a significant behavioural commitment from those who did not (figure 7).

The issue of commitment to an organized religion versus a commitment to an unorganized (agnostics and athiests) religion can be seen as the common link between KMMS and PSCORE. Further, in both KMMS and PSCORE the more one deviated from the norm of religion (the lower the participation), the higher was the associated morality score.

Similar to these findings were the results obtained from the relation between morality and the amount of importance religion was reported to have in one's life (religious saliency). Although significant differences were obtained for religious saliency groups with

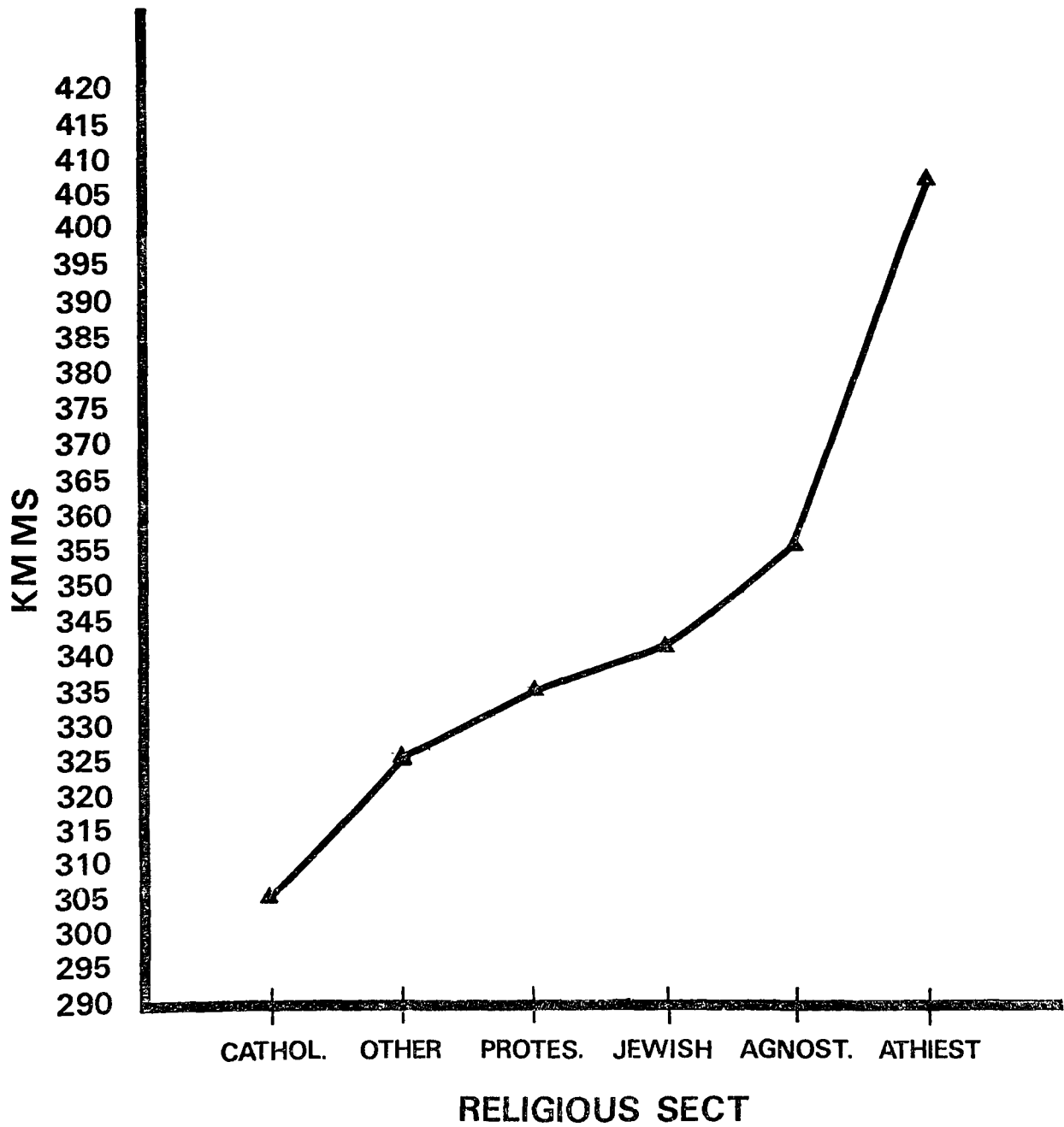


Figure 4. KMMS responses distributed across religious sect.

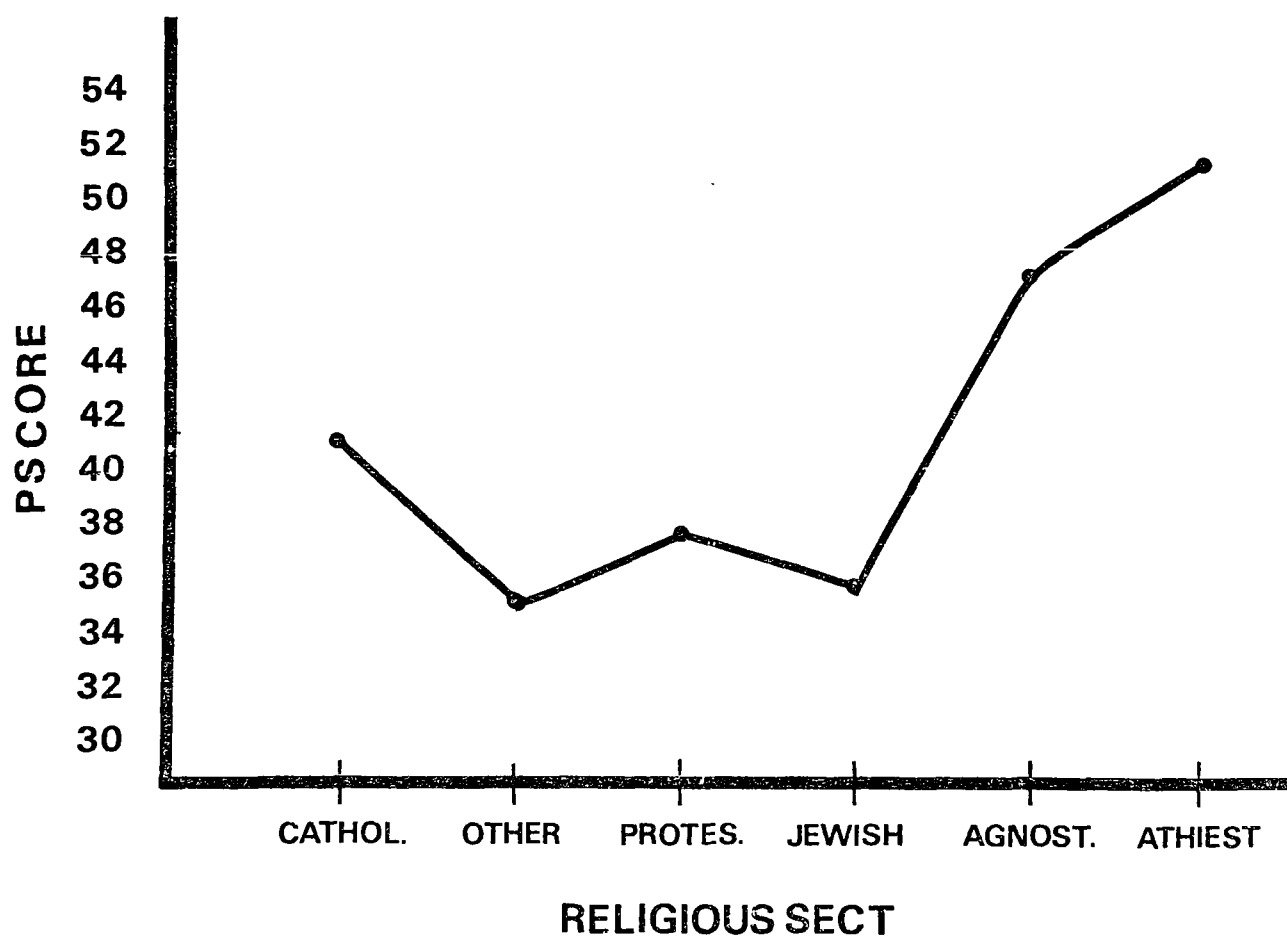


Figure 5. PSCORE responses distributed across religious sect.

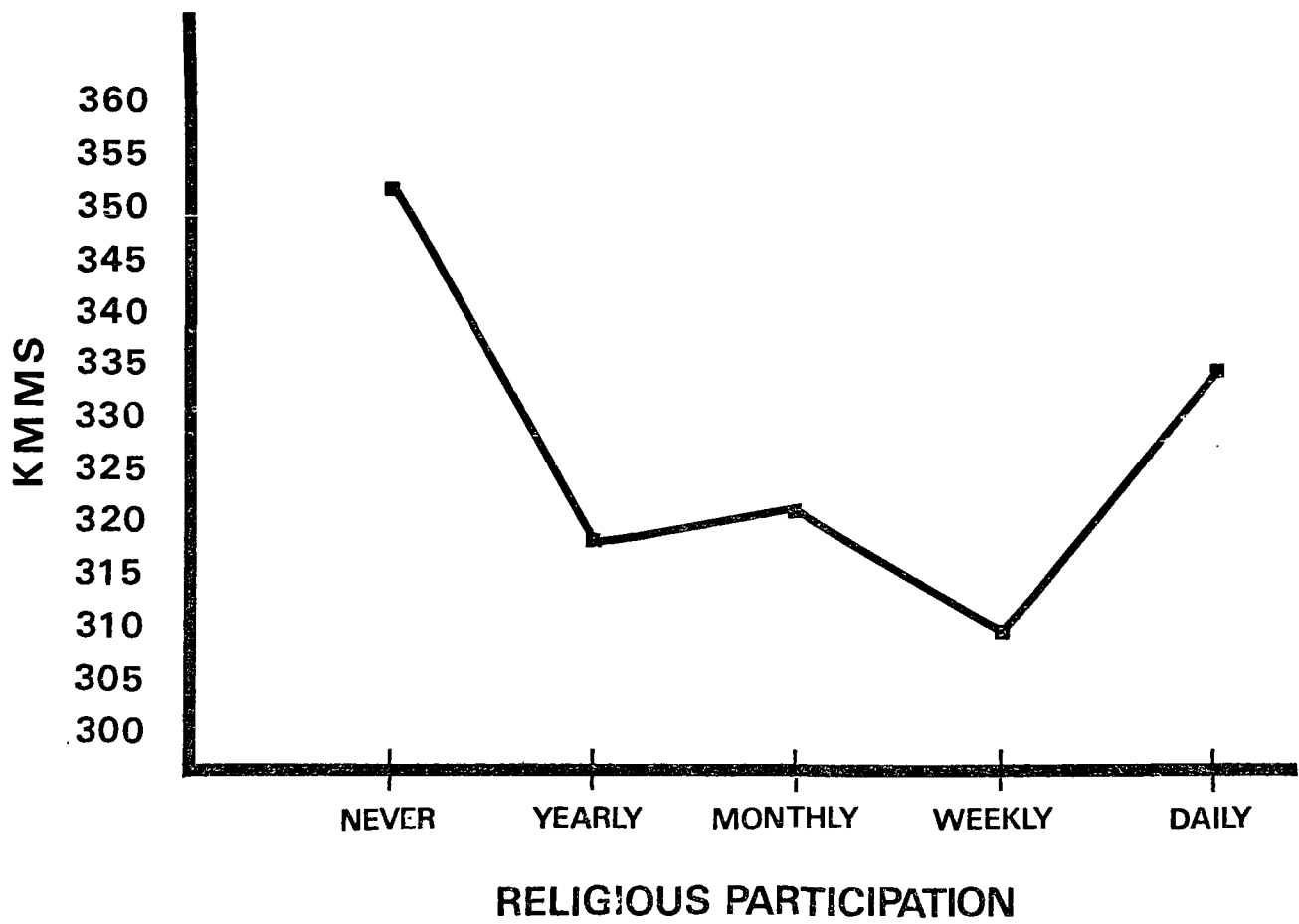


Figure 6. KMMs responses distributed across religious participation.

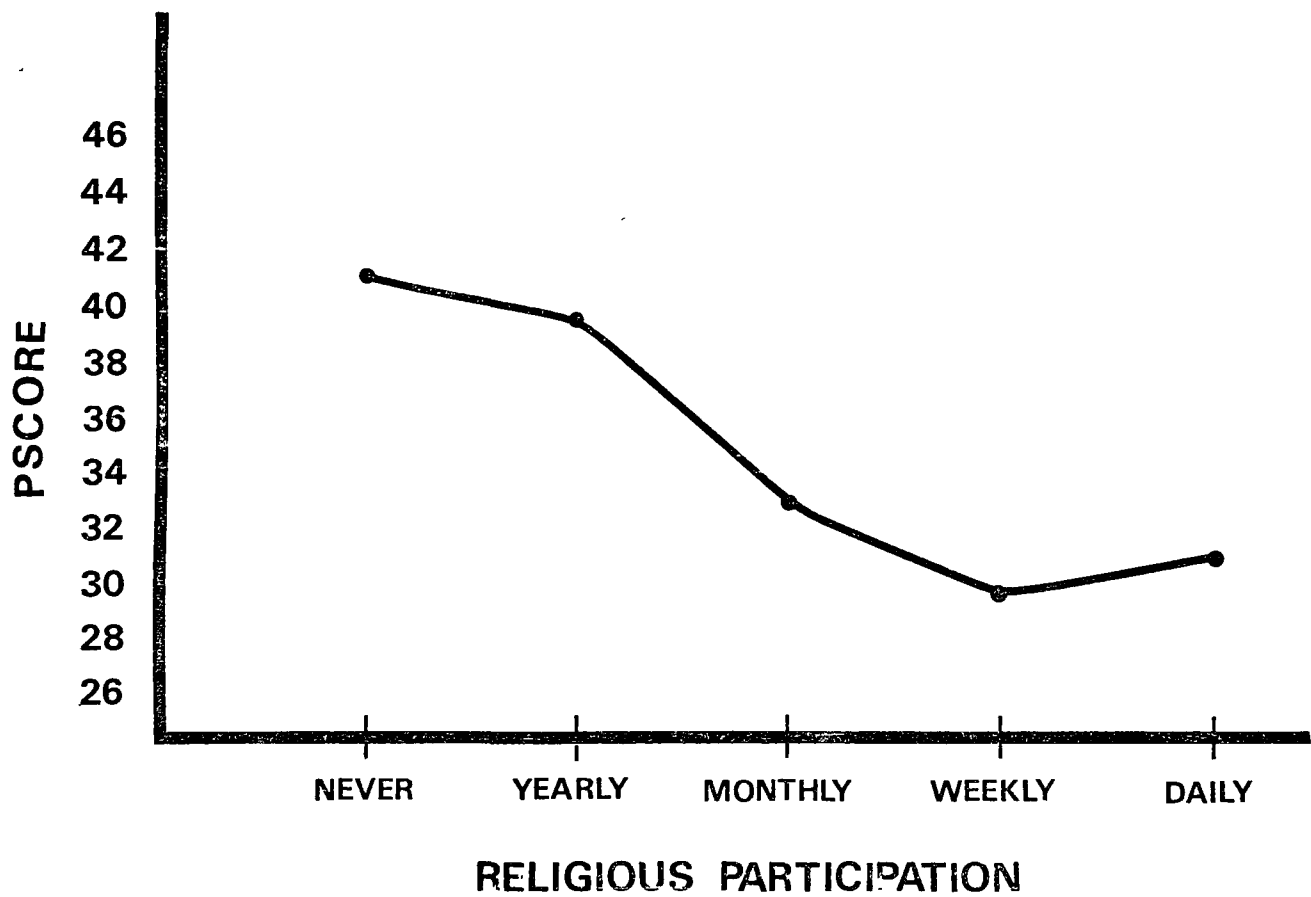


Figure 7. PSCORE responses distributed across religious participation.

respect to KMMS and PSCORE, these differences were found to differentiate between two groups. In the case of KMMS, the two groups were "average" and "more than average" versus "none". In the case of PSCORE the two groups were "more than average" versus "none". On this basis, figures 8 and 9 suggest that the two saliency groups in each case, were at the extremes. Those who were greatly committed to religion consistently responded lower than those who were consistently non-committed to religion for both KMMS and PSCORE. Thus, both morality measures were inversely related to religious saliency.

Because of the nature of these findings, additional analyses were performed to determine if there were any interactions which might aid in the further clarification of this data. In the case of KMMS and PSCORE, there was no interaction between religion measures.

To explain the data, commonalities between KMMS and PSCORE findings were noted. For both KMMS and PSCORE, significant differences were found on religious sect, religious participation and religious saliency. In all cases, the significance suggested the idea that the further away one moved from organized religion the higher were the morality scores. Quite possibly this might reflect a rather deep personal decision of conscience in going against as strong and as powerful a social norm as the institution of religion.

To further understand the issue of religion and morality, univariate multiple regressions were performed. In the case of moral recognition, the religion variables were included in the following order: religious participation, religious sect and religious saliency. In a sense,

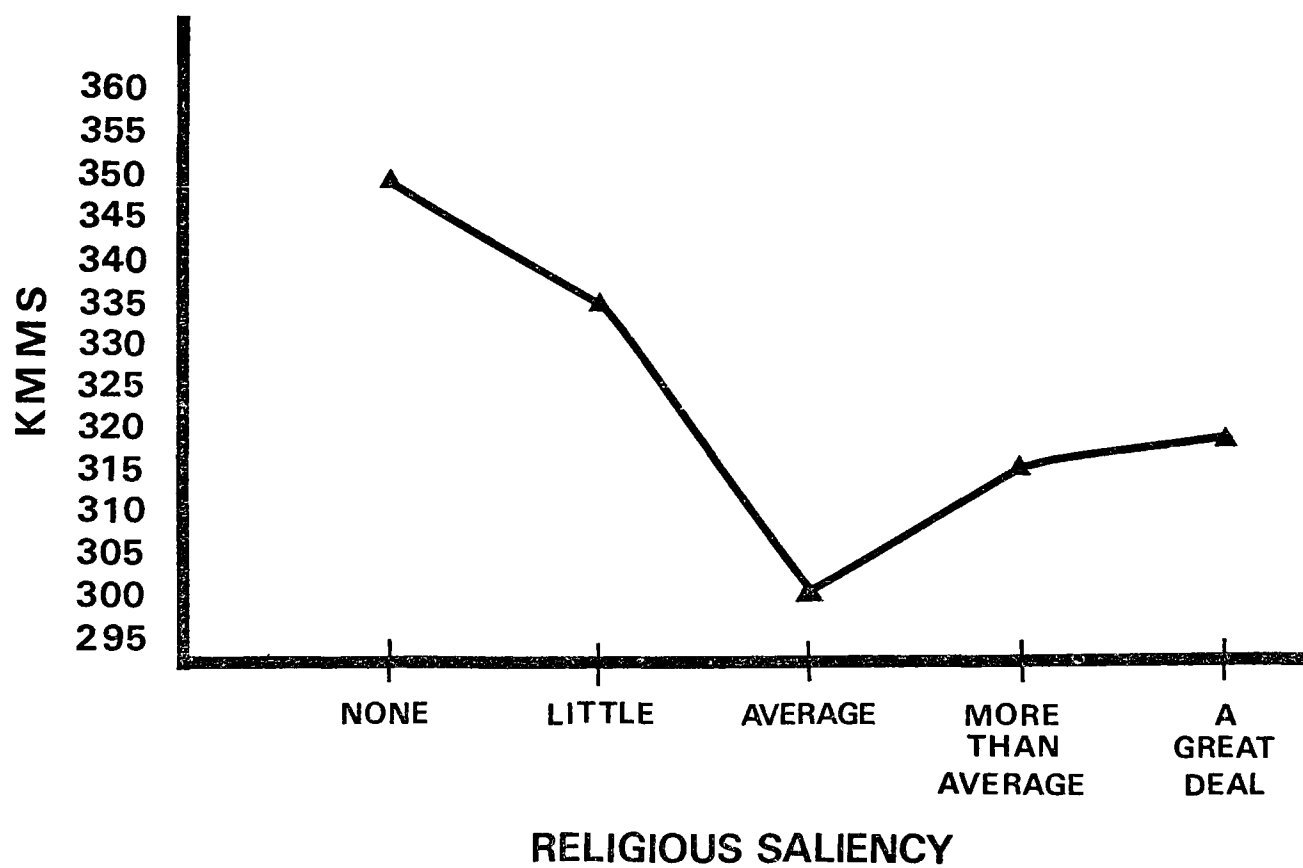


Figure 8. KMM S responses distributed across religious saliency.

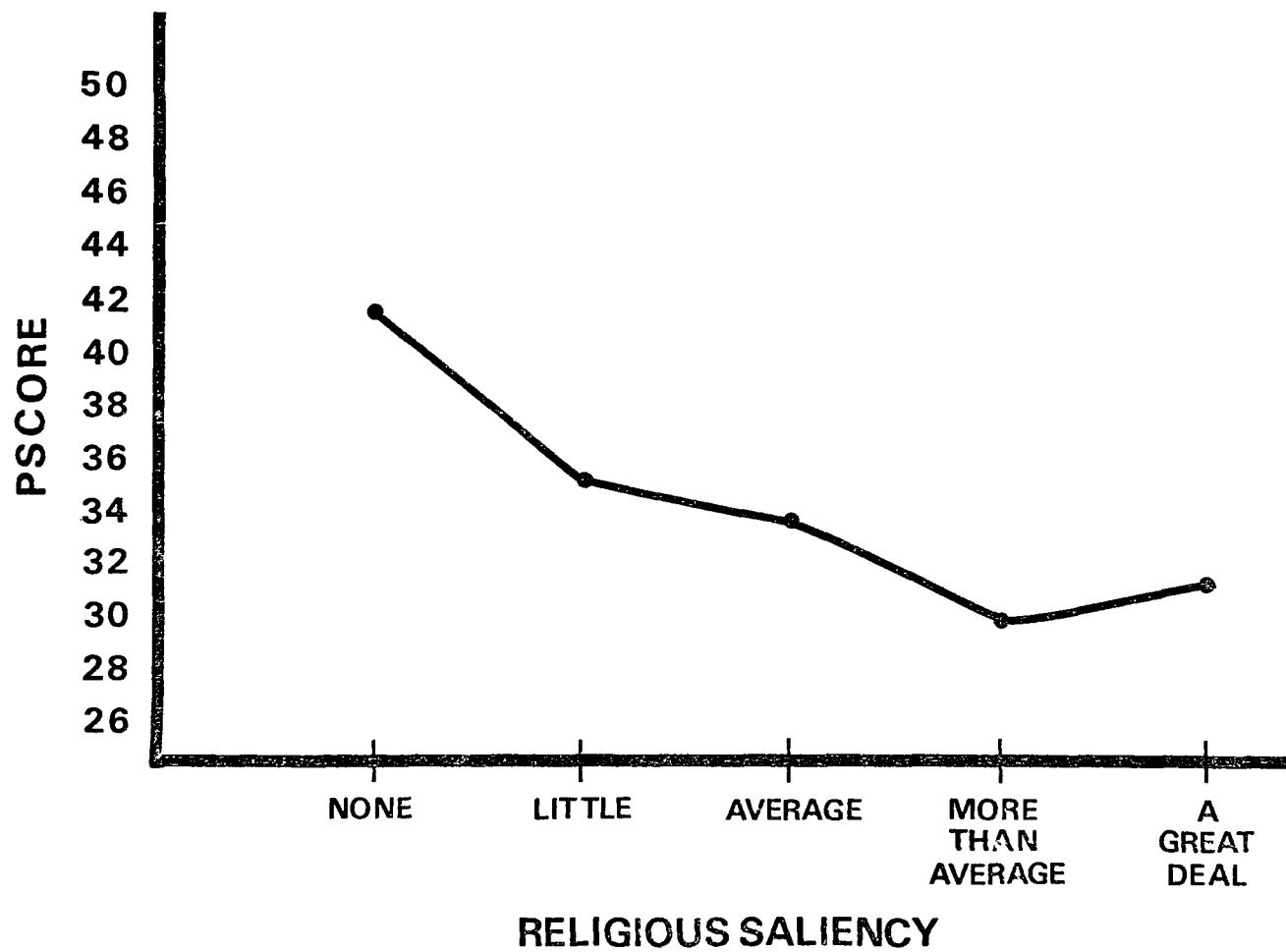


Figure 9. PSCORE responses distributed across religious saliency.

religious participation may be operationally defined as a system of behaviours and religious sect may be defined as a system of rules. In this light, both may be thought of as being more external oriented variables. It was these two variables which were most important in predicting PSCORE. Religious saliency, on the other hand may be seen more as a cognitive structure and thus, may be defined as more internal. In this analysis, religious saliency entered the regression equation last and therefore, can be seen as taking on least importance in predicting PSCORE. In looking at this finding, as well as others previously discussed, the possibility of these two instruments measuring different theoretical constructs seems to be emerging.

Another point of interest was the sign of the coefficient in the regression equations, where it was observed that religious participation entered negatively, religious sect entered positively and religious saliency entered negatively. That religious participation entered negatively suggests that the lower the amount of religious participation the higher the PSCORE. According to the coding scheme used in the analysis, the higher the religious sect the higher the PSCORE. That is, the further one moved away from organized religion and into agnosticism and athiesm, the higher the PSCORE. Furthermore, religious saliency entered the equation negatively suggesting that the lower the saliency, the higher the PSCORE.

Consistent with the perspective presented above were the findings with respect to KMMS, where the opposite order of inclusion was evidenced: religious saliency, religious sect and religious participation. Theoretically, a case can be made for viewing spontaneous production of moral

reasoning as a more internalized aspect of moralization. In contrast to PSCORE, religious saliency (cognitive structure) entered the regression equation first, while religious participation (system of behaviours) entered last. Consistent with the notions presented above, religious saliency also entered negatively suggesting that the lower the saliency the higher the morality and thus, the more important the notion of personal conscience became. Religious sect, as in the case of PSCORE, entered positively, suggesting again, that the more one moved away from organized religion the greater the likelihood of scoring high on KMMS.

This method of analysis was again performed using age group as an additional variable, since throughout the analyses presented thus far, age group had been important. In both PSCORE and KMMS, age group entered the equation first, indicating its relative importance. However, in the case of KMMS, religious participation did not enter the equation and thus, confirmed the relatively lesser importance of religious participation (system of behaviours) to KMMS. Further, religious participation was important in predicting PSCORE but not in predicting KMMS. This finding is not inconsistent with the notion of the two instruments measuring different aspects of the moralization process.

In light of these findings discriminant analyses were performed to further examine the importance of each of these variables in predicting criterion groups. The results of one such analysis indicated that discrimination between age groups was more effective using morality scores than religious variables. Further, using religious sect as the criterion variable, age group was most important while KMMS entered before and PSCORE; using religious saliency as the criterion, KMMS

assumed most importance with PSCORE entering last. Finally, with religious participation as the criterion, PSCORE entered before KMMS. This suggests that PSCORE was more important in the discriminant, confirming the theoretical orientation presented thus far. Further, it appeared from these findings that the idea that these instruments measure different constructs became more viable.

However, an examination of the percentage of correct classification, which in all cases was low, suggests that either more variables or more observations were needed.

To summarize the findings on religion, the null hypotheses with respect to all religion variables was rejected. However, two additional statements can be made. Firstly, there seemed to be a tendency for an inverse relationship between all measures of religion and measures of morality. Secondly, the notion of spontaneous production of moral reasoning (KMMS) and moral recognition (PSCORE) not measuring similar aspects of morality should be considered.

It has been reported by numerous moral educators (Dewey, 1909; Blatt 1969; Speicher, 1973; Fenton, 1974) that one of the greatest facilitators in moral growth was interaction with other individuals. This would offer the opportunity for self-resolution of naturally developing cognitive conflict. In this sense, it was thought that a measure of social participation would reflect differences in individuals with respect to their morality scores.

In this study, neither moral recognition (PSCORE) nor spontaneous production of moral reasoning (KMMS) was significantly associated with measures of social participation and thus, warranted the decision to fail to reject null hypothesis seven.

However, although it was found that there was no significant relationship between the two morality measures and the measure of social participation, alternative explanations for why this finding occurred was appropriate. Thus, without negating the findings of no differences, it can be alternatively stated that the instrument which measured social participation did not differentiate clearly the levels of social participation. Further, power was not computed for this analysis and thus, with an increased sample size the relationship may in fact, have been different. Finally, the sample size for each criterion group was different and this may have produced the result obtained.

Thus, although there were no significant differences between morality scores and social participation, the alternative explanations for this result may warrant more systematic investigation.

In summarizing the results of the secondary hypotheses some similarities and differences appeared between KMMS and PSCORE. With respect to age group, both KMMS and PSCORE revealed a significant main effect. However, trends which emerged reflected a general upward trend with KMMS across all age groups while the trend with respect to PSCORE was more variable. This was evident particularly in the latter age groups where there was a considerable decrease in PSCORE.

In regard to education and socioeconomic status, the relationships with KMMS and PSCORE were similar. In both analysis education and SES were found to be significant. However, when conservative post-hoc analysis was performed, no significant results were obtained, thus casting some doubt upon the strength of that relationship. Further

univariate regressions performed on KMMS and PSCORE with education and SES as independent variables suggested the relatively greater importance of education.

With respect to the relationship between KMMS and PSCORE and the three measures of religion, significant findings were found for both morality scores and religious sect, religious participation and religious saliency. Univariate regressions performed on this data not only suggested an inverse relationship between the measures of morality and all measures of religion but also, through the order of variable inclusion and the sign of the respective coefficients, that these two measures of moralization may, in fact, be measuring different aspects of the moralization process. This suggested the possibility of the non-interchangeability of the two instruments.

Finally, both sex and social participation produced non-significant results with respect to KMMS and PSCORE. In regard to the findings concerning the sex variable, differing patterns emerged. In KMMS, males consistently scored higher than females across the age groups tested. However, with respect to PSCORE, the findings were more variable; that in age groups 15-18 and 19-29, males scored higher than females while in groups 30-49 and particularly 50-72, the trend was reversed. Thus, the notion that these two instruments are measuring different theoretical constructs within the moralization process appears to be more viable.

In regard to the non-significant relationship between social participation and both morality indices, it was thought that both the unequal sample sizes and the possible lack of validity of the social

participation measure could have obscured a theoretically possible relationship. Thus, more refined investigation of this variable must be considered.

After discussing the findings with respect to the secondary hypotheses, the evidence, on the whole, seems to suggest that these two morality instruments may be measuring different aspects of the moralization process. At this point, the discussion of the major hypothesis becomes relevant.

2. Univariate Multiple Regression

Stepwise univariate regression was performed to examine the interrelationship between morality scores as dependent variables, and subject relevant measures as independent variables. With this procedure, it was anticipated that the pattern or type of variables which were significantly associated with KMMS and PSCORE independently would help clarify a discussion of the major hypothesis under study: that there was no relationship between the two morality instruments.

These regressions were performed on the total subject pool as well as by age group, in keeping with a developmental perspective. Further, the regressions were performed both with and without the morality index that was not the dependent variable in the regression equation.

When the regression was performed across all age groups for KMMS, subjects education, PSCORE and financial stability entered

significantly. The equation indicated a positive relationship with education and PSCORE and a negative relationship with financial stability. Although this finding did not have much weight as the groups were heterogeneous, these variables can be viewed as those which were more longitudinal in nature. As expected, then, education and PSCORE played an important part in predicting KMMS. However, financial stability, in the younger ages would not be important. Hypothetically, the greater the financial stability the greater the opportunity to question one's values and thus, the negative coefficient. However, due to the heterogeneity of the total sample, the implications here become speculative. What this suggested was that there may well be a longitudinal or developmental aspect to what becomes meaningful in predicting KMMS with respect to the variables measured.

In the 15-18 year old group, PSCORE and mother's education entered positively on KMMS. This finding indicated that these subjects, consisting mainly of high school students, may be reflective of a more "external" orientation towards right and wrong as well as a reliance on parental teachings. This shows the more environmental effect on KMMS at this particular age. Thus, this age group can be characterized as being external with respect to predicting KMMS. That is, the determiners

of KMMS at this point were those variables which may be viewed as outside the individual.

However, for 19-29 year olds, consisting generally of university students, religious sect entered positively. This may be interpreted as a time when individuals tended to question parental values, and possibly break away from the societal system as evidenced by religious sect, which, as previously stated, pointed in the direction of agnosticism and athiesm. The reliance on, or importance of external type variables did not emerge at this age.

In the 30-49 year old group, PSCORE entered positively. In contrast to the 15-18 year old findings where parental variables were important in predicting KMMS, this was not evidenced at this age as only PSCORE continued to consistently predict KMMS.

In the 50-72 year old groups, job consistency and religious saliency both entered significantly but did so with negative coefficients. The negative religious saliency supported the consistent findings presented previously. One can hypothesize that the higher the subject's job consistency, the more his values oriented towards acceptance of the societal system of rules. Thus, on the basis of the data, it could be asserted that there will be less likelihood for one to orient towards higher KMMS. That is, the more one accepted the vocational system, the more one might conform to societal standards and thus, the likelihood of obtaining the higher stages of KMMS was lower.

These same regression analyses were run, excluding PSCORE as an independent variable. In the overall analysis, the only difference from the previous regressions was that PSCORE was replaced by religious

sect, suggesting a confirmation of previous statements. However, at all age groups, no new variables were entered in the equation. Thus, from the point of view of a developmental perspective the regressions of KMMS seemed to indicate a general pattern. This pattern seemed to reflect a general tendency for KMMS to be predicted by external variables at the younger ages, followed by a transitional, questioning period, followed by a more internalized perspective.

The regression using PSCORE as the dependent variable on all other measures was performed in the same way as KMMS.

Overall, in predicting PSCORE, subject's education, as in KMMS, entered first. However, instead of religious sect, the equation included religious participation, suggesting the general notion that moral recognition may be measuring a more external behavioural system relative to KMMS which seemed to be more internalized. Further, that KMMS did not contribute significantly to the prediction of PSCORE suggested that PSCORE may be more of an external measure than KMMS, overall. However, the heterogeneity of this overall group analysis did not warrant definitive statements in this regard.

For the 15-18 year old group, only KMMS entered, suggesting that for this particular age there was more of a reliance upon an internal structure, or frame of reference. Further, this finding contrasted the finding in KMMS for this age group which suggested greater importance on the external. This seemingly paradoxical result may be explained by the fact that at this early developmental stage, internal and external frames of reference may overlap a great deal.

For the 19-29 age group, religious sect, mother's socioeconomic

status and subject's education entered positively while marital consistency entered negatively. Religion continued to play a large role and suggested that this age group was in a questioning phase. Further, most subjects in this age group were enrolled in university, and thus, not only would this lend support to the idea of a questioning phase, but also, in light of the inclusion of mothers SES and marital consistency, this age group may also be reflective of an environmental factor. Further, due to the positive aspect of subject's education it can be hypothesized that the greater the education, the more questioning of the societal system for this age group. Thus, this age seems to reflect a transitional or conflict phase, with regard to PSCORE.

For the 30-49 year olds and KMMS entered the prediction equation for PSCORE. This inferred the reliance on an internal frame of reference, as no other variables had a systematic relationship with PSCORE. Further, this may be a time where one normally considers the additional commitments of marriage, vocation and children and thus, the reliance upon KMMS may be appropriate for that age group.

For the 50-72 year old group in contrast to the 30-49 year olds, not even KMMS was meaningful to predict PSCORE. This may be reflective of the lowering or regression in moral recognition during that age group. From the data obtained it appeared that, in a sense, at this age group, the variables which might have been assumed to predict PSCORE had been fixed and stabilized by now. That is, experience and the ability to recognize the moral right from the moral wrong was a constant regardless of the variables. However, on the other hand in the same age group where regressions on KMMS were computed, more internalized variables appeared.

It may be, then, that for this age group PSCORE reflected an environmental or experiential effect whereas KMMS reflected a more internalized effect. This suggested, again, that these two instruments might be considered to measure different theoretical constructs within moralization theory.

When KMMS was excluded from consideration, the regression equations took much the same form. However, with the removal of KMMS, there was an inclusion of socioeconomic status measures. This was supportive of previous conclusions where it seemed that environmental variables became important with respect to PSCORE.

The developmental pattern which emerged in predicting PSCORE, seemed to reflect a slightly different pattern in that there was a tendency for internalized variables to be important at younger ages followed by a transitional phase, questioning the importance of internal versus external measures. This was then followed by a more internal orientation and then a return to a more external-experiential perspective.

In summary, then, there appeared to be a pattern which developed with respect to predicting KMMS and PSCORE using the variables assessed in this project.

In attempting to predict an internalized construct (KMMS), the findings suggested that the more external variables were more meaningful in 15-18 year olds, followed by a transitional or questioning period (19-29). This was followed with a tendency towards conformity to societal rules in 30-49 year olds, followed by a more internalized orientation in 50-72 year olds.

In the case of predicting an external construct (PSCORE), the findings suggested that there was a tendency for 15-18 year olds to rely

upon their own internal frame of reference. This was followed by a period of transition and a conflict between a questioning orientation and the influence of some residual elements of home life in 19-29 year olds. In the case of 30-49 year olds there seemed to be a more internalized perspective while the orientation in the 50-72 year old group revealed that attitudes and values were fixed at this stage, in the sense that to predict PSCORE, no variables were important. Thus, the latter group suggested the tendency towards being experiential.

These notions were further supported when the appropriate morality score was deleted from the regressions.

Further, it appeared that in predicting KMMS, PSCORE seemed to be important, while in predicting PSCORE, the importance of KMMS was relatively less. Secondly, it seemed that the difference between spontaneous production of moral reasoning and moral recognition may, in fact, be the degree to which one internalizes. However, the variability between groups was such that these conclusions were speculative and warrant further consideration in light of more systematic research. Thus, the decision not to reject hypothesis one was made. However, until further discussion is made, this conclusion is not definitive.

3. Multivariate Multiple Regression

In view of the results of the univariate regression, multivariate regression was performed to further examine the interrelationship between KMMS and PSCORE as simultaneous dependent variables. Only those measures which signifi-

cantly contributed to the regressions will be discussed.

In predicting KMMS and PSCORE in the overall sample, subject's education, age group and religious sect entered respectively. These results were interpreted to indicate a developmental trend for KMMS and PSCORE with respect to education and age. The inclusion of religious sect confirmed the statements made earlier concerning the notions of system questioning and internal commitments.

In the case of the 15-18 year olds, only mother's education appeared. In a sense, as in univariate regressions presented earlier for this age, these subjects were still young enough to be strongly influenced by parental variables and still could mirror family ideals.

For 19-29 year olds, religious sect was included first. However, the inclusion of three socioeconomic status variables suggested that these became important morality determinants at this age. Further, the sign of the coefficient was negative for most SES variables, suggestive of a retardant effect of SES on moral development. This finding suggested the breaking away from societal-parental norms, as previously noted in this age group throughout the univariate regressions presented earlier. It is interesting to note that the only SES coefficient which was positive was with respect

to PSCORE. This was consistent with previous discussions suggestive of the external bias of PSCORE relative to KMMS and, as well, supports the notion that these two instruments measure two different theoretical constructs.

In regard to the 30-49 year olds, no variables played an important role in determining morality. This was expected in light of previous non-significant univariate regressions. It appeared that this may be an age of transition where none of the variables measured in this study took on importance.

With respect to the 50-72 year old group, sex enters negatively and religious sect, again, plays an important role. The negative coefficient of sex suggested that females at this age tended to score lower than their male counterparts.

In summary, as was the case previously, overall analysis pointed in the direction of a longitudinal or developmental model. In the 15-18 year olds, parental influence was important, reflecting a family orientation. Further, similar to previous regressions, there appeared to be a transitional phase in 19-29 year olds and this appeared to carry into a reassessment period of 30-49 year olds. 50-72 year olds indicated an experiential component in that sex and religious sect was important.

Thus, while utilizing the results from the secondary hypotheses and the univariate and multivariate regressions, the decision not to reject the major hypothesis of no relationship between KMMS and PSCORE, was made. That is, it appeared that KMMS and PSCORE measure different aspects of the moralization process. The operational definitions of both measures as presented throughout this text (spontaneous production versus recognition) may point to the precise difference. In fact, the

difference may be the extent to which one internalizes.

The following discussion attempts to more precisely refine and investigate the differences between the measures.

4. Factor Analysis

The purpose of utilizing the factor approach was to obtain a more parsimonious description of the data collected. A structure was assumed, relating the data to a set of factors but since the true number of factors was unknown, a series of steps was employed, increasing the number of factors by one until statistical significance was lost for the added factor (χ^2 test). In this case the following six factors emerged:

1. a factor combining subject and parental socioeconomic status;
2. a factor contrasting subject socioeconomic status and spontaneous production of moral reasoning;
3. a factor contrasting parental education and spontaneous production of moral reasoning;
4. a factor contrasting subject socioeconomic status and moral recognition;
5. a factor contrasting spontaneous production of moral reasoning/moral recognition and generalized participation;
6. an independent factor combining spontaneous production of moral reasoning and moral recognition.

Since the theoretical significance of these six factors was open to interpretation, an examination of the commonalities between factors was appropriate. Firstly, there was a socioeconomic status effect in factors 1, 2 and 4. Secondly, there was a parental effect in factors 1 and 3, and thirdly, a morality effect appeared in factors 2, 3, 4, 5 and 6. Thus, the commonalities within the data not only suggested that a few dimensions were needed to describe

the data but also suggested that these six factors may be re-defined in terms of three factorial effects (i.e. socioeconomic, parental and morality).

With respect to the issue of morality, the findings are clear. That is, morality (two types) was not only an independent factor (and thus supports a failure to reject hypothesis 8) but also some form of morality was an integral component of five of the six factors. However, with respect to the issues of socioeconomic status and parental effects, the data were not as clear. Referring to the system for coding socioeconomic status of the subject, Blishen (1968) did not classify full time students. In light of this, it was decided that full time students (all 15-18 year olds and most 19-29 year olds) would be assigned father's socioeconomic status. With this in mind, a good portion of the sample within these age groups was given father's SES and thus, when subjects SES appeared in factors 1, 2 and 4, a large component of this effect may be loaded with father. In fact, this may suggest the interpretation of a two factor effect; parental (factors 1, 2, 3 and 4) and morality (factors 2, 3, 4, 5, 6).

5. Discriminant Analysis

An investigation of the discriminating power of the measures was undertaken for several criterion variables. Using age group as the criterion, KMMS was the better discriminator indicating that there was a better relationship between KMMS and age group than there was for PSCORE and age group. That is, PSCORE did not vary as systematically with age group as did KMMS.

Using a three level breakdown of KMMS (KLEVEL), eight variables entered significantly with PSCORE entering first. Thus PSCORE discriminated well when the breakdown was by KLEVEL. When PSCORE was removed from consideration, the discriminatory power fell substantially. However, converting PSCORE into three levels and using PLEVEL as a criterion, it was not KMMS which was the best discriminator but rather other variables. Taking these results together, the notion that these two instruments do not measure the same construct appears more viable. However, due to the relative arbitrary nature of the PLEVEL breakdown, further speculations with respect to this finding are guarded. Furthermore, the fact that in all cases discrimination was not good leads one to consider that generally more subjects needed to be sampled or more variables needed to be ascertained.

6. Kohlberg-Rest Comparisons

To more precisely understand the nature of Kohlberg's and Rest's instruments, the data provided by them, and the issue of their interchangeability, an attempt to integrate the data with a view towards determining a "moral profile" was made.

To this end, the first method was through the use of regressions of PSCORE on KMMS. These regressions were computed for the total sample as well as by age group. Summarizing the findings presented previously, the amount of total variation explained by the regression equations ranged from .03 to .25 and thus, was sufficiently low to warrant an alternative method of combining KMMS and PSCORE. These results, however, were not inconsistent with the hypothesis that these two instruments might be unrelated and therefore might measure

different theoretical constructs. In light of this, an attempt to define a moral profile was made by dividing KMMS scores into pre-conventional (low), conventional (middle) and post-conventional (high) ranges as theoretically conceived within Kohlberg's theory. For PSCORE, this breakdown was more arbitrary in that PSCORE did not relate to a theoretical level or stage. Thus, the breakdown for PSCORE was to divide the sample data into low, middle, and high groups. Then, all possible combinations of KMMS and PSCORE were formed resulting in the nine KP groups delineated previously.

This type of breakdown resulted in some interesting findings, particularly since the literature suggests that researchers have been using Rest's instrument in place of Kohlberg's to assess morality; i.e. implicitly assuming their equality. However, based upon the evidence gathered thus far, this assumption may not be warranted. In fact, the utilization of both measures in the assessment of morality may be more appropriate. With the utilization of both measures, two theoretical positions may be taken.

The first position is that moral recognition may be seen as a kind of pre-requisite or precursor to spontaneously produced morality. That is, in the same way as individuals recognize shapes before they have the ability to reproduce them, or understand sentences before being able to spontaneously produce them, individuals may also be able to recognize right from wrong before they are able to spontaneously produce that concept of right and wrong. This leads to the hypothesis that moral recognition would be higher than or equal to spontaneous production. That is, theoretically speaking, the KP

groups which would emerge would be those where PSCORE would be equal to or higher than KMMS (i.e. HH, MM, LL, LH, MH, LM). In fact, these groups accounted for almost 65% of the subject population. However, the results also indicated the presence of three other groups (i.e. HM, HL, ML) which although theoretically should not have emerged, accounted for almost 35% of the subjects.

The second possible position states that internalization is fundamental to recognition in the same way as an internal frame of reference integrates one's behaviour. Thus, theoretically speaking, the KP groups which would emerge would be those in which spontaneous production was equal to or higher than moral recognition. That is, the possible KP groups would be LL, ML, HL, MM, HH and HM. The percentage of the subjects which fell into these groups was 90%.

What appears to be the case was that the possible KP groups generated by the theoretical positions overlap. Thus, in considering the two differing theoretical positions generated by two differing assessment procedures, there seems to be enough "theoretical overlap" and enough "data based" overlap to warrant the consideration of both positions as being somewhat valuable.

The analysis of the relationship between age group and KP group was examined. For age group 15-18, 90% of the subjects fell into KP groups LL, MM and ML.

85% of the 19-29 year olds fell into groups MM, ML and HM. 49% of the 30-49 year olds fell into the MM group while 50% of the 50-72 year olds fell into groups ML and HL.

On the basis of this data and by looking at a modified version

of the cross-tabulation matrix presented in Table 49, further statements can be made regarding the theoretical questions of whether KMMS would emerge as greater than PSCORE or whether PSCORE would emerge greater than KMMS. One way of examining these relationships was to remove from the analysis, all KP groups which appeared in both theoretical positions (HH, MM, LL). That is, when subtracting the 149 subjects along the main diagonal it was found that 27 subjects had a PSCORE higher than KMMS. However, 95 subjects were found to have had a higher KMMS than PSCORE. Although hardly definitive due to the small number of subjects (122), these data can be seen as supportive of the theoretical perspective of KMMS being higher than PSCORE.

An alternative method of examining this data was to characterize each specific age group with respect to the issue of "consistency" (KMMS the same as PSCORE) versus "inconsistency" (differing KMMS and PSCORE). Most individuals within the 15-18 and 30-49 year old groups fell into KP groups which indicated "consistency" while most 19-29 and 50-72 year olds fell into KP groups which indicated "inconsistency".

It was observed that those age groups characterized by "inconsistency" of KP group, were also those age groups who were referred to as questioning the societal system. Further, these age groups often indicated a strong emphasis upon the external measures as important in predicting morality scores. These same statements cannot be made with respect to the individuals classified as "consistent".

Another finding which emerged from this type of analysis not only supported the position that the two assessment strategies did

TABLE 49

Modified Cross-tabulation Matrix
of KP Groups

KMMS	PSCORE		
	Low	Medium	High
Low	56	22	0
Medium	58	87	5
High	9	28	6

not measure the same construct, but also suggested some theoretical difficulties within general moralization theory. As both Kohlberg (1976b) and Rest (et. al. 1969) have suggested, it was relatively improbable that a person will respond to moral dilemmas in a way that will reflect a two stage discrepancy. In particular, studies by Turiel (1966) and Rest (et. al. 1969) have suggested that a person at stage three would not comprehend stage five reasoning, and in fact, would be more likely to reject these higher concepts. It follows then, that there would be an expectation that HL and LH groups would not emerge in the data. From the data obtained in this project the LH group did not exist and thus, not only is this consistent with moralization theory in general, but also is consistent with the position that one needs an internal frame of reference upon which to rely when resolving moral dilemmas. However, on the other hand, the HL group did exist and while again, is supportive of the position which states the importance of an internal frame of reference, it also indicates an inconsistency within moralization theory, even though only accounting for nine of 271 subjects (3.3%).

In conclusion, based upon the analysis of KP group breakdowns, there seemed to be a general tendency for KMMS scores to be consistent with PSCORE scores. However, when scores on the main diagonal were excluded, the tendency for KMMS to be higher than PSCORE resulted. Since the division of PSCORE into ranges was more arbitrary than the KMMS subdivisions, it may have accounted for some of the results. Thus, this hypothesis should be considered accordingly. Further, there seemed to be some theoretical questions with respect to some of the KP groups which emerged. Finally,

there seems to be a fair amount of evidence to question the general assumption that Kohlberg's measure of spontaneous production of moral reasoning and Rest's measure of moral recognition are synonymous. More precisely, it appears that Rest's measure of moral recognition may be more sensitive to an external-environmental bias in that the variables which appear significantly related to PSCORE are those which may be seen as outside the individual (i.e. religious participations). KMMS, on the other hand, appears to be more sensitive to those variables which can be seen as more internalized (i.e. religious saliency).

However, although the data convincingly suggests that the instruments measure different theoretical constructs within moralization theory and thus, may not be interchangeable, there are some limitations of this study which must be considered in weighing the results.

Firstly, the sample sizes in age groups are unequal and in some cases, are small enough to warrant consideration of whether these results are generalizable. This is particularly evident in the 30-49 and the 50-72 year old groups where the sample sizes are 46 and 26 respectively.

A further limitation is that counter-balancing was not utilized in this project. Although the reasons for not counter-balancing are appropriate in this case, more systematic studies utilizing counter-balancing may provide data which will be more definitive.

Finally, since this investigation has yet to be replicated, the results remain preliminary and should be viewed accordingly.

SUMMARY AND SPECULATIONS FOR FURTHER RESEARCH

Over the past fifteen years the investigation of moralization theory has taken on renewed interest. For the most part, the major studies to this end, have utilized the moral dilemma approach devised by Kohlberg (1958, 1976a) which was designed to elicit information basic to the individual's thought structure without the influence of an imposed frame of reference. This type of assessment procedure was operationally defined in this project as the spontaneous production of moral reasoning. In the early 1970's, Rest (1974a) devised an alternative instrument. However, Rest structured the response procedure by providing the respondent with various issues and statements for consideration in the resolution of dilemmas. Due to the nature of the stimulus, this type of assessment procedure was operationally defined as moral recognition.

The aim of this research was to investigate a few relatively untapped areas within moralization theory by examining the relationship between the two operational definitions of morality and several subject relevant and demographic variables. Further, attempts were made to combine or integrate the two moral indices to define a more inclusive "moral profile".

With respect to the relationship between both measures of morality and other variables, significant relationships were found for age, three measures of religion, education and socioeconomic status. However, conservative post hoc analysis for education and socioeconomic status revealed that the significance of these variables were cast into doubt. Non-significance was established for sex and social participation.

Univariate and multivariate regressions resulted in postulating a developmental model when attempting to predict morality in the sense that different variables were important for different age groups in predicting morality scores. Further, these regressions seemed to consolidate the notion that the different instruments and the data obtained from them, define different theoretical constructs within the same moralization theory.

With regard to defining a "moral profile", regressions of PSCORE on KMMS revealed low R^2 statistics, again suggesting that these two indices were independent and that they measured different theoretical constructs within moralization theory.

An alternative method was used to investigate this relationship by dividing both KMMS and PSCORE into high, medium and low ranges. In this regard, the KP groups which emerged yielded some interesting theoretical questions, as well as some interesting speculations for moral education.

Results from this project indicated advantages of including moral recognition during pre-testing, mid-treatment and post-testing evaluations in that it would allow for the specific examination of KP comparison groups during the moral educational process. This would be particularly useful for examining those groups characterized as inconsistent or transitional (one measure higher than the other) and those characterized as consistent or consolidated (both measures falling into the same ranges). It is hypothesized that the transitional groups would be more susceptible to change than consolidated groups, particularly in view of the fact

that individuals desire to reason one stage above their own modal stage. Further, in some groups, moral recognition was higher than spontaneous production while in other groups the opposite was true. The differential analysis of transitional group movement would add considerably to moralization theory.

However, due to the exploratory nature of this project, these suggestions for further research were viewed accordingly.

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APPENDIX A

Name _____

Code # _____

Study _____

MORAL JUDGMENT INTERVIEW

Form A

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

1. Should Heinz steal the drug? Why or why not?
2. If Heinz doesn't love his wife, should he steal the drug for her? Why or why not?
3. Suppose the person dying is not his wife but a stranger. Should Heinz steal the drug for the stranger? Why or why not?
4. (If you favor stealing the drug for a friend:) Suppose it's a pet animal he loves. Should Heinz steal to save the pet animal? Why or why not?
5. Why should people do everything they can to save another's life, anyhow?
6. It is against the law for Heinz to steal. Does that make it morally wrong? Why or why not?
7. Why should people generally do everything they can to avoid breaking the law, anyhow?
- 7a. How does this relate to Heinz's case?

Dilemma III: Heinz did break into the store. He stole the drug and gave it to his wife. In the newspapers the next day, there was an account of the robbery. Mr. Brown, a police officer who knew Heinz, read the account. He remembered seeing Heinz running away from the store and realized that it was Heinz who stole the drug. Mr. Brown wonders whether he should report that Heinz was the robber.

1. Should Officer Brown report Heinz for stealing? Why or why not?
2. Officer Brown finds and arrests Heinz. Heinz is brought to court and a jury is selected. The jury's job is to find whether a person is innocent or guilty of committing a crime. The jury finds Heinz guilty. It is up to the judge to determine the sentence. Should the judge give Heinz some sentence, or should he suspend the sentence and let Heinz go free? Why?
3. Thinking in terms of society, why should people who break the law be punished?
- 3a. How does this relate to Heinz's case?
4. Heinz was acting out of conscience when he stole the drug. What reasons are there for not punishing a lawbreaker if he is acting out of conscience?
5. What does the word conscience mean to you, anyhow? If you were Heinz, how would your conscience enter into the decision?
6. Heinz has to make a moral decision. Should a moral decision be based on one's feelings or on one's thinking and reasoning about right and wrong?
7. Is Heinz's problem a moral problem? Why or why not? In general, what makes something a moral problem or what does the word morality mean to you?
8. If Heinz is going to decide what to do by thinking about what's really right, there must be some answer, some right solution. Is there really some correct solution to moral problems like Heinz's, or when people disagree is everybody's opinion equally right? Why?
9. How do you know when you've come up with a good moral decision? Is there a way of thinking or method by which one can reach a good or adequate decision?
10. Most people believe that thinking and reasoning in science can lead to a correct answer. Is the same thing true in moral decisions or are they different?

Dilemma I: Joe is a fourteen-year-old boy who wanted to go to camp very much. His father promised him he could go if he saved up the money for it himself. So Joe worked hard at his paper route and saved up the \$40. it cost to go to camp and a little more besides. But just before camp was going to start, his father changed his mind. Some of his friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost. So he told Joe to give him the money he had saved from the paper route. Joe didn't want to give up going to camp, so he thinks of refusing to give his father the money.

1. Should Joe refuse to give his father the money? Why or why not?
2. In what way is the fact that Joe earned the money himself something very important for the father to consider?
3. The father promised Joe he could go to camp if he earned the money. Is that promise something very important for the father or Joe to consider? Why or why not?
4. Why in general should a promise be kept?
5. Is it important to keep a promise to someone you don't know well and probably won't see again? Why or why not?
6. What do you think is the most important thing for a good son to be concerned about in his relationship to his father in this or other situations?
- 6a. Why is that important?
7. What do you think is the most important thing for a good father to be concerned about in his relationship to his son in this or other situations?
- 7a. Why is that important.

APPENDIX B

QUESTIONS ABOUT SOCIAL PROBLEMS

This questionnaire is aimed at understanding how people think about social problems. Different people often have different opinions about questions of right and wrong. There are no "right" answers in the way that there are right answers to math problems. We would like you to tell us what you think about several problem stories. The papers will be fed to a computer to find the average for the whole group, and no one will see your individual answers.

In making a decision about social problems, what should be the most important questions a person asks himself? On what general basis would you want people to determine what is crucial in these problems?

On the next page is a list of questions that a person might ask himself when he is trying to make a decision. Read one question at a time and check in the left hand margin (of each one) how important you think it is.

There are five places to put a check.

GREAT Importance - Check here if the question concerns something that makes a big, crucial difference one way or the other in making a decision about the problem.

MUCH Importance - Check here if the question concerns something that a person should clearly be aware of in making a decision, and one way or the other, it would make a difference in your decision, but not a big, crucial difference.

SOME Importance - Check here if the question concerns something you generally care about, but something that is not of crucial importance in deciding about this problem.

LITTLE Importance - Check here if the question concerns something that is not sufficiently important to consider in this case.

NO Importance - Check here if the question is about something that has no importance in making a decision, and that you'd be wasting your time in thinking about this when trying to make a difficult decision. Some of the questions are apt to seem foolish or make no sense - - Check here on those questions.

In this questionnaire you will be asked to give your opinions about several stories. Here is a story as an example:

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family's only car. It will be used mostly to get to work and drive around town but sometimes for vacation trips also. In trying to decide what car to buy, Frank Jones realized that there were a lot of questions to consider. On this page there is a list of some of these questions.

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

INSTRUCTIONS FOR PART A: (SAMPLE QUESTION)

On the left hand side of the next page check one of the spaces by each statement of a consideration. (For instance, if you think that statement #1 is not important in making a decision about buying a car, check the space on the right).

GREAT Importance	MUCH Importance	SOME Importance	LITTLE Importance	NO Importance	
—	—	—	—	—	1. Whether the car dealer was in the same block as where Frank lives. (Note that in this sample, the person taking the questionnaire did not think this was important in making a decision.)
—	—	—	—	—	2. Would a <u>used</u> car be more economical in the long run than a <u>new</u> car. (Note that a check was put in the far left space to indicate the opinion that this is an important issue in making a decision about buying a car.).
—	—	—	—	—	3. Whether the color was green, Frank's favourite color.
—	—	—	—	—	4. Whether the cubic Inch displacement was at least 200. (Note that if you are unsure about what "cubic inch displacement" means, then mark it "no importance".)
—	—	—	—	—	5. Would a large, roomy car be better than a compact car.
—	—	—	—	—	6. Whether the front connibilities were differential. (Note that if a statement sounds like gibberish or non-sense to you, mark it "no importance".)

INSTRUCTIONS FOR PART B: (SAMPLE QUESTION)

From the list of questions above, select the most important one of the whole group. Put the number of the most important questions on the top line below. Do likewise for your 2nd, 3rd, and 4th most important choices. (Note that the top choices in this case will come from the statements that were checked on the far left-hand side - statements #2 and #5 were thought to be very important. In deciding what is the most important, a person would re-read #2 and #5, and then pick one of them as the most important, then put the other one as "second most important".

Most important _____

Second most important _____

Third most important _____

Fourth most important _____

HEINZ AND THE DRUG

In Europe a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost to make. He paid \$200 for the radium and charged \$2000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and began to think about breaking into the man's store to steal the drug for his wife.

Should Heinz steal the drug? (Check one)

- ☐ Should steal it
- ☐ Can't decide
- ☐ Should not steal it

HEINZ STORY

On the left hand side of the page check one of the spaces by each question to indicate its importance.

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

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

Most important _____

Second most important _____

Third most important _____

Fourth most important _____

STUDENT TAKE-OVER

At Harvard University a group of students, called the Students for a Democratic Society (SDS), believe that the University should not have an army ROTC program. SDS students are against the war in Viet Nam, and the army training program helps send men to fight in Viet Nam. The SDS students demanded that Harvard end the army ROTC training program as a university course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degrees.

Agreeing with the SDS students, the Harvard professors voted to end the ROTC program as a university course. But the President of the University stated that he wanted to keep the army program on campus as a course. The SDS students felt that the President was not going to pay attention to the faculty vote or to their demands.

So, one day last April, two hundred SDS students walked into the university's administration building and told everyone else to get out. They said they were doing this to force Harvard to get rid of the army training program as a course.

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

- ☐ Yes, they should take it over
- ☐ Can't decide
- ☐ No, they should not take it over

STUDENT TAKE-OVER

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

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

Most important _____
 Second most important _____
 Third most important _____
 Fourth most important _____

ESCAPED PRISONER

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

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

- ☐ Should report him
- ☐ Can't decide
- ☐ Should not report him

ESCAPED PRISONER

GREAT Importance
 MUCH Importance
 SOME Importance
 LITTLE Importance
 NO Importance

- | | | | | | |
|---|---|---|---|---|---|
| — | — | — | — | — | 1. Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person? |
| — | — | — | — | — | 2. Everytime someone escapes punishment for a crime, doesn't that just encourage more crime? |
| — | — | — | — | — | 3. Wouldn't we be better off without prisons and the oppression of our legal system? |
| — | — | — | — | — | 4. Has Mr. Thompson really paid his debt to society? |
| — | — | — | — | — | 5. Would society be failing what Mr. Thompson should fairly expect? |
| — | — | — | — | — | 6. What benefits would prisons be apart from society, especially for a charitable man? |
| — | — | — | — | — | 7. How could anyone be so cruel and heartless as to send Mr. Thompson to prison. |
| — | — | — | — | — | 8. Would it be fair to all the prisoners who had to serve out their full sentences if Mr. Thompson was let off? |
| — | — | — | — | — | 9. Was Mrs. Jones a good friend of Mr. Thompson? |
| — | — | — | — | — | 10. Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances? |
| — | — | — | — | — | 11. How would the will of the people and the public good best be served. |
| — | — | — | — | — | 12. Would going to prison do any good for Mr. Thompson or protect anybody? |

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

Most important _____
 Second most important _____
 Third most important _____
 Fourth most important _____

NEWSPAPER

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

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

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

Should the principal stop the newspaper? (Check one)

- ☐ Should stop it
- ☐ Can't decide
- ☐ Should not stop it

NEWSPAPER

GREAT Importance
 MUCH Importance
 SOME Importance
 LITTLE Importance
 NO Importance

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

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

Most important _____
 Second most important _____
 Third most important _____
 Fourth most important _____

WEBSTER

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

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

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

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

WEBSTER

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

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

Most important _____
 Second most important _____
 Third most important _____
 Fourth most important _____

THE DOCTOR'S DILEMMA

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

What should the doctor do? (Check one)

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

DOCTOR

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

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

Most important _____
 Second most important _____
 Third most important _____
 Fourth most important _____

CONFIDENTIAL INFORMATION SHEET

Please fill in the following information:

1. Name_____ Code Number_____
2. Date of Birth_____ 3. Sex_____
4. Father's education, (high school, college, master's degree, doctor's degree, other)_____
5. Mother's education_____
6. Father's occupation (specify in detail)_____

7. Mother's occupation (specify in detail)_____

8. Age and sex of brothers and sisters:
 - a. age_____ sex_____
 - b. age_____ sex_____
 - c. age_____ sex_____
 - d. age_____ sex_____
 - e. age_____ sex_____
 - f. age_____ sex_____
9. Where were you born? _____
Mother_____ Father_____
10. Clubs and groups to which you belong (including church):
 - a. Group_____
Office or participation_____
 - b. Group_____
Office or participation_____
 - c. Group_____
Office or participation_____
 - d. Group_____
Office or participation_____
11. What is your religion?
12. How much importance does religion have in your everyday life?
 - a. None_____
 - b. Little_____
 - c. Average_____
 - d. More than Average_____
 - e. A great deal_____

What work have you done most of the time during your adult years? _____

How many years did you do this kind of work? _____

As you think back, were you given as many raises as other people who had the same job as yours? _____

If you had your life to lead over again what kind of work would you do (what kind of job would you like to have had)? _____

Have you, on the whole, had a better or worse job than the average person?

- a. better than average _____
- b. worse than average _____
- c. about the same as average _____

Have you ever been married? _____

How many times have you been married? _____

How do you rate the happiness of your marriage?

- a. very unhappy _____
- b. unhappy _____
- c. average _____
- d. happy _____
- e. very happy _____

How many children did you have? _____

How often do you see or hear from your family or close relatives?

- a. less than once a year _____
- b. about once a month _____
- c. once or twice a week _____
- d. have no family or relatives _____

How many living brothers, sisters and close relatives do you now have? _____

What do you do in your free time? (check more than one)

- a. work on some hobby _____
- b. write letters _____
- c. attend movies _____
- d. attend club or other meetings _____
- e. participate in church work _____
- f. play golf or other sports _____
- g. play cards or other table games _____
- h. read _____
- i. just sit and think _____
- j. other (what?) _____

What hobbies or favourite pastimes have you?

Are there things you plan to do in the next year or two? _____

What things? _____

How often do you attend church services? _____

How many organizations such as clubs, lodges, etc., do you belong to? _____

Were you an officer in any of these organizations?

How many club meetings do you attend each month?:

- a. none _____
- b. about one a month _____
- c. few times a month _____
- d. few times a week _____

Do you receive a pension?_____

Do you receive old age security?_____

Do you intend to apply for old age security?_____

Did you ever own your own home?_____

Do you own it now?_____

Did you ever own any stocks and bonds?_____

Do you own any now?_____

Over most of your life have you consistently
had a bank account or savings account?_____

Have you now established credit or charge
accounts?_____

Have you ever owned any life insurance, not
including armed forces related insurance?_____

Do you have any now?_____

How much?_____

Throughout most of your life would you say
your salary and earning were:

- a. not enough to make ends meet_____
- b. just enough to get along_____
- c. sufficient and comfortable_____
- d. more than you needed for a comfortable
life_____

Check the highest grade of school that you
have finished:

Grade 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8

High 1 - 2 - 3 - 4 - 5

College 1 - 2 - 3 - 4

Have you ever been to any other kind of school
such as trade school or business school?_____

How many years?_____

APPENDIX D

TABLE 1

Scheffe Test Performed on Subject's
Education x Age Group¹

Age Group	15-18	50-72	19-29	30-49
Subeduc Mean	(10.80)	(17.15)	(17.44)	(17.60)

¹ Means underlined by the same line are not significantly different at the .05 level. This mode of presentation will be convention throughout this text.

TABLE 2

Scheffe Test Performed on Subject's
Socioeconomic Status x Age Group

Age Group	15-18	19-29	50-72	30-49
SES Mean	(48.09)	(54.31)	(54.96)	(64.10)

TABLE 3

Scheffe Test Performed on Father's
Educational Level x Subject's Age Group

Age Group	30-49	50-72	19-29	15-18
FaEduc Mean	(10.96)	(14.12)	(14.26)	(14.72)

TABLE 4

Scheffe Test Performed on Father's Socioeconomic
Status x Subject's Age Group x Sex

Age Group	30-49	19-29	15-18	50-72
FaSES Mean	(41.49)	(47.84)	(48.09)	(50.15)

TABLE 5

Scheffe Test Performed on
KMMS x Age Group

Age Group	15-18	19-29	30-49	50-72
KMMS Mean	(279.36)	(350.11)	(355.80)	(367.92)

TABLE 6

Scheffe Test Performed on
PSCORE x Age Group

Age Group	15-18	50-72	30-49	19-29
PSCORE Mean	(25.77)	(34.81)	(42.65)	(43.83)

TABLE 7

Scheffe Test Performed on
Subject's Educational Level x KMMS

Educational Level	Grade School	High School	College	Post Grad.
Mean KMMS	(217.00)	(288.32)	(350.73)	(355.00)

Additional analyses were performed, deleting the N = 1
in the grade school group. Results indicated no
significant differences between groups.

TABLE 8

Scheffe Test Performed on
PSCORE x Subject's Education

Educational Level	Grade School	High School	College	Post. Grad.
Mean PSCORE	(15.00)	(26.17)	(42.40)	(43.62)

Additional analyses were performed deleting the N = 1
in the grade school group. Results indicated no
significant differences between groups.

TABLE 9

Scheffe Test Performed on
KMMS x Socioeconomic Status

Socioeconomic Status	Low	Middle	High
Mean KMMS	(307.19)	(322.32)	(333.62)

TABLE 10

Scheffe Test Performed on
PSCORE x Socioeconomic Status

Socioeconomic Status	Low	High	Middle
Mean PSCORE	(28.57)	(36.48)	(36.65)

TABLE 11

Scheffe Test Performed on
KMMS x Religious Sect

ReSect	Catholic	Other	Protestant	Jewish	Agnostic	Athiest
Mean KMMS	(306.71)	(327.88)	(337.86)	(342.43)	(356.27)	(407.00)

TABLE 12

Scheffe Test Performed on
PSCORE x Religious Sect

Resect	Catholic	Other	Jewish	Protestant	Agnostic	Athiest
Mean PSCORE	(31.07)	(35.42)	(36.91)	(38.46)	(47.95)	(51.04)

TABLE 13

Scheffe Test Performed on
KMMS x Religious Participation

RePart	Weekly	Yearly	Monthly	Daily	Never
Mean KMMS	(310.24)	(318.02)	(321.40)	(335.75)	(351.54)

TABLE 14

Scheffe Test Performed on
PSCORE x Religious Participation (RePart)

RePart	Weekly	Daily	Monthly	Yearly	Never
Mean PSCORE	(30.72)	(31.31)	(34.09)	(35.20)	(42.62)

TABLE 15

Scheffe Test Performed on
KMMS x Religious Saliency

ReSal	Average	More Than Average	A Great Deal	Little	None
Mean KMMS	(300.88)	(316.94)	(319.79)	(336.48)	(350.68)

TABLE 16

Scheffe Test Performed on
PSCORE x Religious Saliency

ReSal	More Than Average	A Great Deal	Average	Little	None
Mean PSCORE	(30.72)	(31.31)	(34.10)	(35.21)	(42.62)

APPENDIX E

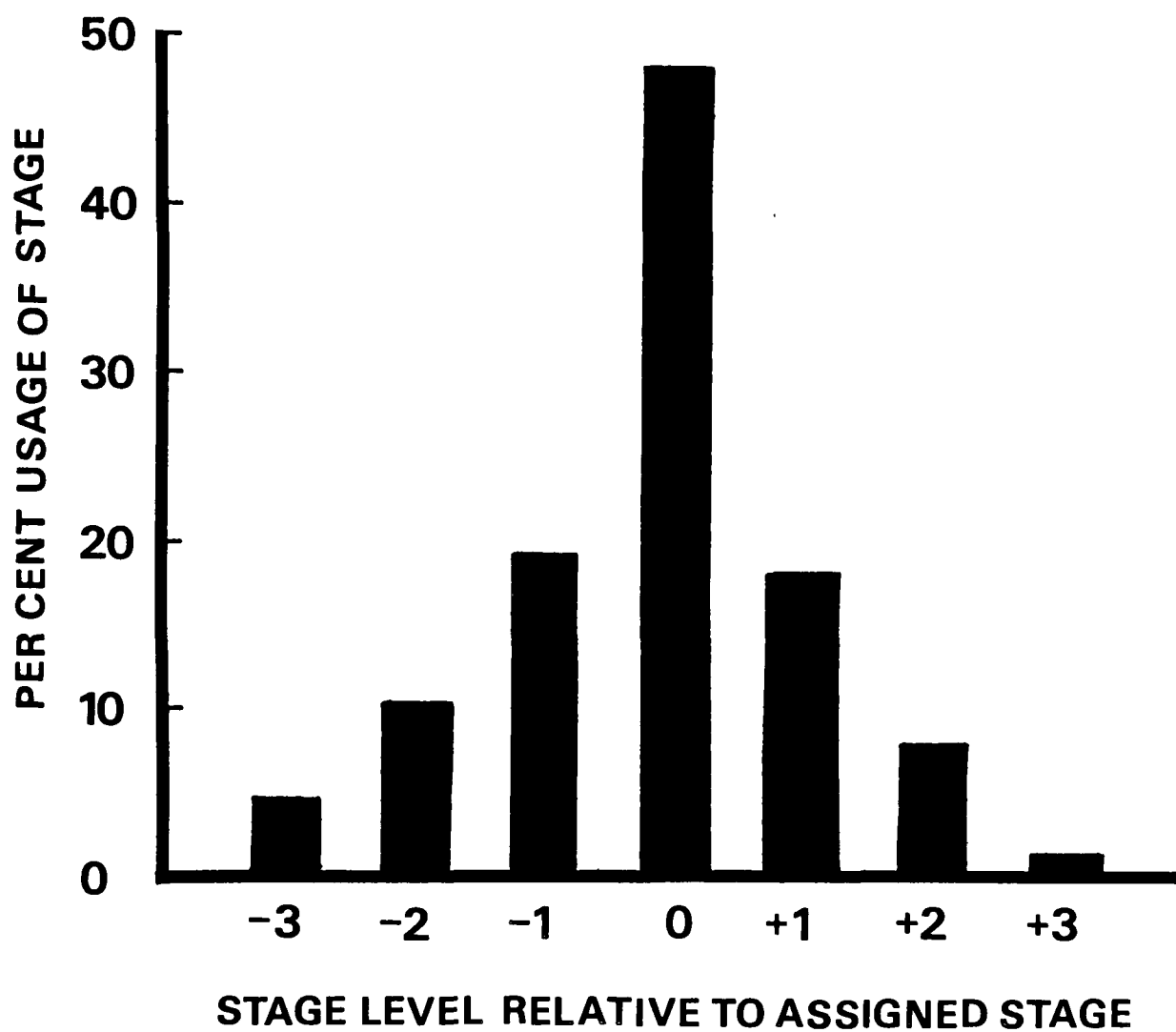
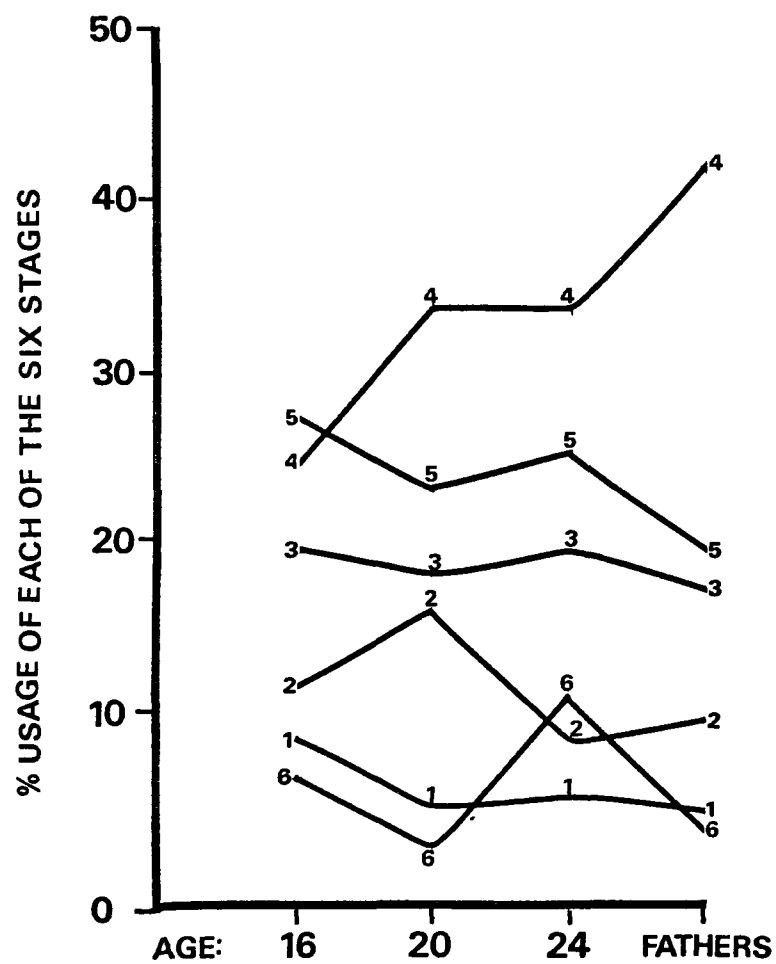
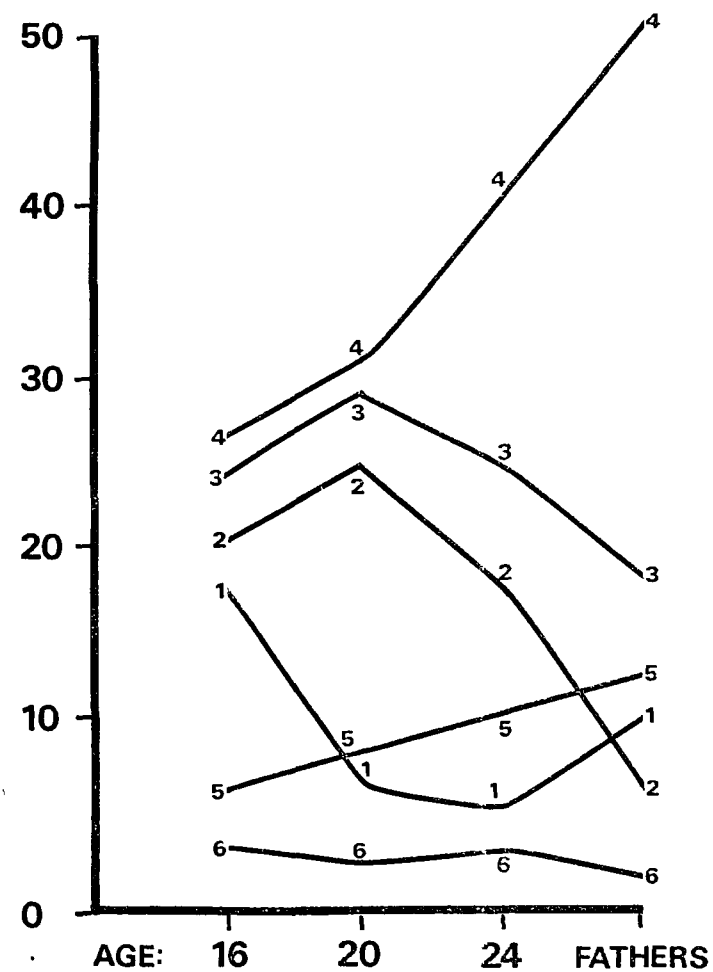


Figure 1. Graphic visualization of Guttman Quasi-simplex matrix.



MIDDLE CLASS



LOWER CLASS

Figure 2. Spontaneous production of moral reasoning in middle and low socioeconomic status groups across four age groups.