Using Student-Generated Moral Dilemmas to Construct an Objective Measure of Moral Reasoning for Intermediate Elementary Students

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ABSTRACT

This study employed a constructivistic approach to create a new objective measure of moral reasoning for use with intermediate grade, elementary students. Students rewrote three classic moral dilemmas used in Kohlberg's Moral Judgement Interview and rendered them more appealing and suitable for elementary students. From these rewritten dilemmas, a new measure of moral reasoning was constructed. One hundred and nine fifth, sixth and seventh grade students completed the new measure which consisted of ranking and rating statements corresponding to the stages of moral development for the three moral dilemmas.

A Weighted Average Score was representing the pattern of percent stage usage was calculated for each student. Alpha coefficients for Inter-item consistency ranged from .31 to .72 for the three different grade levels. Across all grade levels an alpha of .41 was found. Given the 3-item scale, this is not unusual. Internal consistency, as measured by Cronbach's alpha, was strongest for fifth grade students. The distribution of moral reasoning across the three levels of moral reasoning (i.e., preconventional, conventional, postconventional) revealed a consistent pattern of development. For example, pre-adolescents most frequently employed conventional reasoning and least often, postconventional reasoning. Results from an analysis of family composition and Weighted Average Scores revealed that students from non-intact families had higher moral reasoning scores than did students from intact families. The disequilibrium or conflict associated with non-intact family status may promote moral reasoning growth resulting from the decision making and responsibility these students experience.

Additional analysis examining the moral reasoning scores from the Social Problem Questionnaire and the Moral Judgment Interview revealed a consistent one stage difference between scores obtained on these two measures. Specifically, students' scores on the SPQ were approximately one stage higher than those on the MJI. These results confirm previous findings which have identified higher scores of moral reasoning on recognition tasks (i.e., the SPQ) than on production tasks (i.e., the MJI).

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CHAPTER I: INTRODUCTION

Moral reasoning refers to one's ability to reflect upon and cognitively interpret various social and moral dilemmas. Lawrence Kohlberg's (1969) cognitive-developmental theory of moral reasoning explains how moral judgment changes over time. Kohlberg's current stage model theory of moral reasoning has guided much of the current research in moral development.

There exist several reasons why the study of moral reasoning within elementary-aged children warrants further investigation. First, scant research is available with respect to the moral reasoning of intermediate grade, elementary-age students. This is due, in part, to the paucity of easily administerable measures of moral reasoning designed for this age group. Indeed, little research has been done because of the limited number of measures available. Second, the meagre data derived to date suggests that there exists a critical period with respect to pre-adolescence and moral reasoning intervention (Colby & Kohlberg, 1987). That is, students who are exposed to a moral reasoning intervention during pre-adolescence may show an increase in their moral reasoning level and subsequently, a reduction in disruptive behavior. Third, the work of Blatt and Kohlberg (1975) demonstrated the effectiveness of moral discussions as a means of increasing the moral reasoning of pre-adolescents. Kohlberg concluded that it was in fact the cognitive conflict arising from the moral discussions which stimulated growth in moral development as measured by his stage model of moral reasoning (Hersch, Paolitto, & Reimer, 1979).

Because moral reasoning plays an integral role in the social and cognitive development of the pre-adolescent, there exists a need to objectively evaluate the moral reasoning of elementary students in order to design and implement successful interventions to facilitate moral reasoning development. Given that moral reasoning is linked to behavior (Arbuthnot & Gordon, 1986), it is in the best interest of educators to be cognizant of the moral reasoning of their students. Objectively measuring moral reasoning in elementary school children will allow educators the opportunity to quickly and easily evaluate the progress of their students with respect to moral development so that they can design successful classroom or school-wide interventions.

The purpose of this study was to construct and partially validate an objective, paper and pencil measure of moral reasoning for pre-adolescents. The new measure is, in essence, an adaptation of two existing measures: the Defining Issues Test (DIT; Rest, Cooper, Coder, Masanz, & Anderson, 1974) an objective measure of moral reasoning for adolescents and adults, and the Moral Judgment Interview (MJI; Colby & Kohlberg, 1987) a measure of moral reasoning which assesses moral reasoning via a lengthy individual interview. Although these measures of moral reasoning are both reliable and valid, there exists a need for a measure of moral reasoning which is both easily administered and which evaluates the moral reasoning of intermediate elementary students (grades 4-7) objectively and reliably.

Identifying the moral reasoning level of students has implications for both the practical and theoretical realms of childhood education. Given the relation between moral reasoning and behavior, such a measure would be valuable for educators wanting to assess the moral reasoning of students. A test which measures pre-adolescent moral reasoning would help identify children "at risk" and determine which intervention is best suited to the needs of the child. From a theoretical perspective, the development of an objective measure of moral reasoning would allow researchers to investigate further the moral development of pre-adolescents, an age group which to date remains relatively unstudied.

Moral education within the public school system is becoming increasingly important given the changing role of the school in the socialization of students (Lickona, 1991). In many urban centers, the school is the primary socializing agent in the child's life, having come to the forefront of the nuclear family and the church. As single parent homes increase and affiliation with local churches decrease, (both traditional sources of socialization for children), the school is left as one of the remaining institutions of socialization. The need for moral education programmes within schools is argued by Thomas Lickona (1991) who highlights several telltale signs that the behavior of youths is in need of attention. Among such trends are: violence and vandalism, stealing, cheating, disrespect for authority, peer cruelty, and profanity. Schools must now, more than ever,

address the moral education and development of students. An easily administered measure of moral reasoning would best facilitate this.

1.1 Theoretical Significance of the Study

Lawrence Walker (1988) defines morality as

"... voluntary actions committed by individuals that are governed by some internal mechanism, and thus entails (at least) behavior, attitudes, intentions, and emotions, although it is not exclusively behavioral or contemplative" (p. 34).

Lawrence Kohlberg (Hersh et al., 1979) refines further the notion of morality in his definition of moral judgment as "... the thinking process we use to make sense out of the moral conflicts that arise in everyday life (p. 48)." Moral development or our understanding of how one's sense of justice develops over time, is an important facet of human nature.

Moral reasoning follows a developmental pathway in which, at first, the child relies heavily on the notion of right versus wrong as defined by adults. This rudimentary, very external way of reasoning gradually becomes internalized with age. Late adolescence and early adulthood is characterized by moral reasoning which more typically reflects an internalized understanding of what is right and wrong. Indeed, the moral reasoning of this age group is less influenced by justice as defined by authority figures and is instead characterized by a concern for individual rights and social contracts.

Within the realm of moral education, there exist two principal measures of moral reasoning: the DIT as developed by James Rest and others (1974); and the MJI developed by Lawrence Kohlberg (1958). These two measures have been used extensively in the measurement of moral reasoning.

The DIT is an objective measure of moral reasoning and was designed for use with both adolescents (age 13 and older) and adults. It consists of having subjects read three (short form) or six (long form) moral dilemmas and then rank a series of statements reflecting various stages of

moral reasoning which pertain to the dilemmas on a scale of importance, ranging from great importance to no importance. Once rated, the subject is then required to select and rank the four most important statements.

The DIT yields stage score percentages for Stages 2, 3, 4, 5, and 6. In addition, a "P Score" can be calculated which represents a subject's developmental level in terms of a continuous variable. The "P" score, the most frequently used index of moral reasoning derived from the DIT, refers to the relative importance attributed to principled (Stages 5 and 6) considerations in making moral decisions. The P score represents the sum of the subject's weighted rankings given to Stage 5 and 6 items and is expressed in a percentage.

The MJI, in contrast, consists of an individual interview in which the subject is presented different moral dilemmas and asked what the principal character in the dilemma should do. The MJI is administered by a trained interviewer. Subject responses are recorded throughout the interview and later transcribed. Trained coders then match the subject's responses to statements which are most typical of Kohlberg's different stages of moral reasoning according to a scoring manual (Colby & Kohlberg, 1987). Scoring of the MJI furnishes a profile of the subject's reasoning at each of the stages.

These two measures, while principal measures of moral reasoning widely used in moral education research, remain inadequate measures for use with elementary student populations. The limitations of the MJI lie principally in the time required to administer and score the measure whereas the DIT is restricted most fundamentally by the eighth grade reading level required to complete the ranking and rating tasks.

Given that moral reasoning correlates with behavior, (Arbuthnot & Gordon, 1986), it in and of itself merits further investigation given its potential for promoting socially responsible behavior in students. For example, once the moral reasoning level of students is identified, educators can best select and implement interventions which are most appropriately suited to the needs of the students. The identification of moral reasoning levels may be of benefit to both the individual child, and on a

larger scale, to the school itself as it would serve as a measure of the moral reasoning most characteristic of the students in the school.

1.2 Statement of the Purpose

There exists much research in the literature which has investigated the moral reasoning of adults (Rest, 1986) and to a somewhat lesser extent, that of adolescents (Schonert, & Cantor, 1991; Sigman, Ungerer, & Russell, 1983). There is, however, little research which addresses the moral reasoning of the pre-adolescent. This is, in part, because existing measures of moral reasoning are either time consuming, such as the MJI, or not designed to investigate this age group, such as the DIT. Certainly a measure which evaluates moral reasoning within a group setting, such as a classroom, has not been available. Thus the pre-adolescent population remains relatively unstudied with respect to moral reasoning.

At this time, no objective measure of moral development appropriate for intermediate grade students exists. The construction of an objective measure of moral reasoning for use with pre-adolescent populations would facilitate the understanding of moral reasoning because it would encourage further research on this age-group.

Objectively measuring moral reasoning in pre-adolescent populations has important ramifications for educators. First, it would allow teachers to identify the reasoning most characteristic of a given student. Second, it would allow educators to best match an intervention to the needs of the student. Lastly, such a measure would allow schools to gage the moral climate most characteristic of the school as a whole. Thus, the proposed measure has strength in its practical application for the school, for the classroom teacher, and for the individual student. The goal of the proposed study is to construct and partially validate an objective measure of moral reasoning for use with pre-adolescents using a constructivistic approach whereby students themselves contribute to the test construction. Chapter two contains a review of the literature pertaining to specific research questions derived from this goal.

CHAPTER II: LITERATURE REVIEW

This chapter begins with a review of the work of the principle theorists in the area of moral development. Specifically, the contributions of Jean Piaget and Lawrence Kohlberg will be examined as will commonly used measures of moral reasoning; the Moral Judgment Interview and the Defining Issues Test. A review of the literature concerning the variables which correlate with moral reasoning follows. A rationale for the study and research questions concludes this chapter.

2.1 Piaget

2.1a Constructivism

It is Piaget and his notion of constructivism which truly fuels the present study. Piaget (1932/1965) believed that in order for learning to be meaningful for the child, the child him/herself must be implicated in the learning process. That is, children should have an active role in constructing the learning process. This may be achieved by involving the child in decisions about the topics covered or in the choice of materials used in instruction. The constructivistic approach ensures that the learning process is meaningful for the child and not an externally imposed process which fails to take into account the views of the child him/herself.

This idea of implicating the learner in the learning process was applied to the construction of this study's objective measure of moral reasoning. It has been the author's opinion that the moral dilemmas used to measure moral reasoning (i.e., the MJI and DIT dilemmas) fail to speak directly to the experiences of adolescents and pre-adolescents. Take for example the dilemmas used in the MJI. The classic Heinz dilemma concerns the stealing of a drug by a husband in order to save his wife's life.

Heinz and the Drug Dilemma

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 10 times what the drug cost him to make. He paid \$400 for the radium and charged \$4,000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money and tried every legal means, but he could only get together about \$2,000, 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 having tried every legal means, Heinz gets desperate and considers breaking into the man's store to steal the drug for his wife (Colby & Kohlberg, 1987, p. 1).

The concepts inherent in this dilemma deal with issues of life and death, responsibility to one's spouse, and the ramifications of breaking the law. These clearly are issues which remain foreign to the average adolescent.

Yussen (1977) analyzed moral dilemmas written by 7th, 9th and 12th grade students. He was specifically interested in the issues or themes prevalent in the student-generated dilemmas. Contrary to the issues dealt with in many of the "classic" dilemmas used in both the MJI and the DIT (i.e., civil rights, life, death), Yussen identified themes generated by adolescents which centered upon interpersonal relations, physical safety, stealing, and drug use.

It became evident that in order to effectively evaluate the moral reasoning of pre-adolescents, it would be necessary to elicit their help in the development of the dilemmas used within the measure. Having included pre-adolescents in the moral dilemma writing process lends assurance to the notion that the dilemmas used in the measure will be appealing and age-appropriate for the pre-adolescent population. Moreover, the use of such dilemmas should best elicit the moral reasoning most characteristic of this age group.

2.1b Piaget's Theory of Moral Reasoning

The work of Jean Piaget (1932/1965) shed light on the concept of moral development in children. While his work principally focused upon the cognitive development of the child, he also proposed a theory of childhood moral development.

Piaget postulated that the moral reasoning development of the child is characterized by two stages (Kurtines & Pimm, 1983). The first stage, heteronomous morality, sees the child placing great emphasis on the objective qualities of acts and on morality as being dictated from adult to child by adult (omnipotent) authority figures. This first stage proposed by Piaget is most characteristic of children aged four to eight. The second stage of moral development refers to an autonomous sense of morality. At this stage, the child places less emphasis on obedience to authority figures and begins to evaluate for him/herself a sense of justice. The autonomous sense of morality appears at age eight and extends through to age 12. In essence, the two stages depict a transformation from a very external morality (i.e., morality as imposed by adults) to a more internal morality, where the child him/herself defines what is right or wrong.

According to Piaget, adults who reinforce children via a system of rewards and punishment reinforce heteronomous morality whereas adults who encourage the exchanging of views and discussion encourage autonomous morality (Piaget 1932/1965). The key for children in acquiring moral values is not in the indoctrination of values by adult figures but rather in the construction of the values by the child him/herself. This construction of a values system, according to Piaget, is best facilitated through interactions with others. The work of Piaget has inspired the work of Lawrence Kohlberg, who proposed a six stage model of moral reasoning.

2.2 Kohlberg

Without doubt, the work of Lawrence Kohlberg (1958, 1969, 1973), most notably his identification of the six developmental stages of moral reasoning, has been highly influential within the realm of moral education research. His contribution to the understanding of moral reasoning has not only shed light on an important area of human development but moreover, his work has

laid a foundation upon which much research investigating moral development has been possible. This, is due in large part to his development of the Moral Judgment Interview which measures moral reasoning. His cognitive-developmental theory of moral reasoning aims to explain how an individual's sense of justice, of what is right or wrong, develops over time.

Building upon the work of Dewey (1964) and Piaget (1932/1965), Kohlberg both refined and validated the stage theory of moral reasoning development. Kohlberg (1973) proposed a six stage model of moral reasoning. The six stages are categorized into three levels of development: the pre-conventional (preschool to middle school years); the conventional (adolescence to early adulthood); and the post-conventional (adulthood) (Colby, Kohlberg, Gibbs, & Lieberman, 1983). The pre-conventional level is composed of stages one and two and focuses upon the avoidance of punishment and the satisfaction of one's needs. The conventional level, which is composed of stages three and four, centers upon behaving so as to gain the approval of others and ensuring that behavior meets the expectations of those around us (e.g., family, nation). The postconventional level, which is comprised of Stages five and six, focuses upon obeying the legal standards as set by the society as a whole and exercising one's conscience as guided by universal principles of justice.

According to Kohlberg (1973), the stages of moral reasoning are characterized by three fundamental principles: the stages are "structured wholes", that is, individuals will use reasoning reflective of one stage most of the time with adjacent stages used concurrently; the sequence of the stages is invariant, that is, the development is from lower stages to higher stages and follows a sequential order; and lastly, the stages are integrated hierarchically, that is, the higher stages incorporate the lower stages. Longitudinal data derived from interviews using moral dilemmas has validated the stages with respect to the aforementioned criteria (Colby & Kohlberg, 1987).

With respect to the development of moral reasoning, like Piaget, Kohlberg held that individuals develop a sense of justice which initially is very external (i.e., imposed by others) to an internalized, sense of justice. The child reasoning at Stage 1, for example, is concerned with doing good so as to avoid punishment given out by an authority figure. The adult, in contrast, who

reasons at Stage 5, sees personal values and opinions as central to any decisions of what is right or wrong. An example dilemma followed by the reasoning characteristic of stages one and five best illustrates the difference between this external and internal sense of morality.

A dilemma used in the MJI is the dilemma "Joe and his father". The dilemma is as follows:

Joe is a 14-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 \$100 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 (Colby & Kohlberg,1987, p. 3).

An example of reasoning at Stage One would be: "It is important to keep a promise because if you don't then you get punished." Note that this response focuses on the avoidance of punishment when making a decision about the dilemma. This reliance on external demands is characteristic of Stage One reasoning in Kohlberg's typology. In contrast, reasoning at Stage Five would be: "Joe should refuse to give his father the money because autonomy with respect to personal property is the right of every individual." Note that this response conveys respect for individual rights. A non-egocentric and societal perspective is characteristic of Stage 5 reasoning (Colby & Kohlberg, 1987).

Kohlberg's principle contribution lies in his creation of the first measure of moral reasoning, the Moral Judgment Interview (MJI; Colby & Kohlberg, 1987). Following, two measures of moral reasoning will be examined. In addition to Kohlberg's Moral Judgment Interview, the Defining Issues Test (DIT), as developed by James Rest (1974), will also be reviewed.

2.3 Measures of Moral Reasoning

Lawrence Kohlberg (1958) developed a measure of moral reasoning in his dissertation. The MJI (Colby & Kohlberg, 1987) represented the first attempt at measuring moral reasoning. The measure consists of exposing a subject to a series of three moral dilemmas and having him/her respond to a number of probe questions designed to elicit the level of moral reasoning most characteristic of the subject. All interviews are administered individually by a trained interviewer and are recorded and later transcribed. The dilemmas used in the MJI center around a variety of fundamental issues. These include: life versus law, morality and conscience versus punishment, and contract versus authority. A total of nine to twelve standardized, probe questions are used during the interview. The subject's answers (the moral judgments) are then matched to statements (criterion judgments) representative of Kohlberg's stages of moral reasoning in the appropriate section of the scoring manual (Colby & Kohlberg, 1987).

The DIT, in contrast, as developed by Rest and others (1974), is a measure which evaluates a subject's moral reasoning by having him/her rate and rank a series of statements which correspond to a moral dilemma. The creation of the DIT represents an effort to create an objective measure of moral reasoning. James Rest's work stems from and is heavily influenced by the Kohlbergian approach to moral development. The DIT consists of six moral dilemmas (although a short form employing three dilemmas can also be used). The dilemmas used in the DIT are similar to those used in the MJI and as such, focus upon the same issues as are found in the MJI dilemmas.

The DIT, administered in a paper and pencil format, is appropriate for use with subjects as young as ninth graders through to adults. Subjects are asked to read a series of moral dilemmas and then to rate 12 statements on a scale of importance. Once rated, the four most important statements are then ranked in order from "Most Important" to "Fourth Most Important". Scoring of the DIT furnishes information regarding the percentage of reasoning found at the different stages as well as a "P" score which indicates the amount of reasoning a subject demonstrates at Stages 5 and 6. Because the DIT is a recognition task rather than a production task, it elicits higher stage reasoning than would a production task such as the MJI (Rest, 1979).

2.4 Limitations of Current Measures of Moral Reasoning

The limitations of the MJI have been highlighted throughout the moral reasoning literature (Carlo, Eisenberg, & Knight, 1992; Kurtines & Greif, 1974). Because the MJI is a production task where an interview is used to gather information concerning moral reasoning, it has been criticized as the interview questions vary across subjects (Kurtines & Greif, 1974). The use of the interview technique lends further difficulties in that it relies uniquely on verbal abilities and is vulnerable to experimenter bias (Carlo et al., 1992). Further, the MJI is individually administered and as a result, is very time consuming. Lastly, the MJI requires a trained interviewer to administer and a trained coder to score.

The limitations of the DIT lie principally in its restricted usage, namely that it cannot be used with children. Specifically, the eighth grade reading level required of subjects taking the DIT limits its use to ninth grade students to adults. The DIT format itself has been challenged in that the number of issues are unequal for each of Kohlberg's six stages of reasoning. Moreover, the statements themselves are arranged so that lower stage statements always appear before the higher stage statements (Martin, Shafto, & Van Deinse, 1977). The DIT nevertheless has strengths in its ability to be administered to large groups and its objective nature.

2.5 Moral Reasoning Correlates

Moral reasoning has been found to correlate with a variety of variables. In a 20 year longitudinal study, Kohlberg attempted to identify the variables which correlate positively with moral reasoning (Colby et al., 1983). His research identified the following variables as positive correlates of moral reasoning: age, IQ, socioeconomic status, and education. Kohlberg proposed a developmental model of moral reasoning and as such held that as children increase in age, they also increase in their level of moral reasoning. Kohlberg reports a correlation between age and moral reasoning level of .78. As mentioned earlier, Kohlberg's theory of moral reasoning is based on Piaget's cognitive-developmental model. Thus, one would expect moral reasoning to have a

cognitive component. Empirical research has supported such a claim. For example, Rest (1979) reports that correlations between moral judgment and IQ or achievement tests generally range from .20 to .50 (Rest, 1979). Although the positive correlations indicate that a cognitive component exists with respect to moral judgment, such modest correlations also suggest that moral judgment is not reducible to IQ. With respect to socioeconomic status, Kohlberg held that socioeconomic status was a reflection of an individual's participation in society (Colby et al., 1983). It was Piaget (1965) who put forth the notion that interactions with others facilitated moral development. Moderate correlations (.22 to .62) were found between moral reasoning and socioeconomic status. The variable of education was also examined by Kohlberg. Specifically, he looked at the relation between formal education in adults and level of moral maturity. The correlations between these two variables were found to range from .54 to .69. Kohlberg postulated that it was perhaps educational experience rather than educational level which most affected moral reasoning development.

2.6 Rationale for the Study

There exists a need to objectively evaluate the moral reasoning of the pre-adolescent. First, the MJI has been one of the few measures available to access the moral reasoning of these subjects. As previously stated, the limitations of the MJI make it ill-suited for group administration and impractical to administer by the classroom teacher. The DIT is equally unsuited for pre-adolescent populations given the eighth grade reading level required to comprehend the tasks involved in completing the questionnaire.

While the MJI and the DIT are the principle measures of moral reasoning, there exist lesser known measures which merit mentioning. One such measure is the recently constructed PROM, a measure of prosocial moral reasoning developed by Carlo and others (1992). This measure has a similar format to the DIT, although the dilemmas have been changed and center on themes which appear relevant to the adolescent population. It warrants mention that the mandate of the PROM is to measure prosocial moral reasoning rather than justice-oriented moral reasoning. Prosocial moral

reasoning differs from justice-oriented moral reasoning in that there is no direct conflict with the needs or wants of another individual or any conflict with authorities, rules, laws, punishments, or formal obligations (Carlo et al., 1992). Given the recency of the PROM, the efficacy with which it measures pre-adolescent moral reasoning remains to be seen.

Another measure of moral reasoning is the Sociomoral Reflection Measure (SRM) developed by Gibbs and Widaman (1982). This measure, inspired by the work of Kohlberg, asks subjects to respond in writing to social issues (e.g., euthanasia, honesty) as found in dilemmas taken from the MJI. The subject's answers are then matched to previously identified norms prevalent within the dilemmas. While the mandate of the SRM is to identify the level of social intelligence, it does nevertheless furnish information with respect to the subject's level of moral reasoning. The SRM is inappropriate for use by classroom teachers working with pre-adolescents given both the reading and writing competency required to adequately respond to the dilemmas within the measure, as well as the time-consuming scoring method.

In the construction of the new measure of moral reasoning, entitled the Social Problem Questionnaire (SPQ), the above mentioned limitations found in other measures of moral reasoning have been addressed.

The methodological issues of reliability and validity with respect to the SPQ will, as well, be examined. Reliability is defined here as how accurately the SPQ measures moral reasoning (Thorndike & Hagen, 1977). Specifically, what is the precision of the resulting score derived from the SPQ? That is, what is the level of internal consistency or stability of the SPQ? Various methods may be used to determine the reliability of a measure. These methods include: test-retest; split-half; Kuder-Richardson; and Cronbach's alpha. The internal consistency of the SPQ will be analyzed via a Cronbach's alpha coefficient as this is the most suitable measure of internal consistency for a test of this nature (McMillan & Schumacher, 1989). The SPQ does not lend itself to internal consistency analyses such as the split-half analysis or to the use of a Kuder-Richardson formula as it cannot be divided into two equal parts nor are the items used in the measure answerable by a YES or NO response. The Cronbach's alpha was determined to the most

appropriate measure of reliability given the nature of the SPQ in which there is a range of possible answers for each dilemma. That is, the subject has a choice of 10 statements from which to chose four to place in the Most Important column. A Weighted Average Score (WAS) is then calculated for the SPQ that represents the sum of the subject's weighted rankings ("Most Important" = 4, "Second Most Important" = 3, "Third Most Important" = 2, "Fourth Most Important" = 1) multiplied by the number of the stage of moral reasoning chosen divided by three (the number of dilemmas). These scores can range from 100 to 500. Thus, the questionnaire format of the SPQ lends itself best to the use of a Cronbach's alpha (1959) for examination of its internal consistency.

The validity of the SPQ will be analyzed with respect to the measure's content and convergent validity. Content validity is defined as the extent to which the dilemmas used in the SPQ are judged representative of the construct of moral reasoning (McMillan & Schumacher, 1989). Validity will further be examined through the analysis of the degree of relationship between the SPQ and a number of other measures given at the same time (Convergent validity; Campbell & Fiske, 1959). Because moral reasoning has previously been established to correlate positively with the constructs of age, IQ or achievement tests, education, and socioeconomic status (Colby et al., 1983), the Weighted Average Scores from the SPQ will be correlated to measures of these variables as a means of establishing the convergent validity of the SPQ. In addition, the Weighted Average Scores from the SPQ will be correlated to the Weighed Average Scores from the MJI. This analysis will furnish further information with respect to the convergent validity of the SPQ given that the mandate of both of these measures is to evaluate moral reasoning.

Based on the literature concerning moral reasoning development and on research which has established correlations between moral reasoning and other variables, the present study intends to answer the following questions:

2.7 Research Questions:

- 1. What is the internal consistency of the new SPQ measure? Specifically, how well do the three dilemmas used in the measure correlate to one another and in turn, reflect measurement of the same dependent variable of moral reasoning. (Reliability).
- 2. Does the SPQ accurately reflect the construct of moral reasoning? That is, do the items on the SPQ in fact represent the content of moral reasoning? (Content Validity)
- 3. How strongly do Weighted Average Scores obtained on the SPQ correlate to measures of the following variables: age; socioeconomic status; verbal ability; and Weighted Average Scores obtained from the MJI? (Convergent Validity).

CHAPTER III: METHODOLOGY

3.1 Description of the Sample

A total of 116 students enrolled in one elementary school participated in the study. From this total, 109 (94%) of the questionnaires met the acceptance criteria and were subsequently used in the study. (Seven students were excluded from the analyses because they failed to follow test instructions on the SPQ). The resulting sample was composed of 11 fifth graders, 48 sixth graders, and 50 seventh graders. Students were selected from a total of five intact classes. Four of the classes were composed of a combination of sixth and seventh grade students and one class was composed of fifth and sixth grade students. Two of the classes of sixth and seventh grade students were French Immersion classes where students receive 60% of their instruction in French. One of the sixth and seventh grade classes in French Immersion participated in the English Language Arts unit on moral dilemmas. These students were taught by the researcher who is an intermediate elementary teacher in the school.

There were 53 males and 56 females in the study. The students ranged in age from 10 to 13 years with a mean age of 11.7 years (SD = .88 months). The school is located in a predominantly middle class community in a large Western Canadian city. Students were predominantly Caucasian (69%) and came from families composed of both biological parents (82%). As calculated from the Blishen Index (Blishen, 1987), the mean socioeconomic status of the father's occupation was 52.50 (SD = 16.63). Such a score is typical of occupations which include service managers (52.49), science technicians and technologists (52.86), and fire fighters (51.17). The mean socioeconomic status of the mothers was 44.20 (SD = 13.74). This is reflective of occupations which include Dental Hygienist (45.02), Illustrating Artist (44.23), and Travel Clerks (44.92).

Information concerning the study was distributed to students one week prior to the collection of data and both parental and student permission were sent home. All but one student (grade 6) received parental permission to participate in the study. Additionally, the students participated in a

study investigating pre-adolescent friendships which was conducted in conjuction with this investigation.

3.2 Measures

3.2a. Social Problem Questionnaire (Appendix A)

The Social Problem Questionnaire was constructed via a three step process. First, students were asked to revise classic moral dilemmas used in Form A of the MJI and render them more appealing and suitable for use with pre-adolescents. In order for this to be accomplished students in one of the sixth and seventh grade classrooms studied moral dilemmas as part of their English/Language Arts programme. Particular emphasis was placed on how to write moral dilemmas and students were instructed in accordance to the principles outlined by Berkowitz (1991). Prior to writing the dilemmas, students were exposed to a variety of moral dilemmas (see Appendix A for an example). Dilemmas were presented in the form of controversial films, newspaper articles, and classical dilemmas (i.e., dilemmas written for discussion purposes). Students were encouraged to identify the components of the dilemmas and to react both verbally and in writing to the dilemmas. The language arts unit on moral dilemmas was 12 weeks long.

Students were instructed as to how to write moral dilemmas and were to ensure that each dilemma met the following criteria (Berkowitz, 1991):

- -the dilemma must be relevant to their life
- -the dilemma must be controversial in nature
- -the dilemma must be understandable/comprehensible
- -the dilemma must contain a character(s) and a certain level of character development
- -the dilemma must provide the character(s) with at least two clear choices
- -each dilemma must end with a SHOULD question.

Students were then required, as part of their English programme, to write three moral dilemmas. Students were encouraged to be creative and to brainstorm and plan out their dilemmas prior to writing. Students wrote a rough draft of each dilemma, had the dilemma proofread and edited by a peer for spelling errors, and then wrote good copies which were handed in to the teacher-researcher.

In all, the students generated a total of 75 moral dilemmas. A content analysis was done identifying the themes prevalent in the student generated dilemmas. The themes most prevalent in the dilemmas were peer pressure, honesty, personal safety, friendship, self-esteem, and theft and vandalism.

To create the dilemmas used in the SPQ students were asked to rewrite three moral dilemmas which are employed in standardized moral reasoning measures, most notably Form A of the MJI (Colby & Kohlberg, 1987). Students had the option to work individually or cooperatively with classmates when rewriting the dilemmas and were given the following instructions.

REWRITE THE FOLLOWING DILEMMA DOING YOUR BEST TO MAKE THE DILEMMA MORE APPEALING OR MORE INTERESTING TO INTERMEDIATE ELEMENTARY SCHOOL CHILDREN. THIS DILEMMA DEALS WITH THE ISSUES OF LIFE VERSUS LAW (OR CONTRACT VERSUS PUNISHMENT). YOU MAY CHANGE THE SETTING, THE CHARACTER(S), AND THE DILEMMA ITSELF BUT YOUR NEW DILEMMA MUST STILL FOCUS UPON AND CENTER AROUND THE ISSUES OF LIFE VERSUS LAW. WHEN WORKING IN GROUPS REMEMBER IT IS IMPORTANT TO HAVE INPUT FROM EACH GROUP MEMBER.

Three dilemmas were chosen from Form A of the MJI. The combination of the three dilemmas "Heinz", "Heinz, part 2", and "Joe and his father" were chosen as they represented well the norms of Life versus Law, Morality and Conscience versus Punishment, and Contract versus Authority. Additionally, this combination was chosen as the reliability had previously been established for these three dilemmas (Form A) in the MJI (Cronbach's alpha = .92) (Colby & Kohlberg, 1987).

The second step in the creation of the SPQ, once the classic dilemmas had been rewritten, was to select 10 statements (criterion judgments) from the MJI scoring manual (Colby & Kohlberg,

1983) for each of the three dilemmas. Two statements were chosen representing each one of Kohlberg's five Stages of moral development. That is, two statements represented Stage 1 reasoning, two statements represented Stage 2 reasoning, two statements represented Stage 3 reasoning, two statements represented Stage 4 reasoning, and two statements represented Stage 5 reasoning. [Stage Six, the most advanced reasoning level, has been excluded from practical applications of Kohlberg's stage theory model as few subjects demonstrate reasoning representative of this stage (Colby & Kohlberg, 1983)]. Of the two statements representing each Stage, both norms prevalent in each dilemma were represented by one of the statements. For example, the Heinz and the Drug dilemma deals with the norms of Life versus Law. As a result, care was taken to ensure that one criterion judgment selected from the MJI scoring manual represented each of these norms for each of Kohlberg's five Stages. Once statements had been chosen, they were then altered to fit the newly revised dilemma. An example of this transformation from the MJI scoring manual to the revised dilemma best illustrates this process. A Stage 2 statement (the criterion judgment) used in scoring the "Heinz and the drug" dilemma is, "Heinz should steal for his wife because if you (or I) were in Heinz's shoes you'd steal too or you'd do the same thing". The statement as it appears in the SPQ reads, "Whether Justin should steal for his dog because if you or I were in Justin's shoes, you'd steal too or you'd do the same thing". As can be seen from this example, the criterion judgment statements from the MJI were changed only in so much as was necessary to ensure suitability to the revised dilemmas. Once the criterion judgments from the MJI had been adapted to the new dilemmas, they were arranged in random order. This, in turn, reduced any possible effects the order of the statements may have had on the selection of statements by subjects.

The last step in the creation of the SPQ was to ensure the rating and ranking tasks for the students were of appropriate difficulty for the pre-adolescent age group. A three point Likert scale was chosen and students are asked to rate four of the ten statements for each dilemma as Very Important. From this Very Important column, students are asked to rank the four statements according to their importance.

The researcher read aloud the following directions to the students prior to administration of the SPO:

This questionnaire has been designed to find out what young people think about social problems. The questionnaire you are about to do is unique in that it has been partially written by kids your age. On the pages that follow you will be asked to read and respond to three stories in which the character faces a social problem where he/she must decide what exactly is the right thing to do. You have three jobs.

#1. Read each story carefully.

- #2. After each story you will find a list of 10 statements. Read carefully each statement and put a check mark in one of the three columns beside the statement depending on how important you feel the statement is. For example, if the statement was "Being allowed to chew gum in school is an expression of one's personal freedom.", and you completely agreed with this statement you would check the Very Important column. Whatever you do, you must have 4 check marks in the Very Important column, no more and no less. You may have as many or as few check marks in the two other columns as you like. If you do not understand a statement then mark it as Not Important.
- #3. After you have checked each statement as either Very Important, Somewhat Important, or Not Important, you must make sure that you have only four check marks in the Very Important column. Then, re-read the four statements you have checked off in the Very Important column and decide which statement is the most important, the second most important, the third most important, and the fourth most important statement. Put the number of the statement next to its order of importance. There is no need to put the statements from the Somewhat Important and the Not Important columns in order of importance. The following example will help prepare you. Read the following problem and then decide how important the following statements are to the main character.

In addition to being given the above directions, students were as well given a completed example (see "The New Jacket" in the SPQ, Appendix B).

3.2b Scoring of the SPQ

The SPQ was scored by two different methods. First, a Weighted Average Score was calculated. The WAS represents the stage level most frequently used by the subject and ranges from 100 to 500 (100 weighted average points per Stage). The second method of scoring provides a percentage of the subject's reasoning across the three levels of preconventional, conventional, and postconventional reasoning.

Calculating the WAS entailed summing the WAS for each of the three dilemmas and dividing by three to obtain the average WAS. The statements ranked in the Very Important column were matched to their stage score according to criterion judgment statements in the MJI scoring manual (Colby & Kohlberg, 1987). Once the corresponding stage level for each of the statements in the Very Important column was determined, the stage level for each statement was then multiplied by the ranking position of the statement (one to four). For example, a Stage 3 statement in the Very Important column would be multiplied by 4 if it was ranked as "Most Important" (the highest of the four possible rankings), or a Stage 3 statement in the Second Most Important column would be multiplied by 3. Scoring essentially involved multiplying the moral reasoning stage of the chosen statement by the ranked position (from one to four) of the statement.

The second method of scoring the SPQ provided a profile of the subject's moral reasoning across the three stages of preconventional, conventional, and postconventional reasoning. This scoring procedure entailed tabulating the frequency of statements selected from each of the three levels. This was determined by using the stage level of the statements identified in the Very Important column, and tabulating the frequency with which statements were selected from Stages 1 and 2 (preconventional level), Stages 3 and 4 (conventional level), and Stage 5 (postconventional level). The number of statements for each level was then divided by 12 (the total number of possible statements across the three dilemmas which could be ranked in the Very Important column) thus furnishing the distribution of reasoning across the three levels of moral reasoning.

3.2c. Demographic Information (Appendix C)

A questionnaire was designed to gather information concerning students' age, gender, ethnicity, parental occupation, and family composition (i.e., intact versus non-intact).

3.2d. Iowa Test of Basic Skills

A total of 39 questions taken from the Iowa Test of Basic Skills (ITBS; Iowa Testing Program, 1986) comprised this vocabulary measure which required students to select the word or words which most closely resembled the presented vocabulary item. The range of possible scores on the vocabulary measure were from 0 (no correct responses) to 39 (all questions answered correctly).

3.2e. Moral Judgment Interview (Appendix D)

Moral Judgment Interviews were administered by three trained interviewers who had students respond to two moral dilemmas. The two dilemmas used were "Valjean" and "Karl and Bob" (Form C). These particular dilemmas deal specifically with the norms of Morality and Conscience versus Punishment, and Contract versus Property. Although typically three dilemmas are posed in the MJI, only two were used because of time constraints. Previous research indicates that two dilemmas are sufficient for evaluating moral reasoning (Colby & Kohlberg, 1987).

The MJI is an individual interview which consists of presenting subjects with a series of moral dilemmas. Subjects are asked probing questions designed to elicit their best level of moral reasoning. All interviews were recorded and later transcribed.

Scoring of the MJI involves matching the subjects' responses to criterion judgments found in the MJI manual. Each moral judgment is assigned a stage score based on Kohlberg's stages of moral reasoning. Stage scores are either pure (e.g., Stage 2) or transitional (e.g., Stage 2/3). Both a Weighted Average Score (WAS) and a Global Stage Score may be obtained from scoring the MJI (Walker, 1988). For the present study, a WAS for each dilemma was calculated for each subject.

3.3 Procedure

A short presentation explaining the study was given to each of the five classes involved. Once permission slips had been returned indicating parental permission, the subjects own consent was obtained and the questionnaires were administered over a period of two, forty minute class periods. All measures were administered by the researcher and three assistants who gave clear instructions, complete with examples, to the students prior to any measures being given. The SPQ and the Iowa Test of Basic Skills were administered to each of the five intact classes, one class at a

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time. The MJI was administered individually by either the professor supervising the thesis, or two trained research assistants employed by the university. Administration of the MJI took approximately 30 minutes. For the administration of all measures, students were reminded of the importance of answering honestly and were ensured that their responses would remain confidential.

Chapter IV: RESULTS

The results will be analyzed in three principal sections. First, the reliability of the SPQ as reflected by the internal consistency, is reported. Second, the validity of the SPQ is discussed with respect to its content validity. Convergent validity is discussed last. This section includes an analysis of the correlation between Weighted Average Scores from the SPQ and Weighted Average scores obtained from the Moral Judgment Interview.

Preliminary analyses were conducted in order to determine if those students who had participated in the writing of the moral dilemmas for the SPQ (and the Language Arts programme on moral dilemmas) had somehow benefited from such an activity. A one-way ANOVA, controlling for age, indicated no class differences with respect to moral reasoning, $\underline{F}(4,102) = 1.90$, $\underline{p} > .05$. That is, the moral reasoning scores of the children in the class who participated in the Language Arts unit on moral dilemmas did not differ significantly from those children in the classes who did not participate (See Figure 1). Further preliminary analyses indicated that there were no sex differences with respect to moral reasoning scores on the SPQ, $\underline{F}(1,107) = 2.39$, $\underline{p} > .05$. Thus, this variable was not included in further analyses.

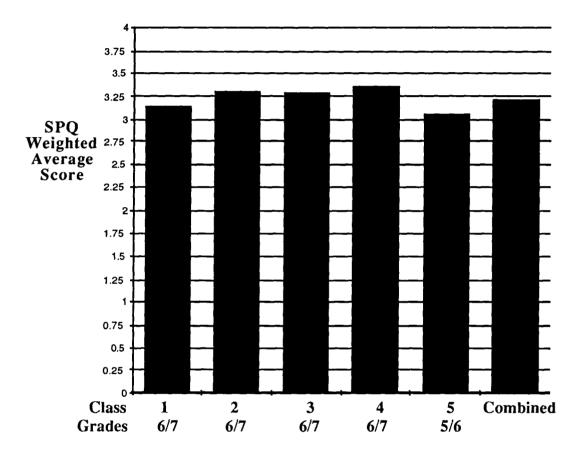


Figure 1. Social Problem Questionnaire Weighted Average Score (WAS) by Class

4.1 Reliability

4.1a Internal Checks on Subject Reliability

The internal consistency as measured by Cronbach's alpha (Cronbach, 1951), for all subjects on the SPQ (three dilemmas) was .41. The reliability coefficient was also calculated as well for each of the three grades. As shown in Table 1, the fifth grade students had the highest reliability coefficient, followed by the sixth and then the seventh grade students (.72, .33, and .31, respectively). While the fifth grade students consisted of nine subjects, it merits noting that the inclusion of the fifth grade scores of moral reasoning in the entire sample raises the alpha coefficient from .32 to .41. This provides argument with respect to the measure's reliability for students in the fifth grade.

Table 1 Reliability Coefficients Across Grades			
Grade	Reliability Coefficient (Cronbach's alpha)		
Five	0.72		
Six	0.33		
Seven	0.31		
Combined Grades	0.41		

The reliability of the measure is further supported by the low number of students who failed to adequately complete the questionnaire. As mentioned previously, a total of 116 students were administered the new measure of moral reasoning. Seven questionnaires (6%) were not used because they failed to meet the cut off point or minimum criteria required for a questionnaire to be admissable. The cut off point of acceptability is based on the criteria established by Rest (1974) in

the DIT scoring manual and has been adapted for the new measure of moral reasoning. Questionnaires were not included in further analyses if:

- 1. The subject inconsistently ranked and rated statements on **ONE** of the three dilemmas. That is, if the subject ranked statements from a column other than the **Very Important** column.
- 2. The subject ranked statements from the Very Important column but rated more than 4 statements as Very Important.
- 3. The subject failed to complete the questionnaire (i.e., failed to rate and rank statements for all three dilemmas).

The questionnaires which failed to meet the above criteria and which were subsequently not used in the analysis of the data included:

- -five unfinished questionnaires (e.g., one student was classified as English-as-a-Second Language, and another was classified as Learning Disabled).
- two questionnaires where the subject ranked statements from other than the **Very Important** column.

4.2 Validity

4.2a. Content Validity

The content validity of the measure, or the extent to which the contents of the SPQ (i.e., the dilemmas) are representative of the construct of moral reasoning, is evaluated first. The dilemmas used in the measure are modifications of the dilemmas used in Form A of the Moral Judgment Interview (Colby & Kohlberg, 1987). Form A was chosen because of the high reliability (alpha = .92) of the dilemmas in measuring moral reasoning. Students were given precise instructions on how to modify the dilemmas ensuring that the norms (e.g., Life versus Law; Morality and Conscience versus Punishment; Contract versus Authority) contained within each dilemma were found in their modified versions. Further assurance that the dilemmas written by the students were actual moral dilemmas rests on the training provided to each student within their Language Arts programme. Indeed, students were instructed in accordance to the principles outlined by

Berkowitz (1991) on writing moral dilemmas. That is, students had been exposed to several moral dilemmas, could easily identify the components of a moral dilemma, and had experience writing dilemmas prior to the modification of the MJI, Form A dilemmas.

4.2b Convergent Validity

A series of correlations were conducted in order to determine the relationship between the Weighted Average Scores for the SPQ and the variables of age, vocabulary, and socioeconomic status.

Pearson Product-Moment correlations indicated that SPQ moral reasoning was not significantly related to age ($\underline{r} = .15$, $\underline{p} > .05$) or to vocabulary achievement ($\underline{r} = .18$, $\underline{p} = .058$). To further examine the role of age in students' moral reasoning, subjects were classified into two age groups: Pre-adolescents (ages 10.46 to 11.60 years) and Early Adolescents (ages 11.61 to 13.93 years). When subjects were divided into the two groups of pre and early adolescents their respective mean SPQ Weighted Average Scores were 310.00 and 324.96 $\underline{F}(1,106) = 2.90$, $\underline{p} = .09$). Further, SPQ moral reasoning scores were not related to father's occupation ($\underline{r} = -.06$, $\underline{p} > .05$) or to mother's occupation ($\underline{r} = .10$, $\underline{p} > .05$).

Family composition was analyzed by dividing the composition of families into two groups: intact families consisting of both biological parents; and non-intact families consisting of any parenting situation other than biological mother and father (e.g., biological mother and stepfather, grandparents). There were a total of 88 students (81%) from intact families and 20 (19%) from non-intact families. A one-way analysis of covariance (ANCOVA) controlling for verbal ability, revealed that students from intact families had lower SPQ moral reasoning scores ($\underline{m} = 321.39$) than did students from non-intact families ($\underline{m} = 336.00$) $\underline{F}(1, 106) = 3.31$, $\underline{p} = .07$.

4.3 Moral Reasoning Distribution

The distribution of moral reasoning scores by grade (fifth, sixth, and seventh), by age (pre and early adolescents) and by stage level (preconventional, conventional, and postconventional) was determined. The age of the subjects was divided into two categories: pre-adolescents, who ranged in age from 10.46 to 11.60 years; and early adolescents, who ranged in age from 11.61 to 13.93 years. This distinction was made as it is consistent with previous research (Colby & Kohlberg, 1987) which has examined moral reasoning and age and has drawn a developmental distinction between pre- and early adolescents.

Figure 2 illustrates the distribution of SPQ Weighted Average Scores for each of the three dilemmas used in the measure by age group. As can be seen from the graph, early adolescents consistently obtain higher Weighted Average Scores of moral reasoning on all three of the dilemmas than do pre-adolescents.

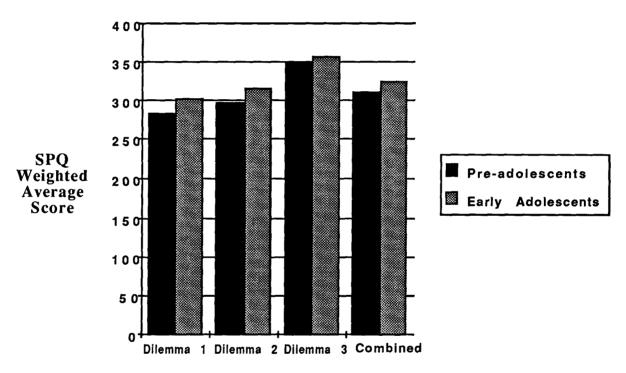


Figure 2. Social Problem Questionnaire Weighted Average Scores by Dilemma.

It may be recalled that the SPQ was scored by two different methods. In addition to determining a weighted average score, an analysis of the distribution of subject's moral reasoning across the three levels of preconventional (Stages 1 and 2), conventional (Stages 3 and 4), and postconventional reasoning (Stage 5) was determined. Both Table 2 and Figure 3 reveal the distribution of moral reasoning stage usage for each of the three grades. Students in all three grades use the conventional level of moral reasoning (Stages 3 and 4) most frequently, followed by the preconventional level (Stages 1 and 2), and the postconventional level (Stage 5). Figure 3 further demonstrates a pattern of moral reasoning development which is consistent with the developmental nature of moral reasoning in so much that the most complex reasoning (postconventional) is used less frequently than both the preconventional and conventional levels. This finding supports moral reasoning developmental theory which has empirically established that pre-adolescent children (ages 10 to 13) should demonstrate reasoning predominantly at the conventional level (Colby & Kohlberg, 1983).

Table 2 Mean Percentages of SPQ Moral Reasoning Levels by Grade				
Moral Reasoning		Grade		
Level	Five	Six	Seven	
Preconventional	37%	34%	36%	
Conventional	43%	42%	41%	
Postconventional	20%	23%	22%	

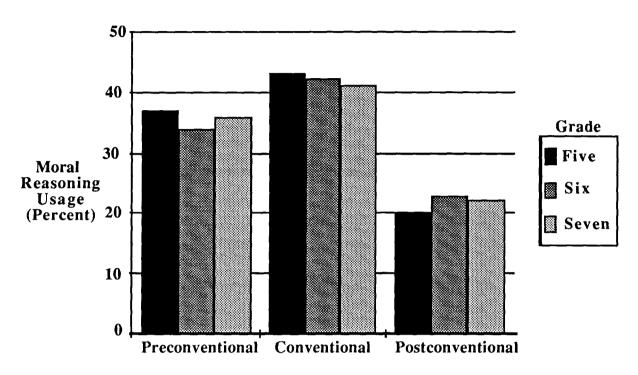


Figure 3. Level of Social Problem Questionnaire Moral Reasoning by Grade

4.4 The Relationship between the SPQ and the MJI

The Weighted Average Scores from 30 randomly selected Moral Judgment Interviews were correlated with the Weighted Average Scores from the SPQ. The mean WAS for the MJI was 238.50~(SD=39.21) and the mean WAS from the SPQ was 322.35~(SD=37.61). Both measures, while having a low correlation ($\mathbf{r}=.01,\,\mathbf{p}>.05$) do nevertheless have similar variability. That is, the subjects' scores were equally distributed around the respective means for both the MJI and the SPQ. Further, the difference between the total mean Weighted Average Scores for the two measures is approximately equivalent to one moral reasoning stage (i.e., 83 Weighted Average points). This finding is consistent with the nature of the two measures. Rest (1979) highlights the difference in moral reasoning scores for production versus recognition tasks. Specifically, scores are higher for recognition tasks than for production tasks (one stage above). Given the MJI is a production task which requires subjects to generate statements reflective of their moral reasoning level and the SPQ is a recognition task requiring subjects to identify existing statements of moral reasoning, the difference in the mean Weighted Average Scores for these two measures is both reasonable and expected.

Table 3 MJI and SPQ Weighted Average Scores				
	Mean	SD	Minimum	Maximum
MJI	238.50	39.21	153.00	302.00
SPQ	322.35	37.61	250.00	426.67

Table 4 represents an Inter-Correlation Matrix which identifies the correlations among all moral reasoning scores derived for the present investigation. As Table 4 reflects, scores from the postconventional level correlate highest to the MJI scores.

Table 4

Intercorrelations Postconventional M	of SPQ T Moral Reas	otal, Preco	nventional Kohlberg	, Convention's MJI (N	onal, = 109)
Variables	1	2	3	4	5
1. SPQ Total (WAS)		-0.71*	-0.02	0.72	0.01
2. Preconventional Reasoning			-0.51*	-0.47*	-0.01
3. Conventional Reasoning				-0.52*	-0.16
4. Postconventional Reasoning					0.14
5. MJI (WAS) ^a					

a N = 30 p < .001

CHAPTER V: DISCUSSION

The purpose of this study was to construct an objective measure of moral reasoning for use with pre-adolescents. The newly created measure (i.e., SPQ) represents a modification of the Defining Issues Test (Rest et al., 1974) and incorporates moral dilemmas used in the Moral Judgment Interview (Colby & Kohlberg, 1987). This research has been influenced by the Kohlbergian philosophy of moral development (Kohlberg, 1973) and Piaget's (1932/1965) notion of constructivism. As such, the SPQ has been designed with Kohlberg's stages of moral reasoning in mind, and has incorporated students' ideas in the actual construction of the measure.

The principal purpose of the study was to identify and establish both the reliability and validity of the SPQ. The creation of an objective measure of moral reasoning for use with pre-adolescents is particularly important as an objective measure of this nature has not been available for this population and as a result, little research has been conducted which investigates the moral reasoning of this age group. Increased understanding of pre-adolescent moral reasoning contributes to the overall understanding and comprehension of pre-adolescent development. The results and limitations of the present study will facilitate future research which focuses upon pre-adolescent moral development.

This chapter is comprised of a discussion of the results stemming from the research questions addressed in the study. First, the results of the reliability measure of internal consistency will be discussed. Specifically, is the SPQ reliable? That is, how well do the three moral dilemmas used in the measure actually measure the same construct of moral reasoning? Second, the convergent validity of the SPQ is discussed. This will include discussions of the correlations between moral reasoning scores obtained from the new measure and the variables of age, verbal ability, socioeconomic status, and family composition. Last, the distribution of moral reasoning across three levels (preconventional; conventional; post conventional) as well as the correlation between Weighted Average Scores from the SPQ and Weighted Average Scores obtained from the MJI, are examined.

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5.1 Reliability

The reliability of the SPQ as measured by Cronbach's alpha was .41, p > .05 for all subjects across the three dilemmas. This finding is consistent with previous research conducted on the internal consistency of measures with few items (Anastasi, 1988). Because the number of items in a scale influences the alpha coefficient, an item employing few items may typically report alpha coefficients of around .50 (Nunnally, 1978). Further analysis of the internal consistency of the SPQ reveals that the reliability was higher for fifth graders. The Cronbach's alpha of .72, p > .05. for the students in the fifth grade, despite their low number, suggests that the dilemmas used in the new measure tap the construct of moral reasoning most consistently when used with this age group.

The discrepancy in the total reliability coefficients for internal consistency for the original dilemmas used in Form A of the MJI (Colby & Kohlberg, 1987) and their modified versions employed in the new measure (r.= 92 versus r= .41) may be explained by the higher Weighted Average Scores obtained on the third dilemma of the new measure. The third dilemma entitled "My Money or Yours?" elicited a higher stage score level of moral reasoning than did dilemmas 1 and 2. The mean WAS for dilemma 1 was 283, for dilemma 2 it was 297, and for dilemma 3 it was 350. It is perhaps the nature of the topic discussed in dilemma 3 that pre-adolescents find more closely related to their everyday experiences. The dilemma "My Money or Yours?" asks whether a child who has earned and saved money for a new bicycle should give his money to his father who has asked for it in order to go on a golfing trip with his friends. This would in turn affect the ability of the dilemma to tap into more sophisticated moral reasoning. Dilemmas 1 and 2 focus upon the saving of a dog's life whereas dilemma 3 centers around the lending of money to a family member. Perhaps further still, the norms addressed in dilemma 3 (i.e., Contract versus Authority) are more concrete and easier to relate to than are the norms found in dilemmas 1 and 2 (i.e., Life versus Law and Morality and Conscience versus Punishment). If so, dilemma 3 would

elicit higher levels of moral reasoning than would dilemmas 1 and 2. This, in turn, would lead to a reduced internal consistency for the three dilemmas used in the measure.

5.2 Convergent Validity

5.2a Moral Reasoning and Age

The correlation between the SPQ Weighted Average Scores and age was determined and revealed a moderate relationship. Lawrence Kohlberg (Colby & Kohlberg, 1987) in a longitudinal study of moral reasoning, found the correlation between age and moral reasoning development to be <u>r</u>=.71. The low correlation found in the present study (<u>r</u> = .15, <u>p</u> > .05) may be explained by the restricted range of the subjects used. That is, the subjects participating in the present study ranged in age from 10.46 to 13.93 years whereas the subjects in Kohlberg's longitudinal study ranged in age from 10 to 28 years. The results of the analysis of the relationship between moral reasoning and age stemming from the present investigation are nevertheless consistent with findings cited elsewhere in moral reasoning literature in so much that the findings consistently reveal a developmental pattern in which moral reasoning scores increase with age. The correlation found between moral reasoning scores and age for the present investigation is attenuated. The relation between these two variables is further supported by the higher mean Weighted Average Score found for early adolescents (324.96) than pre-adolescents (310.00). The higher mean stage score for early adolescents is consistent with moral reasoning developmental theory which dictates that older subjects will attain higher scores of moral reasoning than will their younger counterparts (Walker, 1988).

5.2b Moral Reasoning and Vocabulary

Moral reasoning scores from the SPQ were found to correlate positively to the scores obtained on the Iowa Test of Basic Skills ($\underline{r} = .18$, p = .058). That is, subjects who scored highly on the SPQ also obtained high scores on the vocabulary measure. This finding is consistent with

previous research which has found positive correlations between results on the DIT and verbal ability, and between results on the MJI and education (Colby & Kohlberg, 1983; Rest, 1979).

5.2c Moral Reasoning and Family Composition

The finding that students who live in non-intact families composed of parental figures other than both their biological parents proves interesting. The students from non-intact families attained higher mean Weighted Average Scores than did subjects from intact families (336.00 versus 321.39). A possible explanation for this finding is the notion that the conflict often associated with factors contributing to families changing from intact to non-intact status (e.g., divorce or death of a parent), causes cognitive conflict which in turn stimulates moral development.

Larry Walker (1988) has examined the prerequisites to growth in moral development and has identified cognitive disequilibrium as a variable which stimulates moral reasoning development. This finding that cognitive conflict promotes moral development is further supported by the work of Colby (Colby, Kohlberg, Fenton, Speicher-Dublin, & Lieberman, 1977) who found that cognitive conflict created in students via classroom discussions of moral dilemmas promoted moral reasoning growth.

The work of Lawrence Kohlberg (1973) lends further support to the interpretation that the conflict often associated with non-intact family status may promote moral development. Kohlberg (as cited in Walker, 1988) argued that life experiences which stem from interpersonal relationships which involve responsibility, leadership, communication, and decision making also promote moral reasoning development. It is therefore highly plausible that a child experiencing the transition from intact to non-intact family status may experience more life events such as taking on more household responsibilities in the home of their newly single, working mother, or in making decisions concerning which parent to spend holidays with once parents are divorced. Further research is needed to determine what specifically about the non-intact family accounts for the observed differences in moral reasoning scores.

5.2d Moral Reasoning and the Moral Judgment Interview

The correlation between the moral reasoning scores from the SPQ and the scores obtained from the MJI was low ($\underline{r} = .01$, $\underline{p} > .05$). Despite this low overall correlation between the two measures, there was nevertheless a moderate correlation between the Weighted Average Scores on the MJI and the postconventional level of moral reasoning on the SPQ ($\underline{r} = .14$, $\underline{p} > .05$). This moderate correlation suggests that the SPQ identifies best a subject's higher level reasoning. This finding is similar to the 'P' value furnished by the DIT which represents a subjects level of reasoning at stage 5 (Rest et al., 1974).

A further finding which stems from an analysis of the Weighted Average Scores obtained from the SPQ and the MJI indicate that students consistently score one stage level higher (83 points) on the MJI than on the SPQ. This finding is consistent with previous research which has examined moral reasoning scores on recognition tasks versus production tasks (Rest, 1979).

5.3 Distribution of Moral Reasoning

Table 2 revealed the distribution of moral reasoning across the three levels of reasoning (preconventional, conventional, and postconventional) for each of the grades. It can be seen that the bulk of the reasoning is at the conventional level which corresponds to stages 3 and 4. Preconventional reasoning, or stages 1 and 2 are most frequently used after the conventional level. There is relatively low usage of the postconventional level as it corresponds to stage 5 which is a complex level of moral reasoning and not characteristic of the reasoning typical of the age groups studied.

Analysis of the distribution of the moral reasoning levels for each of the three grades indicates that students in each grade are consistent with respect to their usage of the three different levels of moral reasoning. That is, students in each grade follow the same pattern of stage usage. All students reason most frequently at the conventional level, then at the pre-conventional level, and demonstrate reasoning least often at the post conventional level. This finding is consistent with

both developmental theory and with the findings of Kohlberg (Colby & Kohlberg, 1987) which suggest similar trends in moral reasoning stage-use development.

5.4 Limitations of the Study

Identifying the limitations of the study is important as it serves to guide and potentially ameliorate the efficacy of the SPQ in objectively measuring pre-adolescent moral reasoning. First, including a larger sample size of fifth graders would lend support to the claim that the SPQ best identifies the moral reasoning of this age group. Second, including a sample of younger students, perhaps fourth grade students, would as well indicate the efficacy of the SPQ in identifying the moral reasoning of students aged nine to ten.

A further limitation of the study is the discrepancy between the Weighted Average Scores obtained on the three dilemmas used in the SPQ. Restructuring or modifying the three dilemmas used in the measure to eliminate the discrepancies in Weighted Average Scores between dilemmas 1 and 2 versus dilemma 3 may result in increased reliability. Having the content validity of the SPQ dilemmas analyzed by experts in the field of moral development would best accomplish this.

One limitation of the dilemmas themselves is that they each contain masculine characters. This, despite pre-adolescent girls being the authors of the revised dilemmas. A possible modification to the dilemmas would be to change the names of the characters from masculine names to gender neutral names.

The SPQ may further be ameliorated by the development of a scoring system which incorporates the ranking (i.e., the position of statements in the Most Important, Second Most Important, Third Most Important, and Fourth Most Important position) in determining the distribution of reasoning across the three levels of preconventional, conventional, and postconventional reasoning. This would result in a P value similar to that derived from scoring the Defining Issues Test (Rest et al., 1974).

Yet another means of ameliorating the scoring procedure of the SPQ would be to analyze the item consistency of the selected statements for each subject. That is, to provide a profile for each

subject as to the consistency with which adjacent stages are chosen. Doing so would identify whether subjects select statements which are adjacent to one another (e.g., stage 2 as Most Important, and stage 3 as Second Most Important) or if statements are chosen in a haphazard fashion. An analysis of this nature would identify a profile of moral reasoning for each subject with respect to his/her consistency in identifying statements reflective of similar or adjacent levels of moral reasoning.

5.5 Conclusions and Directions for Future Research

Despite the aforementioned limitations, there nevertheless exist important practical and theoretical implications stemming from the findings of this study. First, the SPQ proved reliable for intermediate elementary students and may best measure the moral reasoning of students in the fifth grade. Once again, administration to a larger sample of fifth grade students and the inclusion of younger students, perhaps fourth graders, would better identify the efficacy of the SPQ in measuring the moral reasoning of these students. Second, a consistent relationship was found between the SPQ and the MJI. That is, a one stage difference between these two measures was found. The SPQ (a recognition task) identified the weighted average score of subjects approximately one stage above the MJI (a production task). Third, the results of the study indicate that students from non-intact families have higher moral reasoning scores than do subjects from intact families. This may be due to the disequilibrium or conflict these subjects have experienced stemming from the life experiences they have had which subjects in intact families have not experienced. Future research aimed at distinguishing the characteristics of non-intact families which promote moral reasoning growth would contribute to our understanding of the role of specific family dynamics in moral reasoning development.

The findings further reveal distinct patterns of development with respect to age. Moreover, the findings are consistent with developmental theory in that moral reasoning scores increased with age. Early adolescents scored higher on the SPQ than did their younger, pre-adolescent counterparts. Additionally, the results showed that the majority of the subjects used conventional

reasoning most frequently, and postconventional reasoning least often. This finding is as well consistent with the developmental nature of moral reasoning. Postconventional reasoning was found to correlate best with the Weighted Average Scores obtained on the MJI. As previously suggested, the SPQ may best measure a subject's higher stage reasoning.

The creation of the SPQ represented an attempt at objectively measuring pre-adolescent moral reasoning. The findings stemming from the SPQ, most notably the pattern of moral reasoning development identified, as well as the relationship between the SPQ and the MJI weighted average scores, is encouraging. Further analysis of the scoring system of the SPQ in addition to the inclusion of younger students in the sample, should direct future research.

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Appendix A

Example of newspaper article used in language arts unit on moral dilemmas.

The Province

ver forced injurec

By Gordon Clark Staff Reporter

It was a life-or-death choice.

The caver who chose life was forced to leave his injured buddy to die deep within Canada's largest cave yesterday.

The tragedy unfolded as 39 crack rescuers tried desperately to reach the men.

The caver, exploring Arctomys Cave on Mount Robson, was crushed late Thursday when rocks fell on him 390 metres (1,300 feet) below the surface, about 1,050 metres into the cave, 68 kilometres northeast of Valemount.

injured man in the near-freezing cavern while two other companions returned to the surface. They

Rescuers work to recover body of dead colleague

walked 17 kilometres through knee-deep snow to the nearest road and called RCMP late Friday.

But some time yesterday, fearing they both would die of exposure, the pair in the cave decided the injured man should wait for rescue alone and not risk both their lives.

"They talked about it and did One caver stayed with the some soul-searching," said Valemount RCMP Const. Marvin Toma. "It wasn't an easy decision."

When the advance rescue team

harder to stay warm."

The injured caver's buddy remained with him for about 40 hours and the rescue party found him as they went in, said John Tay-

reached the man he was dead.

"The cave that they're in, there's

a stream running though it," said

Toma. "Because of the weather

conditions, the dampness, it's very

cold. When you're cramped up it's

Mount Robson provincial park.

The rescuers were working through the night to recover the

body. Taylor said.

"Those guys are still up in the mountain," he said last night. "It's a highly technical rescue. There's a series of steps down. It's no small undertaking.

The path rescuers must use to extract the body "isn't terribly confined." rescue co-ordinator Clair Israelson said.

"It's not as though they have to go through very many squeezes. It's possible to move without undue difficulty."

But ropes will be needed to winch the body up cliffs.

The dead man's name was unavailable and police did not know lor, the assistant chief warden in the cause of death.

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Appendix B

Social Problem Questionnaire (SPQ)

NAME:	
DATE: T	
AGE:	

SOCIAL PROBLEM QUESTIONNAIRE

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- #1. Read carefully each story.
- #2. After each story you will find a list of 10 statements. Read carefully each statement and put a check mark in one of the three columns beside the statement depending on how important you feel the statement is. For example, if the statement was "Being allowed to chew gum in school is an expression of one's personal freedom.", and you completely agreed with this statement you would check the Very Important column. Whatever you do, you must have 4 check marks in the Very Important column, no more and no less. You may have as many or as few check marks in the two other columns as you like. If you do not understand a statement then mark it as Not Important.
- #3. After you have checked each statement as either Very Important, Somewhat Important, or Not Important, you must make sure that you have only four check marks in the Very Important column. Then, re-read the four statements you have checked off in the Very Important column and decide which statement is the most important, the second most important, the third most important, and the fourth most important statement. Put the number of the statement next to its order of importance. There is no need to put the statements from the Somewhat Important and the Not Important columns in order of importance. The following example will help prepare you. Read the following problem and then decide how important the following statements are to the main character.

The New Jacket

Curtis wants to buy a new jack	et with the name of hi	s favorite sports team written on	the
back. He has needed new clothes	for school for a long tir	ne now but would really like to bu	y the
jacket. All his friends at school ha	ve a jacket of their fav	orite sports team.	
Should Curtis buy the jacket?	•	·	
Should buy	Can't decide	XShould not buy	

Very Important	Somewhat Important	Not Important	
		х	Whether Curtis buys the jacket on a Monday or a Saturday.
Х			2. That all of his friends at school have a sports jacket.
х			3. That the jacket is on sale for half price.
	х		That the jacket is popular among both boys and girls.
х			5. That the jacket is the right size for Curtis.
X			6. That Curtis believes he will fit in better with his friends if he has a sports jacket.

From the Very Important column, select the four most important:

Most important	3
Second most important	6
Third most important	2
Fourth most important	5

The Dying Dog Dilemma

Should Justin steal the money? (Check one)

Sh	ould steal	it	Can't decideShould not steal it
Very Important	Somewhat Important		
			Whether Justin should steal for his dog because if you or I were in Justin's shoes, you'd steal too or you'd do the same thing.
			Winether Justin should not steal because it's a crime, wrong and against the law.
		۴.	3. People should do everything they can to save another's life because people must have some sense of responsibility for others for the sake of society or humanity.
		,	4. Whether Justin should not steal in order to leave a good impression in the community.
			5. Whether Justin should steal the money because his dog might be a very important dog or might own a lot of dog toys.
			6. Whether Justin or anyone should not steal because he would be taking too great a risk.
			Whether one should obey the law because if individual's are to live together in society, there must be some common agreement.
			8. Whether Justin should steal the money because the right to life is universal or basic.
			Whether Justin should steal the money because he will feel guilty if he doesn't try to save his dog.
			10. It is important to obey the laws because laws serve to protect productive and orderly functioning of society.

From the Very Important	column,	select	the tour	most	ım
Most important					
Second most important					
Third most important					
Fourth most important					

The Dying Dog Dilemma Part-Two

Justin snuck into his parent's room when they were at work and took \$150 from his parent's sock drawer. He added this to the \$50 he had already saved from his paper route. Tony, Justin's little brother, saw Justin take the money. Tony really wants Butch their dog to get better but he knows that stealing is wrong. Tony heard his parents car door shut in the driveway outside. Justin had the money but not the medicine. Tony knew that if he told now Butch would not get better. If he didn't tell and his parents found out, he would be punished.

	_Should te	ell	Can't decideShould not tell
Very Important	Somewhat Important	_	
			Whether Justin should be turned in because if we can assume a just legal system is operating, citizens ought to abide by the due process as provided by that system.
			2. Whether Tony should turn Justin in because respect for the law is essential to society.
			3. Should the parents go easy because they should realize that the law is not designed to take into account every particular case or to anticipate every circumstance?
			Whether Tony should turn in Justin because if Tony doesn't he'll be punished himself.
			5. Whether Tony should not tell because Justin will save the dog who may be a famous or Important dog.
			Whether the parents should go easy because they should realize that the right to life is more basic than property rights.
			7. Whether the parents should punish Justin because if Justin finds or starts to see that he can get away with it, he might try to steal again.
			8. Whether Justin should be punished because he should suffer for what he has done.
			Whether Tony should not report Justin if he likes Justin or doesn't want him to be put in a detention center.
			10. Whether the parents should go easy because Justin thought what he was doing was right or thought it was right to save lives.

Most important	.:	
Second most important		
Third most important		
Fourth most important		
Some most important		

From the Very Important column, select the four most important:

Should Tony tell on Justin? (Check one)

Billy is a 12 year old boy who wanted to get a new bike. His dad said that he could get the bike if he earned his own money. Billy had a paper route but it didn't pay a lot so he did little jobs for his neighbors and for his family. It took a long time and a lot of hard work but Billy finally earned enough money to buy the bike. Just after Billy told his dad about the money he had earned, his dad changed his mind. Some of his friends decided to go on a golf trip to California and he needed the money for the plane ticket. He told Billy to give him the money and that he could earn the money again. Billy was really looking forward to getting a new bike. Summer was coming up and all the other boys had bikes to go the park with or to just ride around on. Billy really wanted to buy the bike so he thinks of refusing to give his father the money.

Should give	Can't decide	Should not give

Should Billy give his father the money? (Check one)

Very Important	Somewhat Important	Not Important	
important	important	mportune	Whether the most important thing a father should consider is that the other person should be respected as an individual human being.
			 Whether Billy should give his father the money because his father is responsible for making decisions concerning his son.
			Whether Billy's father does not have the right to demand the money because Billy should be learning about hard work or responsibility and the value of the dollar.
			 Whether Billy should refuse to give his father the money because Billy earned, worked for, and saved the money.
			It is important to keep a promise because if you don't then you get punished.
		:	Whether Billy should refuse to give his father the money because Billy is an individual whose personal rights are of equal value to his father's.
			 Whether Billy should refuse to give his father the money because in breaking the promise his father is setting a bad example for Billy.
			8. Whether Billy should give his father the money because if he refused his father might take away his privileges or punish him.
			9. Whether Billy should give his father the money because his father will pay him back later, or do favors for him.
			10. Whether Billy should give his father the money because his father has his best interest at heart, is acting for his own good, and is doing his best to bring up his son.

From the Very Important column, select the four most important:

Most important	
Second most important	
Third most important	
Fourth most important	

A Measure of Moral Reasoning

Appendix C

Demographic Information: Tell us about yourself.

TEI	LUS	Α	ROL	IT Y	Ol.	JR:	SEL	F

We are interested in obtaining some information about your background. Please follow the directions carefully, and answer all of the questions. REMEMBER, YOUR ANSWERS WILL REMAIN PRIVATE AND WILL BE SEEN ONLY BY THE RESEARCHERS.

1.	How do you describe yourself? (CIRCLE ONE)
	a. White
2.	Are you male or female? (CIRCLE ONE)
	a. Male 1 b. Female 2
3.	How old were you on your last birthday?(years)
4.	What is your birthdate?(MONTH) (DAY) (YEAR YOU WERE BORN)
5.	What GRADE are you in this year? (CIRCLE ONE)
	5ТН 6ТН 7th
6	Which of these adults do you live with MOST OF THE TIME? (CIRCLE ALL THE PEOPLE THAT YOU LIVE WITH)
	a. Both my parents
7.	Please describe the job held by your FATHER (stepfather or male guardian)(DESCRIBE WHAT THEY DO AT WORK: for example, office clerk, salesperson, auto mechanic, nurse, electronics technician, lawyer, etc.)
3.	Please describe the job held by your MOTHER (stepmother or female guardian). (DESCAIBE WHAT THEY DO AT WORK: for example, office clerk, salesperson, auto mechanic, nurse, electronics technician, lawyer, etc.)

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Appendix D

Moral Judgment Interview: Form C

Dilemma VIII:

In a country in Europe, a poor man named Valjean could find no work, nor could his sister and brother. Without money, he stole food and medicine that they needed. He was captured and sentenced to prison for six years. After a couple of years, he escaped from the prison and went to live in another part of the country under a new name. He saved money and slowly built up a big factory. He gave his workers the highest wages and used most of his profits to build a hospital for people who couldn't afford good medical care. Twenty years had passed when a tailor recognized the factory owner as being Valjean, the escaped convict whom the police had been looking for back in his hometown.

(check for comprehension by asking the child to tell you what the story is about)

Probe Questions:

- 1. Should the tailor report Valjean to the police?
- 1a. Why or why not?
- 2. Does a citizen have a duty or obligation to report an escaped convict?
- 2a. Why or why not?
- 3. Suppose Valjean were a close friend of the tailor. Should he then report Valjean?
- 3a. Why or why not?
- 4. If Valjean were reported and brought before the judge, should the judge send him back to jail or let him go free?
- 4a. Why?
- 5. Thinking in terms of society, should people who break the law be punished?
- 5a. Why or why not?
- 5b. How does this apply to what the judge should do?
- 6. Valjean was doing what his conscience told him to do when he stole the food and medicine. Should a lawbreaker be punished if he is acting out of conscience?
- 6a. Why or why not?

Dilemma VII:

Two young men, brothers, had gotten into serious trouble. They were secretly leaving town in a hurry and needed money. Karl, the older one, broke into a store and stole \$1,000. Bob, the younger one, went to a retired old man who was known to help people in town. He told the man that he was very sick and that he needed \$1,000 to pay for an operation. Bob asked the old man to lend him the money and promised that he would pay him back when he recovered. Really Bob wasn't sick at all and he had no intention of paying the man back. Although the old man didn't know Bob very well, he lent him the money. So Bob and Karl skipped town, each with \$1,000. (Check for comprehension by asking the child to retell the story. Make sure they know what Karl did and what Bob did in the story.)

Probe Questions:

- 1. Which is worse, stealing like Karl or cheating like Bob?
- 1a. Why is that worse?
- 2. What do you think is the worst thing about cheating the old man?
- 2a. Why is that the worst thing?
- 3. In general, why should a promise be kept?
- 4. Is it important to keep a promise to someone you don't know well or will never see again?
- 4a. Why or why not?
- 5. Why shouldn't someone steal from a store?
- 6. What is the value or importance of property rights?
- 7. Should people do everything they can to obey the law?
- 7a. Why or why not?