INTERRELATIONS AMONG EMPATHY,
MORAL JUDGMENT, AND MORAL ORIENTATION
IN ADOLESCENTS

by

ANGELA YU
B.Sc., The University of Toronto, 1980

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
in
THE FACULTY OF GRADUATE STUDIES
Department of Education and Counselling Psychology, and Special Education

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THE UNIVERSITY OF BRITISH COLUMBIA
April 2001
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Department of Educational and Counselling Psychology, and
Special Education

The University of British Columbia
Vancouver, Canada

Date April 27, 2001
ABSTRACT

The purpose of the present study was threefold: (1) to differentiate between dispositional and situational moral orientations; (2) to explore the interrelations among dispositional and situational moral orientation, moral judgment, and empathy; and (3) to investigate age and sex differences in adolescence, with respect to the above variables, from a multidimensional perspective.

Voluntary participants included 149 boys and 155 girls, of multiple ethnic groups, from Grades 8 to 12, in a B. C. high school. They answered five sets of questionnaires: (1) personal information, (2) moral judgments measured by the 3-story Defining Issues Test (DIT; Rest, 1993) and situational moral orientation with regard to the three DIT stories and a realistic abortion dilemma (the Objective Measure of Situational Moral Orientation), (3) empathic tendencies (the Interpersonal Reactivity Index; Davis, 1994) and social desirability (16 items of the Children’s Social Desirability scale; Crandall, Crandall, & Katkovsky, 1965), (4) dispositional moral orientations (the Objective Measure of Dispositional Moral Orientation), and (5) an honesty check, in a 75-minute class period.

The hypothesized developmental changes and sex differences in empathy and moral judgment were generally supported, but not in moral orientation. A developmental trend toward a less justice-oriented dispositional and situational moral orientation was speculated, regardless of sex and ethnic groups. Boys and girls did not differ in their dispositional moral orientation, and adolescents were generally care-oriented in their dispositional orientation. Girls scored higher than did boys on justice situational orientation scales, but not on care situational orientation scales.
These findings seem to contradict Gilligan’s (1994, 1996) theory that adolescent girls would adopt the ethic of care because of a desire for relationships. These findings were also at odds with previous research that sex differences on moral orientation emerged at adolescence and that more adolescent girls than boys tended to use care or both orientations (e.g., Johnson, 1988). Overall, the results suggest that there are individual differences in dispositional moral orientation among adolescents, but that sex is not a good identifier.

Present findings supported hypothesized positive correlations between dispositional and situational moral orientation, care orientation and empathic affects, as well as justice orientation and perspective taking and the DIT-U score (a measure of participants’ reliance on justice moral reasoning). There were also positive correlations between moral judgment and empathic concern and perspective taking. Nonetheless, present results indicate that students with higher justice scores and lower care scores are more likely to score higher on moral judgment. As a consequence, the hypothesized link between a mixed/balanced orientation and moral judgment was not established. Overall, dispositional moral orientation performed better than empathy in predicting moral judgment development. The combination of dispositional and situational moral orientation seemed to have some predictive power on moral judgment.

In sum, these findings support the differentiation between dispositional and situational moral orientation. The relations between perspective taking and empathic concern in morality seem to be bidirectional (Eisenberg, Shea, Carlo, & Knight, 1991) rather than unidirectional (Davis, Hull, Young, & Warren, 1987). Intrapersonal factors (dispositional empathy and dispositional orientation) and situational factors (situational moral orientation) contribute almost equally in the process of moral reasoning.
### TABLE OF CONTENTS

Abstract ................................................................................................................................. ii

Table of Contents ................................................................................................................ iv

List of Tables ........................................................................................................................ viii

Acknowledgements ............................................................................................................... ix

Chapter 1: Introduction ........................................................................................................... 1
  Moral Psychology in the Twentieth Century ................................................................. 1
  Definition of Morality ......................................................................................................... 3
    Moral Judgment ............................................................................................................... 3
    Moral Orientation .......................................................................................................... 3
  Definition of Empathy ....................................................................................................... 5
  The Research Problem ...................................................................................................... 6
  Significance of the Study ................................................................................................. 10

Chapter 2: Review of the Literature ....................................................................................... 11
  Moral Judgment Development ........................................................................................ 11
    Piaget’s Cognitive Theory of Moral Judgment Development ........................................ 11
    Kohlberg’s Stage Theory of Moral Development ...................................................... 12
    Research Findings ........................................................................................................ 14
    Rest’s Complex Model of Moral Development ........................................................... 16
    Research Findings ........................................................................................................ 18
    Summary ...................................................................................................................... 19
  Moral Orientation ............................................................................................................. 20
    Gilligan’s Theory of Two Moralties ............................................................................ 21
    Research Findings ........................................................................................................ 24
    A Multidimensional Approach to Moral Orientation ................................................... 28
    Measurement of Dispositional and Situational Moral Orientations .............................. 32
    Summary ...................................................................................................................... 34
  Empathy ............................................................................................................................ 36
    Definitions of Empathy ................................................................................................. 36
    Dispositional versus Situational Empathy .................................................................. 37
    A Multifaceted Approach to Empathy ........................................................................ 37
    The Assessment of Dispositional Empathy .................................................................. 38
    Developmental Changes and Sex Differences in Empathy .......................................... 39
    Empathy and Moral Development ............................................................................... 40
    A Multidimensional Approach ................................................................................... 41
    Research Findings ........................................................................................................ 42
Chapter 3: Methodology ........................................ 47

- Research Design ........................................ 47
- Sampling Procedure ...................................... 47
- Measures .................................................. 47
  - Personal Information ................................... 48
  - Moral Judgment ........................................ 48
  - Moral Orientation ...................................... 54
    - The Development of the Objective Measure of Dispositional Moral Orientation ........................................ 54
    - The Development of the Objective Measure of Situational Moral Orientation ........................................ 57
  - Empathy .................................................. 61
  - Social Desirability Response ............................ 63
  - Honesty Check .......................................... 64
- Data Collection Procedures ................................ 65
- Alternate Forms ........................................... 67
- Overview of Data Analysis Techniques .................... 67

Chapter 4: Results .......................................... 69

- Participants ................................................ 69
  - Data Purging Process ................................... 71
    - The Honesty Check .................................... 71
    - The DIT Reliability Check ............................. 72
    - The DMO Consistency Check .......................... 74
  - Summary ............................................... 75
- Preliminary Data Analyses ................................ 76
  - Order Effects .......................................... 76
  - Moral Orientation Analyses ............................. 76
  - Internal Consistency .................................... 77
  - Social Desirability and the Dependent Variables ....... 79
  - Summary ............................................... 79
- Main Analyses ........................................... 80
  - Developmental Changes .................................. 80
  - Group Differences ...................................... 81
    - Sex Differences ....................................... 81
    - Cultural Differences .................................. 82
  - Relations between the Dependent Variables ............. 83
    - Relations between Dispositional and Situational Moral
Appendix I: Means and Standard Deviations for DMO-Consistent Group and DMO-Inconsistent Group on All Measures ................................................................. 134

Appendix J: Means and Standard Deviations for Form 1 and Form 2 on All Measures ..... 136

Appendix K: Adjusted Marginal Means for Sex and Summary of Multivariate Analyses of Covariance on All Dependent Variables ........................................... 138

Appendix L: Adjusted Marginal Means for Ethnic Groups and Summary of Multivariate Analyses of Covariance on All Dependent Variables .................................... 139

Appendix M: Interrelations among Empathy, Moral Orientation, and Moral Judgment...... 140

Table M1. Summary of Hierarchical Multiple Regressions Analyses for Perspective Taking, Empathic Concern, Personal Distress, DMO-Justice, DMO-Care, SMO-Justice 3, and SMO-Care 3 Predicting N2 140

Table M2. Summary of Hierarchical Multiple Regressions Analyses for Perspective Taking, Empathic Concern, Personal Distress, DMO-Justice Orientation, and SMO-Justice Orientation 3 Predicting N2 .... 141
LIST OF TABLES

Table 1. Age Means in Years for Sex and Grade......................................................... 69

Table 2. Age Means in Years for Sex and Ethnic Groups ........................................... 70

Table 3. Cronbach's Alpha Coefficients and Intercorrelations among Age, Social Desirability, and Indexes of the DMO, SMO, IRI, and DIT................................. 78
ACKNOWLEDGEMENTS

This study was funded in part by a Faculty of Education Graduate Student Research Grant, 1999-2000. I would like to express my gratitude to Dr. Kimberly Schonert-Reichl and the members of her Adolescent Development and Psychopathology Research Lab, as well as Dr. Nand Kishor and the class members of his course of Test Construction, spring of 2000, for their helpful advice regarding the modification and adaptation of the Objective Measures of Dispositional and Situational Moral Orientation. I would also like to extend my gratefulness to Vincent White and his students, Joan Ma and her friends, and anonymous participants for giving me valuable feedback on the preliminary versions of the Objective Measures of Dispositional and Situational Moral Orientation. I am particularly indebted to the participants and their parents, teachers, and principal for their time and effort in making this research possible.
CHAPTER 1: INTRODUCTION

Moral Psychology in the Twentieth Century

Morality involves the interplay of emotion, thought, and behavior, which are interdependent and interconnected. Nonetheless, the study of moral psychology has been trichotomized because different theoretical traditions have focused their study of moral development on different aspects of morality (Walker, 1986a).

For example, the psychoanalytic approach emphasized the importance of emotion (e.g., shame and guilt) in the identification-internalization of moral values, standards, and behaviors (Walker, 1986a). Focusing on behavior, the social-learning approach also acknowledged the functions of emotion (e.g., approval and anxiety) in the reinforcement, punishment, and modeling of moral behavior (Aronfreed, 1976). With regard to the former, moral judgment was seen as an illogical process perpetually overshadowed by feelings and impulses, whereas the latter approach regarded moral judgment as insignificant to moral behavior. Either way, morality was independent of reasons before the mid-1960s. Then, a shift of emphasis was brought about by Kohlberg’s cognitive-developmental approach. Since that time, cognition has reigned in the field of moral psychology for over two decades (Walker, 1986a).

In the 1980s, the popularity of the Kohlbergian approach declined, as the presumption of gender polarity rose, with Gilligan’s (1982) theory of two moralities (Rest, 1994). Kohlberg (1984) considered justice as the basic moral principle and proposed three major developmental levels of moral judgment that are dependent upon the development of cognitive and perspective-taking ability. Gilligan (1982) contended that a justice morality, focusing on rationality, rights, and rules, failed to account for the morality of females, which,
she argued, stressed empathic feelings, relationships, and care. Gilligan suggested that there were two moral orientations, “care” and “justice,” that were independent of moral judgment levels.

The significance of emotion in morality has been reinstated (Walker, 1995). It is now generally agreed that both cognitive and affective factors are important in moral development, and that they are interdependent and interactive in nature (e.g., Flanagan & Jackson, 1987; Walker & Taylor, 1991). Affective factors in morality, such as responsiveness, care, empathy, particularity, and compassion, have been advocated by many theorists (e.g., Blum, 1987; Vetlesen, 1994).

The study of empathy as an affective source of moral motivation has been earnestly pursued by many researchers (e.g., Batson & Shaw, 1991; Eisenberg & Strayer, 1987) for the last two decades. The importance of empathy in moral development has now been well recognized by both psychologists and philosophers (e.g., Batson et al., 1996; Deigh, 1996; Hoffman, 2000).

Empirical research linking empathy to moral judgment development has been scant (Schonert-Reichl, 1994b). The investigation of the interrelations among empathy, moral judgment, and moral orientation is almost non-existent. Thus, the aim of this study was to explore the interrelations among empathy, moral judgment, and moral orientation in adolescence.

In the next section, the definitions of morality, moral judgment, and moral orientation are introduced, followed by the definitions of empathy. Then, based on a critical analysis of some important issues in the study of moral orientation and empathy, the problem statement and the significance of this investigation are delineated.
**Definition of Morality**

Morality, a multidimensional phenomenon involving both cognitive and affective processes, involves such issues as how to settle conflicts among individual interests and to optimize reciprocal benefit. Moreover, moral development refers to the growth of one’s ability to differentiate right from wrong, to develop a system of ethical values, and to act morally (Rest, 1986).

**Moral Judgment**

In the Kohlbergian cognitive-developmental tradition, moral reasoning is concerned with how to distribute the rights and duties of social cooperation. Moral judgment is defined as making decisions about what is morally right or good, with different concepts of justice to organize social cooperation (Rest, 1986).

**Moral Orientation**

Moral orientations characterize the “decisional strategies” that the person uses in making moral judgments (Kohlberg, 1976, p. 40). “An orientation is a global framework or perspective for organizing and understanding the moral domain, and is conceptually independent of level of moral reasoning” (Walker, 1986b, p. 115).

In this study, a distinction has been made between “dispositional” moral orientation and “situational” moral orientation. Dispositional moral orientation is a personal “preference” (Walker, de Vries, & Trevethan, 1987, p. 855) for a moral perspective or decisional strategy that one tends to use in interpreting and/or resolving moral dilemmas. Situational moral orientation is one’s use of certain perspective or decisional strategy for interpreting and/or resolving certain moral dilemmas. Situational moral orientation reflects
the interplay between dispositional moral orientation and contextual factors, such as the content of the dilemma.

There are many different moral orientations that characterize people's moral judgment (Colby & Kohlberg, 1987). An individual may have learned many different moral perspectives or decisional strategies that can be employed under different situations (i.e., situational orientations). Among these perspectives or strategies, different individuals may develop preferences for different perspectives or strategies (i.e., dispositional orientation) that they tend to use across situations and across time or identify themselves with. The notion of a dispositional orientation (i.e., a person has developed a personal preference for a moral orientation) does not deny the possibility of a change or switch of one's dispositional orientation as one grows in life. Neither does it limit the person's use of various situational orientations to the dispositional one, as it may be deemed irrelevant to the particular moral situation in question.

From a multidimensional perspective, an individual may have a preference for more than one moral orientation or have no particular preference at all. Similarly, an individual may use more than one moral orientation when resolving a moral conflict. That is, there can be multiple moral perspectives and decisional strategies in one's moral repertoire.

In this study, two specific orientations, the ethics of "care" and "justice," were investigated. Thus, four dimensions of moral orientation were explored: a care dispositional orientation, a justice dispositional orientation, a care situational orientation, and a justice situational orientation.

The following are the operational definitions of the two moral orientations, justice and care, as defined by Liddell, Halpin, and Halpin (1992):
“The ethic of justice is characterized by objectivity, rationality, and separation. One who demonstrates an ethic of justice treats people fairly by identifying and fulfilling rules, principles, rights, and duties. The sanctity of the individual is often conceptualized as a conflict over rights.

“The ethic of care is characterized by subjectiveness, intuition, and responsiveness. One who demonstrates an ethic of care responds to people in a way that ensures that the least harm will be done and that no one will be left alone. There is an assumption of connectedness and attachment and an understanding that everyone is different and may have a different reality. Decisions are contextual and relative to a particular situation. The relationship is valued above the sanctity of the individual.” (p. 326)

**Definition of Empathy**

Empathy is a process as well as a response (Strayer & Eisenberg, 1987). “Responsive empathy is a response specific to and elicited by given persons and situations” (Strayer & Roberts, 1997, p. 387). Individual variation in empathic tendencies, which may affect responsive empathy, is called “dispositional empathy” and viewed as a personality trait (Davis, 1983b). Either a general trait or a specific response, empathy is a multifaceted phenomenon involving both cognitive and affective processes (Strayer & Schroeder, 1989). Empathy is defined herein as a set of related constructs encompassing both cognitive and affective reactions to the observed experiences of another (Davis, 1994).

The present research primarily focused on dispositional empathy as a source of individual differences, and perspective taking as the cognitive components of empathy. As a personality trait of empathy, perspective taking is not an ability but more a social style, that is, a dispositional likelihood to use one’s role-taking ability to receive the others’ viewpoints (Davis, Luce, & Kraus, 1994).

Two affective aspects were examined in this project. One was the self-focused, aversive, and distressed reaction to other’s state, which had been labeled “personal distress”
(Batson & Shaw, 1991; Davis, 1994; Eisenberg, 1991). The other was the feeling of vicarious emotions that were more other-focused than self-focused, together with feelings of tenderness, compassion, and warmth, or concern for the other’s welfare, which has been called “sympathy” (Eisenberg, 1991), “sympathetic distress” (Hoffman, 2000), or “empathic concern” (Davis, 1994).

The following are the operational definitions of the affective and cognitive components of dispositional empathy, as defined by Davis (1994):

“Empathic concern is defined as the tendency to experience feelings of sympathy and compassion for unfortunate others.

“Personal distress is defined as the tendency to experience distress and discomfort in response to extreme distress in others.

“Perspective taking is defined as the tendency to spontaneously adopt the psychological point of view of others in everyday life.” (p. 57)

The Research Problem

With regard to moral orientation, Kohlberg (1984) considered justice as the basic moral principle, and proposed three major developmental levels of moral judgment that are dependent upon the development of cognitive and perspective-taking ability. On the other hand, Gilligan (1982) contended that a “justice” morality, focusing on rationality, autonomy, individual rights, and rules, fails to account for the morality of females, which, she argued, stresses empathic feelings, relationships, and care. Gilligan suggested that there are two moral orientations, “care” and “justice,” that are independent of moral judgment levels.

In general, research based on open-ended interview formats has shown that women are more likely than men to report interpersonal conflicts and use a care orientation in real-life dilemmas, although no sex differences have been reported with regard to hypothetical
dilemmas (Walker, 1989; Wark & Krebs, 1996). Because the content of the conflict influences one’s moral orientation more than does one’s sex, moral orientation may be a methodological artifact (Clopton & Sorell, 1993; Walker, 1989, 1997; Wark & Krebs, 1996, 1997). The results of a meta-analysis on sex differences in moral orientation support that moral orientation is influenced by the content of the dilemma and that care and justice orientations are only moderately sex-related (Jaffee & Hyde, 2000).

The present study inquired into the existence of moral orientation by differentiating dispositional moral orientation from situational moral orientation. In order to investigate how moral orientation is related to moral judgment, it is important to distinguish between dispositional moral orientation (i.e., a personal preference for a moral perspective or decisional strategy for interpreting and/or resolving moral dilemmas) and situational moral orientation (i.e., an orientation that reflects the interplay between dispositional orientation and contextual factors).

I developed objective measures for assessing dispositional moral orientation and situational moral orientation from existing rating scales constructed for college students. As different tasks can be used for collecting different data (Rest, 1979), moral orientation, being a personal “preference” (Walker et al., 1987, p. 855) should be duly assessed by preference measures, such as objective rating scales.

Because moral responses are the results of the interplay between the situation (e.g., the nature of the dilemma) and the characteristics of the individual (Weinberg, Yacker, Orenstein, & DeSarbo, 1993), the use of moral dilemmas may confound dispositional moral orientation (intra-individual characteristics) with situational factors. Therefore, dilemma-free objective rating scales may be more appropriate for measuring dispositional moral
orientation, whereas objective rating scales with standard moral dilemmas may provide a better tool for assessing situational moral orientation, especially for adolescents and adults of lower education. Besides, standard dilemmas can provide standardized measure for situational moral orientation (Ford & Lowery, 1986).

Similarly, a distinction has been made between dispositional empathy (i.e., a general dispositional trait) and situational empathy (i.e., specific empathic responses elicited by given persons and conditions) (Strayer & Roberts, 1997). Many researchers (e.g., Batson, 1991; Eisenberg, 1986; Hoffman, 2000) have hypothesized that empathy is related to moral development. Kohlberg (1984) has emphasized the role of the cognitive aspects of empathy, such as perspective taking, to moral development, whereas Hoffman (2000) has emphasized the affective aspects, such as empathic concern and personal distress.

It has been generally agreed that empathy is multifaceted (e.g., Strayer, 1987). Empirical research has supported interrelations among perspective taking, empathic concern, and personal distress (Davis, 1983b). Most researchers, however, have concentrated on the relation of moral development to either cognitive (e.g., Chandler & Moran, 1990) or affective empathy (e.g., Schonert-Reichl, 1994b) with a unitary measure of affective empathy (e.g., the Emotional Empathy Scale; Mehrabian & Epstein, 1972). As a result, the multifaceted nature of empathy, as it relates to moral development, has been largely ignored. Moreover, I know of no studies examining the relations of either dispositional or situational empathy to moral judgment and moral orientation.

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1 Literature search included PsycInfo, ERIC, and the Internet (e.g., http://www.google.com/) up to March 14, 2001.
Adopting a multifaceted perspective, I explored the influence of intrapersonal characteristics (dispositional empathy and dispositional moral orientation) and contextual factors (content of moral dilemma) on situational moral orientation and moral judgment. By examining the interrelations among perspective taking, empathic concern, personal distress, moral judgment, care and justice dispositional moral orientations, and care and justice situational moral orientations, I tried to reveal the interactive relations between cognitive and affective factors in morality. Developmental changes and sex differences in adolescence were also investigated, with respect to the above variables, from a multifaceted perspective.

Adolescence deserved our primary attention in the exploration of the interrelations among empathy, moral judgment, and moral orientation, because it is the period when a critical shift in moral reasoning (Kohlberg, 1984), perspective-taking ability (Selman, 1976), and empathic capacity (Hoffman, 1978) occur. It is also the period when intimacy and identity exploration are more salient (Kohlberg & Gilligan, 1971). While romantic and sexual relationships may foster empathic concern and a caring orientation in adolescents (Fabes, Carlo, Kupanoff, & Laible, 1999), adolescents may become more aware of who they are in terms of a care- or justice-oriented person with identity development.

The overall goal of this study was to examine the interrelations among empathy, moral judgment, and moral orientation during adolescence. The specific purposes were as follows: (1) to investigate the existence of moral orientation; (2) to differentiate “dispositional” from “situational” moral orientations; (3) to develop an objective measure of dispositional moral orientation; (4) to develop an objective measure of situational moral orientation; (5) to explore the influence of intrapersonal characteristics (dispositional empathy and dispositional moral orientation) and contextual factors (content of moral
dilemma) on situational moral orientation and moral judgment; (6) to explore the interactive relations between cognitive and affective factors in moral judgment; and (7) to examine age and sex differences, with respect to the above variables.

**Significance of the Study**

The differentiation between and the development of measures for dispositional and situational moral orientations may contribute to our present understanding of moral orientation. The assessment of dispositional moral orientation can be a valuable tool for theorists, educators, and counselors in revealing the interaction of intrapersonal and contextual factors in moral reasoning, and in helping students to find their own moral preferences. Being recognition and preference tasks, objective measures of dispositional and situational moral orientations may tap different and possibly more comprehensive information than subjective measures, which are production tasks that require verbal fluency, especially for adolescents and ESL participants.

The exploration of the interrelations among dispositional empathy, dispositional and situational moral orientations, and moral judgment may reveal the interactive relations between cognitive and affective factors in morality, and the influence of intrapersonal factors (dispositional empathy and dispositional orientations) and contextual factors (content of moral dilemmas) on situational moral orientation and moral reasoning. It may also help clarify the role empathy plays in moral reasoning and moral orientation. The examination of age and sex differences in adolescence may help to identify the interaction between sex and developmental changes with respect to these variables.
CHAPTER 2: REVIEW OF THE LITERATURE

In this chapter, I review literature on moral judgment development, moral orientation, empathy, and their interrelations. Research questions and hypotheses are then presented.

**Moral Judgment Development**

*Piaget’s Cognitive Theory of Moral Judgment Development*


Piaget (1932/1965) proposed that moral judgment develops in two stages. At the first stage, morality is imposed on and external to the child. At the second stage, between ages 7 and 12, through interacting with peers, children gradually recognize that social and/or moral rules are social agreements among equal individuals for mutual benefits or cooperation, so that rules can be accepted in a free will. Morality becomes autonomous and internal.

Piaget (1932/1965) noted the existence of two moralities, that is, the morality of constraint and the morality of cooperation, each reflecting different types of social relations. Relations of constraint arise from attachment to social groups or authority, and result in unilateral respect and external morality, such as the relations of children to their parents. Relations of cooperation are characterized by equality and mutual respect, and autonomous rationality, and result in a sense of justice. Piaget observed that “in the main the legal sense is far less developed in little girls than in boys” (p. 69), but that girls were “more tolerant and more easily reconciled” to new rules (p. 75). These sex differences in justice moral reasoning
Kohlberg’s Stage Theory of Moral Development

Like Piaget, Lawrence Kohlberg (1981) regarded a sense of justice as central to the development of moral judgment. Kohlberg stressed that both cognitive-developmental levels and perspective-taking ability are essential but not sufficient conditions for moral development because they set the upper-bound limits on moral reasoning. Kohlberg further postulated that there exist three major levels of social perspective (i.e., the standpoint one takes in defining social facts and moral values) corresponding to three major levels of moral judgment. Moral maturity, argued Kohlberg, is marked by impartial autonomous judgment that takes equal consideration of different perspectives and that can be observed by everyone.

In his original study of moral reasoning, Kohlberg developed the initial moral judgment interview (MJI) with hypothetical dilemmas, and presented them to a sample of 84 boys between ages of 10 and 16. Probe questions were asked to elicit the participant’s moral judgments. Based on empirical findings from his 20-year longitudinal study of this male sample, Kohlberg redefined his theory of moral development and scoring system for interview data (Kohlberg, 1984).

Kohlberg (1984) proposed a six-stage model of moral judgment. The six stages are grouped into three levels of development: the preconventional (most children under 9), the conventional (most adolescents and adults), and the postconventional (some adults). The preconventional level composed of Stages 1 and 2, centers upon avoiding punishment and satisfying one’s needs, and is marked by a concrete individual perspective. The conventional level denoted by a member-of-society perspective and comprised of Stages 3 and 4, focuses
on gaining the approval of others and fulfilling social duties. The postconventional level, characterized by a prior-to-society perspective and composed of Stages 5 and 6, centers upon obeying the legal standards in general and following universal principles of justice in particular. (An overview of Kohlberg's stage-model of moral development and social perspective is presented in Appendix A).

Kohlberg (1984) asserted that the stages are invariant and universal\(^2\), with hierarchical integrations of structured wholes \(^3\), notwithstanding his all male sample. He suggested that women might score lower than men might on his MJI because of their lower education level and more restricted social experience (e.g., being confined to the domestic arena). Otherwise, women do not differ from men in their moral development. Kohlberg's assertions, however, were severely challenged, particularly by Gilligan (1982), who accused Kohlberg's model and MJI of being biased against women.

In the 1980s, the MJI (Colby & Kohlberg, 1987) and its scoring system were finally standardized. It has been reported to have good reliability and validity. According to the latest scoring system, none of his longitudinal participants evidenced a focus of Stage 6 reasoning, so Kohlberg acknowledged that Stage 6 was a theoretical stage.

In his later years, Kohlberg reconceptualized the Stage 6 core idea. He incorporated both benevolence and justice within the notion of respect for persons, as the universal moral principle (Kohlberg, Boyd, & Levine, 1990). He admitted that his cognitive approach focusing on structure and moral reasoning ignored the moral content of development, moral motivation, and the existence and function of a moral self. He affirmed that moral

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\(^2\) Stage development proceeds in an ordered sequence from lower to higher stages across individuals and cultures (Kohlberg, 1984).

\(^3\) Individuals will mainly use one stage reasoning most of the time (Kohlberg, 1984).
motivation comes from empathy and feelings of obligation, although the development of a
moral self is mainly cognitive (Kohlberg & Diessner, 1991).

Research Findings

In general, research based on the current MJI and its scoring system has provided
some evidence for Kohlberg's stage theory of moral development. Cross-cultural
longitudinal studies have reported few instances of stage skipping or regression, suggesting
that stage development is invariant and universal (Colby, Kohlberg, Gibbs, & Lieberman,
1983; Snarey, Reimer, & Kohlberg, 1984). Nevertheless, findings from cross-cultural studies
suggest that Kohlberg's test is biased toward urban societies and middle-class populations
(Snarey, 1985) and under-represents some culturally specific moral judgments, such as
collective principled reasoning (Miller & Besought, 1995; Snarey, 1985; Walker & Moran,

There seems to be empirical evidence for Kohlberg's claims of the prerequisite of
cognitive development and perspective taking ability for moral development. Reviewing
research based on both contingency and experimental analyses, Walker (1986a) concluded
that cognitive-developmental level places a constraint on moral judgment development. For
example, in a pre- and post-test experimental study of children in Grades 4 to 7 who had
attained Stage 2 moral reasoning, Walker (1980) found that only students who had attained
both the cognitive (beginning formal operation) and perspective-taking (Selman's Stage 3)
prerequisites and had been in the experimental condition (an intervention designed to
stimulate moral development to Stage 3) evidenced increases in Stage 3 moral reasoning.
These findings support the contention that both cognitive and perspective-taking
development are necessary but not sufficient conditions for moral development.
Furthermore, Lee and Prentice (1988) found positive and statistically significant correlations among cognitive development (as measured by pendulum task and balance tasks), perspective-taking stage (according to Byrne’s five-stage sequence, 1973), and moral reasoning (the MJI) in a sample of juvenile delinquent boys. When perspective-taking ability was partialed out, however, the statistically significant correlation of cognitive development to moral reasoning disappeared, but the correlation between perspective-taking and moral reasoning remained statistically significant when cognitive development was partialed out. The authors suggested that perspective-taking development plays a mediating role between cognitive development and moral reasoning. The relations between perspective taking and moral development will be further examined in the section on empathy and moral development.

Evidence for Kohlberg’s assumption of “structured wholeness” of moral judgment has been equivocal. In studies involving both moral dilemmas from Kohlberg’s MJI and real-life or real-life-like moral dilemmas, the former elicited higher level of moral reasoning than did the latter. The results from these studies indicate that the standard hypothetical dilemmas assess moral competence, but not moral performance. Thus, these researchers concluded that moral judgment is not organized in structures of the whole, and that people use different stages in response to different issues (Carpendale & Krebs, 1995; Krebs et al., 1991; Wark & Krebs, 1996).

To sum up, there seems to be evidence supporting Kohlberg’s proposition that moral development depends on the development of perspective-taking ability, which in turn depends on cognitive development (Lee & Prentice, 1988; Walker, 1980). Although Kohlberg’s claims of the sequential and hierarchical stage development appear to be
empirically supported, his assumption of the structured whole has been criticized for being
too simple, and inadequate to account for the empirical discrepancies (Krebs et al., 1991;
Levine, 1979; Rest, 1979), and his MJI for being biased against non-individualistic cultures

Rest’s Complex Model of Moral Development

Adopting the cognitive-developmental approach to moral judgment, James Rest
(1979, 1986), a one-time student of Kohlberg’s, proposed a “complex stage model”
suggesting that the acquisition of higher stages does not eliminate the availability of the lower
stages. According to Rest (1979), one may possess and use various forms of thinking
simultaneously, which may develop at different rates and in different patterns that their
curves may overlap with one another. Rest’s model differs from Kohlberg’s
transformational, simple stage model, which implies a holistic stage performance and locates
individuals at a single stage (though they both assume qualitative structural changes at
various stages of development). Rest (1986) also acknowledged that there might be different
kinds of problem-solving strategies in making moral judgments besides the Kohlbergian
stage schemes of justice (e.g., religious beliefs).

In the assessment of moral judgments, Rest (1979) suggested that different tasks
could be used for collecting different data. For example, a Likert-type scale could be used as
a preference measure because it allows the participants to select from a list of possibilities
without giving any reasons. One’s preference for a certain type of thinking may show a
developmental sequence, but one’s comprehension may encompass several forms of thought,
including those higher and lower than one’s primary stage. Rest (1979; Rest, Turiel, &
Kohlberg, 1969) found that preference was usually for higher stage statements for children
and high school students. In contrast, the MJI, which asks for the participant’s spontaneous production of moral judgments, measures moral competence, and fails to capture the varieties of human thoughts, such as the kind of thinking that a participant is able to comprehend but unable to produce. Thus, the MJI may underestimate an individual’s ability to discriminate and appreciate higher level thinking that is presented to them.

In order to assess one’s comprehension of and preference for different moral thoughts, Rest (Rest, Cooper, Coder, Mansanz, & Anderson, 1974) developed the Defining Issues Test (DIT) that measures preference of moral judgments in adolescents and adults. Derived from Kohlberg’s theory and MJI scoring system, the DIT is a rating and ranking test, assessing moral judgment development on a continuum. Unlike Kohlberg’s MJI, which is a production task, the DIT is a recognition task testing the participant’s levels of comprehension and preference. The moral stages used by a participant may be confined between comprehension (the upper bound) and preference (the lower limit).

The DIT (Rest & Narvaez, 1998) provides a score for all of the stages (Stages 2, 3, 4, 5A, 5B, and 6), a P (Postconventional) Score, a U (Utilizer) Score, and an N2 (a new score that employs two parts of the data) Score. The P score reflects postconventional moral reasoning (i.e., the sum of Stages 5A, 5B, and 6). The U score is a measure of subjects’ reliance on justice reasoning that estimates the degree of agreement between the story decisions and moral judgment decisions (i.e., item responses). It reflects justice moral orientations used by respondents to arrive at their story decisions. A low U score indicates that the participant makes moral decisions on some different grounds than concepts of justice (Thoma, Rest, & Barnett, 1986). The DIT and its indexes will be described fully in the next chapter.
Based on 25 years of research using the DIT, Rest and his colleagues (Rest, Narvaez, Bebeau, & Thoma, 1999) postulated three moral schemas: Personal Interest, Maintaining Norms, and Postconventional. Supposedly originated in childhood, the Personal Interest schema includes concerns for oneself as well as for one’s kin, friends, and personal acquaintances. The Personal Interest schema derives from Kohlberg’s Stages 2 and 3 because the scores of these two stages are correlated in DIT data and fuse into a single factor in factor analysis. It is considered primitive because it fails to attain a sociocentric perspective (i.e., to consider how cooperation is organized in society). Deriving from Kohlberg’s Stage 4, the Maintaining Norms schema begins in adolescence and is more advanced because it signifies the attainment of a sociocentric perspective. Deriving from Kohlberg’s Stages 5 and 6, the Postconventional schema is the most advanced and based on sharable ideals and logical coherence. The latest DIT index, N2 score was developed to reflect developmental changes in Personal Interest and Postconventional schemas.

Research Findings

With regard to developmental change, in a review of cross-sectional, longitudinal, and sequential studies of the DIT, Rest, Davison, and Robbins (1978) found that, in a period of 2 to 4 years, individuals generally showed increases in higher stage reasoning and decreases in lower stage reasoning. Nonetheless, moral reasoning seems to reach a plateau of development either in early adulthood, if the individuals receive no further education, or after formal education has been completed. Sex differences on the DIT are small with women typically scoring higher than men (Thoma, 1986).

The N2 has been found to be more sensitive to longitudinal changes and educational trends than the P score, because the N2 index employs more data and contains a larger
portion of “true score” variance than does the P index (Rest, Thoma, Narvaez, & Bebeau, 1997). Therefore, the N2 index can be regarded as a new developmental variable.

Thoma and Rest (1999) investigated the relations between moral judgment development and the utility of moral concepts in five data sets including three cross-sectional and two longitudinal. It was found that low stage mixture, regarded by Thoma and Rest as an index of stage consolidation, was associated with high U scores. In contrast, low U scores were correlated with high stage mixture, indicating periods of stage transition. Moreover, low utilizers tended to use nonjustice-based criteria in making moral decisions. Thoma and Rest suggest that individuals may shift in the utility of Kohlbergian moral concepts across time, and that multiple systems (e.g., the ethic of care) are necessary to provide alternative interpretive systems and decision-making options when one or more fail to be relevant at times.

Summary

Piaget (1932/1965), being the first to study children’s moral judgment, proposed that moral judgment, which is related to cognitive development and social experience, develops in two stages, from external to internal morality. Kohlberg (1984) expanded Piaget’s two-stage model into a six-stage model and claimed that moral judgment develops in universal and invariant stages, with hierarchical integrations of structured wholes. Kohlberg further specified that social experience providing opportunities for perspective taking is a necessary but not sufficient condition for moral development.

Although Rest (1979) agreed with Kohlberg that moral judgment develops in universal and invariant stages, he perceived stage reasoning as different thinking “types” that may develop simultaneously in various rates. He argued that moral development proceeds in
a continuum and should be described as a range in which an individual functions, rather than as a stage.

Recently, Rest and his colleagues (Rest et al., 1999) proposed a three-schema approach to account for the development of adolescent and adult moral thinking, based on DIT research data. The schema model deviates from Kohlberg’s stage theory in that Kohlberg’s Stage 3 (Interpersonal Norms) is considered preconventional when it is combined with Stage 2 to form the Personal Interest schema in the neo-Kohlbergian approach.

The new indices of the DIT seem to provide more information on moral judgment research. Therefore, the DIT was the preferred measure of moral judgment development for the present study. Being an objective rating and ranking test, the DIT is more suitable than the MJJI for the exploration of the interrelations among empathy, moral judgment, and moral orientation. Moreover, the U score of the DIT can be a valuable tool for the investigation of moral orientation as it provides information on the utilization of justice moral orientation, and the investigation of moral orientation constituted a major part of this study.

**Moral Orientation**

Moral orientations characterize the kinds of decisional strategies (Kohlberg, 1984) or the logic or beliefs that underlie a moral judgment (Colby & Kohlberg, 1987). Moral orientation has been defined as “a global framework or perspective for organizing and understanding the moral domain, and is conceptually independent of level of moral reasoning” (Walker, 1986b, p. 115).

Although Kohlberg (Colby & Kohlberg, 1987) previously delineated five moral orientations (i.e., the egoistic, normative order, utilitarian, perfectionist, and justice orientations) in his MJJI, he regarded justice as the basic moral principle that signifies the
highest development of moral judgment. Because of his preference for individual rights and formal principles of justice, Kohlberg's theory is biased against non-individualistic cultures and persons who embrace the ethic of care, and thus has incited a lot of controversy in moral psychology (Puka, 1991). The most notable was Carol Gilligan's (1982) assertion of two moralities.

**Gilligan's Theory of Two Moralities**

Drawing from Chodorow's (1978) work on sex differences in development as well as from interviews with women facing abortion decisions, Gilligan (1982) contended that women have a moral "voice" or caring orientation that is different from Kohlberg's justice orientation. Gilligan argued that a morality of justice, focusing on rules, rights, reciprocity, autonomy, rationality, and impartiality, fails to account for the morality of females. According to Gilligan, the morality of women based on empathic affect and compassion, focuses on care and responsibility, and avoids inflicting harm on others. Owing to this difference, claimed Gilligan, women's moral judgments were misinterpreted and lowered improperly, which implied a sex-biased assessment of moral judgment development in favor of men. Research findings, however, have shown no sex differences in moral judgment on the MJI (Walker, 1984, 1991) and small sex differences favoring females on the DIT (Thoma, 1986).

Gilligan (1982) further proposed a three-level model of care ethic to explain women's social experience and moral development, again based on interviews with women in consideration of abortion. In her theory, women first focus on the self at Level 1, and then move from selfishness to responsibility. At Level 2, due to sex-role identity and social expectation, women become caring and self-sacrificing, which is similar to Kohlberg's
conventional Stage 3. Then, women reflect on their hypocritical relationships with others and their failure of caring for self. This reflection brings back the concern for self-survival. Finally, at Level 3, reconciliation between concepts of selfishness and responsibility is accomplished through a transformation of self-concept and a redefinition of morality, by asserting a moral equality between self and other.

According to Gilligan and Wiggins (1987), moral development is rooted in and proceeds through relationships starting in early childhood. They theorized that the early childhood experiences of inequality and attachment predispose the child to the perception of two moralities, of justice and care. Moreover, the child's search for equality and search for attachment may clash with and obscure the other, resulting in an extreme expression of one morality and a minimization of the other. They posited that most girls and women, searching for attachment and relationships, adopt the ethic of care and response, whereas, most boys and men, searching for equality and respect, develop a morality of rights and justice.

Gilligan (1982, Gilligan & Attanucci, 1988) asserted that conceptions of the self are related to conceptions of morality in women's thinking. The identity of a woman is defined in terms of relationships and social connections. Thus, women tend to view detachment or abandonment as problems. Responsibility and caring about self and others becomes the moral imperative and requires the construction of a moral conflict in its contextual particularity. On the contrary, a justice perspective, debated Gilligan, focuses on problems of inequality and oppression. The notions of reciprocal rights and equal respect become the resolutions. Respecting the rights of others requires a separation identity and noninterference, that is, not to interfere with others' autonomy. Thus, the two orientations are incompatible and sex-related.
In the 90s, Gilligan retreated from her developmental model of care ethic in favor of a literary or musical framework for describing moral orientations (Walker, 1997). Instead, Gilligan (1993) argued that the developmental theories of Freud, Piaget, Erikson, and Kohlberg were inadequate because they focused on the development of men and boys, which is different from that of women and girls. That is, men stress rights and justice, but women stress relationships and caring.

Gilligan (1995) further made a distinction between a "feminine" ethic of care and a "feminist" ethic of care. The former is selfless or self-sacrifice care, based on faulty interpersonal relationships, whereas the latter begins with connection, which is seen as the basis of all human lives. A feminine care ethic thus signifies an opposition between relationships and self-development, as well as a disconnection from emotions, within a patriarchal world, argued Gilligan. On the other hand, the relational world for a feminist care ethic includes not only close interpersonal relationships, but also international relationships as well as relationships with the environment.

In brief, Gilligan (1982; Gilligan & Attanucci, 1988; Gilligan & Wiggins, 1987) contended that there are two sex-related moralities, justice and care, and that morality is rooted in childhood relationships and related to one's self-concept. Thus, women, searching for attachment and defining themselves in relational terms, tend to adopt the ethic of care. Whereas men, searching for equality and defining themselves as detached individuals, tend to focus on justice and rights.

Gilligan's (1982) model of two moralities was predated by Piaget's (1932/1965) notion of two moralities. Both Piaget's (1932/1965) and Gilligan's (1982) theories of two moralities were based on attachment and equality, but they seemed to operate from different
Piaget (1932/1965) viewed the morality of cooperation that resulted in a sense of justice as being more mature than the morality of constraint that was based on the need of attachment to social groups. However, Gilligan (1982) sometimes regarded the ethic of care that arose from attachment as being more adequate than the ethic of justice, and sometimes (Gilligan, 1982; Gilligan & Attanucci, 1988) suggested that moral maturity was represented by a synthesis of these two moralities.

Considering Gilligan has made many inconsistent claims (Walker, 1997), it is beyond the scope of the present study to examine her every claim. The present research focused primarily on Gilligan’s (1982) notion of two sex-linked moral orientations, justice and care, held by men and women respectively, because empirical evidence supported the existence of two distinctly different moral voices, and their relations to self-concept (e.g., Lyons, 1983).

Because of the dispositional connotation of the term “orientation” (Clopton & Sorell, 1993; Lyons, 1983; Walker, 1989, 1997), most researchers tried to find intrapersonal consistency in moral orientation across dilemmas. They mostly investigated sex differences in moral orientation with dilemma-based open-ended measures (i.e., moral dilemma discussion either through interviews or written essays), and coded responses for the presence of care and justice considerations by using or modifying Lyons’s (1983) scoring system (e.g., Donenberg & Hoffman, 1988; Garrod & Beal, 1993). A few dilemma-based objective rating scales of moral orientation have been developed for adults and college students (e.g., Pratt & Royer, 1982; Yacker & Weinberg, 1990), as well.

**Research Findings**

Using open-ended interviews, Walker (1989; Walker et al., 1987) found that most people used a mix of both moral orientations, although there was some intrapersonal
consistency in orientation use. Moreover, individuals with either a care or balanced orientation scored higher overall in moral development than did those with a justice orientation. Thus, there was no evidence of bias by Kohlberg's MJI against a care orientation, but some support for Gilligan's (1982) notion of moral maturity as represented by a balanced/mixed orientation.

Conversely, Gilligan and Attanucci (1988) found that people tended to focus on either one orientation in real-life moral conflicts, despite their use of both care and justice orientations. More women than men tended to focus on care in their judgments with regard to real-life moral dilemmas (Gillian & Attanucci, 1988; Lyons, 1983).

Many researchers suggest that these sex differences in moral orientation may be a function of content. For example, real-life conflicts involving personal relationships may have a "pull" for care orientation, and hypothetical dilemmas may have a "pull" for justice orientation for adults. In general, women tend to report interpersonal-relational conflicts, but men tend to use "impersonal" content (i.e., not involving close interpersonal relationships; Walker, 1989) in their self-chosen moral dilemmas. As a result, women have been found to be more likely than men to use care-oriented thinking in real-life situations, although no sex differences have been reported on hypothetical dilemmas (Clopton & Sorell, 1993; Pratt, Golding, Hunter, & Sampson, 1988; Walker et al., 1987; Walker, 1989, 1997; Wark & Krebs, 1996, 1997).

Nonetheless, research results examining sex differences in children and adolescents' moral orientation have been equivocal. In a 2-year longitudinal study using both real-life and hypothetical dilemmas with participants between the ages of 5 and 63 years, Walker (1989) and colleagues (Walker et al., 1987) found no sex differences in moral orientation but
developmental trends. They reported that younger children were more care-oriented with regard to hypothetical dilemmas but more justice-oriented on the real-life dilemma. A pattern opposite to that was found in the adults.

Although children are care-oriented, with regard to fable or hypothetical dilemmas, with age, both boys and girls show a shift toward justice orientation and become more likely to use both orientations or switch orientations (Donenberg & Hoffman, 1988; Garrod & Beal, 1993; Garrod, Beal, & Shin, 1990; Johnson, 1988). Moreover, the ability to use both orientations is correlated with advanced cognitive and perspective-taking ability (Garrod & Beal, 1993; Garrod et al., 1990) and moral development (Donenberg & Hoffman, 1988). Sex differences in orientation may emerge at adolescence and more adolescent girls than boys tend to use care or both orientations (Donenberg & Hoffman, 1988; Johnson, 1988), similar to findings with adults.

Thus, whether hypothetical and impersonal dilemmas pull for a justice orientation, and real-life personal conflicts for care is age-related and/or sex-related may require further investigation. So far, based on open-ended measures with moral dilemmas, research results on Gilligan’s claim of a sex difference in moral orientation have been mixed. Similarly, studies on moral orientation using objective rating scales with adults also reported no sex differences with regard to hypothetical dilemmas (Friedman, Robinson, & Friedman, 1987; Pratt & Royer, 1982), but a female-care link on standardized realistic conflicts (Liddell & Davis, 1996; Yacker & Weinberg, 1990). Affected by the content of the dilemmas, moral orientations become more “situational” than “dispositional” (Walker, 1997). Thus, the question remains whether moral orientation is dispositional or situational.
Nevertheless, when self- or gender-concepts were included in the investigation, evidence suggested that more women than men possess a feminine or relational self identity, which has been found to mediate sex differences in moral orientation (Lifton, 1985; Lyons, 1983; Pratt et al., 1988; Pratt & Royer, 1982; Skoe & Marcia, 1991). Thus, Gilligan’s (1982) claim of a relation between self-concept and morality has been largely supported.

Moreover, by correlating the care and justice rating scales of the Measure of Moral Orientation (MMO; Liddell, 1990) with the thinking-feeling decision-making preference scale of the Myers-Briggs Type Indicator (MBTI; Myers, 1981), Liddell reported positive correlations between care and feeling, and justice and thinking, and negative correlations between care and thinking, and justice and feeling (Liddell et al., 1992). These findings seem to support Kohlberg’s (1981) theory that rationality and cognitive processes are related to justice orientation and Gilligan’s (1982) theory that the ethic of care is related to feelings.

Given the evidence that personal characteristics, such as one’s self-concept and preference for feeling-thinking decision-making process (Liddell et al., 1992), are related to one’s moral orientation, they may be the origin of intrapersonal consistency that researchers have been looking for but neglected in the study of moral orientation. Thus, in the present study, a multidimensional approach was taken to investigate the dispositional and situational aspects of moral orientation.

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4 A preference for impartiality, objectivity, and logic denotes a preference for thinking judgment in decision-making processes, but it does not deny one’s ability to care or empathize. Likewise, a preference for attending to relationships and emotional life, and seeking harmony signifies a preference for feeling judgment in decision-making, but it does not hinder the development of one’s logical thinking ability (Lawrence, 1996).
A Multidimensional Approach to Moral Orientation

The person-situation debate, similar to the nature-nurture debate, has divided psychologists for decades, but it is now generally agreed that reality is multifaceted (Epstein & O'Brien, 1985). Besides trait and situation, the importance of person-situation interactions in personality and behavior has also been advocated by many researchers (e.g., Endler & Magnusson, 1976). Sarason, Smith, and Diener (1975) surveyed studies involving personality (e.g., empathy) and situational variables (e.g., the context of the event) and found that situational main effects were slightly greater than the main effects of dispositional variables. The Dispositional \times Situational interactions, however, accounted for more of the behavioral variance than did either persons or situations alone. Thus, the authors suggest that the incorporation of both dispositional and situational variables in research design may permit the best prediction of behavior in similar situations, because Dispositional \times Situational interactions may contribute further to specifying the processes that mediate the situational behavior relations, in addition to the variance accounted for by both the dispositional and situational variables.

Viewed in this light, the issue of whether moral orientation is dispositional or situational became secondary in importance to the question of how dispositional and situational variables might best be concurrently studied to advance our understanding of moral psychology. Therefore, in order to investigate the existence of moral orientation as well as sex differences in moral orientation, it is important to distinguish between dispositional moral orientation and situational moral orientation.

Dispositional moral orientation is defined herein as a personal "preference" (Walker et al., 1987, p. 855) for a moral perspective or decisional strategy that one tends to use in
interpreting and/or resolving moral dilemmas. Situational moral orientation is one’s use of
certain perspective or decisional strategy for interpreting and/or resolving certain moral
dilemmas. Situational moral orientation reflects the interplay between dispositional moral
orientation and contextual factors, such as the content of the dilemma.

There are many different moral orientations characterizing people’s moral judgment
(Colby & Kohlberg, 1987). An individual may have learned many different moral
perspectives or decisional strategies that can be employed under different situations (i.e.,
situational orientations). Among these perspectives or strategies, one may develop a
preference for a certain perspective or strategy (i.e., dispositional orientation) that one tends
to use across situations and time or identifies oneself with. The notion of a dispositional
orientation (i.e., a person has developed a personal preference for a moral orientation) does
not deny the possibility of a change or switch of one’s dispositional orientation as one grows
in life. Neither does it limit the person’s use of situational orientations to the dispositional
one, as it may be regarded as irrelevant to the particular moral situation in question.

The notion of dispositional orientation is similar to Ford and Lowery’s (1986) idea of
“primary” orientation. In their study of sex differences in moral reasoning, Ford and Lowery
(1986) asked 202 college students to write about their own moral conflicts. Then the students
were asked to read the definitions of the justice and care orientations and to rate, on 7-point
Likert scales, the extent to which they viewed the dilemmas in terms of issues of care or
justice. The test-retest coefficients (for a period of 3-4 weeks) of the care ratings were more
stable than were the justice ratings for females; and an opposite pattern was found for males.
Ford and Lowery suggest that people may have a primary orientation and thus be more
consistent in their responses across time, and that inconsistency arises when they switch their
primary orientation to other modes, due to reduced certainty and higher competing response
tendencies. Likewise, Thoma and Rest (1999) found that high utilizers of justice orientation
were more consistent/consolidated in their use of stage reasoning than low utilizers were on
the DIT.

Findings from these two studies suggest that some individuals may have a
dispositional or primary orientation and that one's situational moral orientation may reflect
one's dispositional orientation, depending on the sensitivity of the measurement used. Thus,
moral reasoning is a complex enterprise involving the interplay between intra-individual
factors (e.g., one's empathic tendencies, dispositional orientation) and situational factors
(e.g., the nature of the dilemma, the format of the test) (Weinberg et al., 1993). Hence, a
distinction between dispositional and situational orientation becomes necessary in the study
of moral psychology.

A differentiation between dispositional and situational moral orientations does not
only have theoretical value for understanding the complexity of people's moral thinking, but
also practical import for moral instruction. It has been found that moral maturity is related to
mixed orientations (Walker, 1989). Even Kohlberg (Kohlberg et al., 1990), in his later years,
reconceptualized the Stage 6 core idea, by incorporating both care and justice within the
notion of respect for persons, as the universal moral principle. Educators and counselors
could help students to understand their own dispositional orientations and to learn how to
achieve a balanced/mix orientation when resolving moral conflicts (Jones & Watt, 1999;
Liddell & Davis, 1996). The assessment of dispositional and situational moral orientations
can also be a valuable tool for theorists and researchers in understanding and investigating
the interaction of intra-personal and situational factors in moral reasoning, and the relations
of dispositional and situational moral orientations to other factors, such as empathy, depression, and learning styles, just to name a few.

From a multidimensional perspective, an individual may have a preference for more than one moral orientation or have no particular preference at all. Similarly, an individual may use more than one moral orientation when resolving a moral conflict. That is, there can be multiple orientations for both dispositional and situational moral orientations. Care and justice are simply two of the various dimensions of moral orientation that may be related to one’s relational self-concept and thereby sex-linked. Thus, four dimensions of moral orientation were explored: a care dispositional orientation, a justice dispositional orientation, a care situational orientation, and a justice situational orientation.

The two moral orientations, care and justice, are defined operationally by Liddell et al. (1992):

"The ethic of justice is characterized by objectivity, rationality, and separation. One who demonstrates an ethic of justice treats people fairly by identifying and fulfilling rules, principles, rights, and duties. The sanctity of the individual is often conceptualized as a conflict over rights.

"The ethic of care is characterized by subjectiveness, intuition, and responsiveness. One who demonstrates an ethic of care responds to people in a way that ensures that the least harm will be done and that no one will be left alone. There is an assumption of connectedness and attachment and an understanding that everyone is different and may have a different reality. Decisions are contextual and relative to a particular situation. The relationship is valued above the sanctity of the individual." (p. 326)

Furthermore, both dispositional and situational moral orientations were considered continuous variables in the present study (cf. Liddell et al., 1992). Piaget (1932/1965, p. 17) posited "the facts present themselves as a continuum which cannot be cut up into sections." Similarly, Rest (1979) maintained that the development of a particular form of thinking is not
an all-or-nothing affair. Therefore, the measurement of moral orientation should reflect the developmental continuum.

**Measurement of Dispositional and Situational Moral Orientations**

Because moral responses are the results of the interplay between the situation (e.g., the nature of the dilemma) and the characteristics of the individual (e.g., empathy) (Weinberg et al., 1993), the use of moral dilemmas may confound dispositional moral orientations (intra-individual characteristics) with situational factors. Thereupon, dilemma-free measures, such as Lyons’s (1983) self-description questions\(^5\), are more suitable for the measure of dispositional moral orientations than are dilemma-based measures. Self-description questions can avoid the confound of dilemma content, as well as assess an individual’s self-concept as a connected/separate self and/or a care/justice oriented person. Dilemma-based measures, with standard dilemmas, such as hypothetical dilemmas, are more relevant for the assessment of situational moral orientations. Standard dilemmas can provide a standardized measure for both moral judgment and moral orientation (Ford & Lowery, 1986).

Open-ended measures may not be suitable for the assessment of moral orientation because of their limitations. For example, Lyons’s coding procedure is dichotomous (reasoning is coded as either care or justice) that fails to reflect the non-mutually exclusivity of the two orientations (Walker et al., 1987). It categorizes people into categories (e.g., “Care

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\(^5\) These questions include self-description questions (e.g., “How would you describe yourself to yourself?”) and general questions (e.g., “When responsibility to self and responsibility to others conflict, how should one choose?”) Responses are coded as either separate/objective or connected/interdependent relational representations or neither. An individual’s responses are scored by counting the relative number of separate/objective and connected/interdependent relational representations. The predominant mode is then determined (Lyons, 1983).
"Focus" or "Justice Focus") (e.g., Gilligan & Attanucci, 1988), thus ignoring the continuing nature of moral development.

Moreover, open-ended measures, either done through face-to-face interviews or written essays, require participants’ spontaneous production of moral reasoning or self-description. Thus, individual differences in verbal expressivities may increase the error in the assessment of self-definition and moral reasoning and orientation. With open-ended measures, the assessment is not carried out under standardized conditions, and the information collected is scored by raters, not by the participant. Consequently, intra- and inter-rater inconsistencies reduce the reliability of the measurement.

On the contrary, objective rating scales that measure comprehension and preference of moral judgments have many advantages over the subjective, free-response method for the assessment of moral orientation. First, moral orientation is a personal preference (Walker et al., 1987) that should be assessed by a preference measure. Second, objective scales that assess care and justice with independent subscales do not only reflect the developmental continuum but also the non-mutually exclusivity of the two orientations.

Third, objective, preference measures that are comprehension tasks minimize variance due to differences in verbal expressivities (Rest et al., 1974). Fourth, objective scales are standardized in both testing conditions and scoring, and thus eliminate intra- or inter-rater inconsistencies. Finally, preference measures are more appropriate for use with adolescents and ESL participants, because it allows the respondents to select from a list of possibilities without giving any reasons (cf. Rest, 1979). For participants who have difficulties in reading (e.g., children), the instructions, questions, and possibilities can be read out loud by the researcher. Therefore, objective rating scales that measure comprehension and preference of
moral judgments are more preferable than open-ended measures for the assessment of both dispositional and situational moral orientations.

Briefly, a differentiation between dispositional moral orientation (i.e., a personal preference for a moral perspective) and situational moral orientation (i.e., an orientation that reflects the interplay between dispositional orientation and contextual factors) is essential for the investigation of moral orientation. Dilemma-free measures that assess an individual's self-concept as a connected/separate self and/or a care/justice oriented person may be more appropriate for assessing dispositional moral orientation, whereas dilemma-based measures may be more suitable for the assessment of situational orientation. Preference measures, such as objective rating scales, have advantages over open-ended measures for the measurement of both dispositional and situational moral orientation, because moral orientation is a personal preference (Walker et al., 1987).

Summary

Kohlberg (1981) regarded justice as the basic moral principle that signifies the highest development of moral judgment. Gilligan (1982) contended that a “justice” morality, focusing on rationality, autonomy, individual rights, and rules, fails to account for the morality of women and girls, which, she argued, stresses empathic feelings, relationships, and care. Gilligan suggested that there are two moral orientations, “care” and “justice,” that are independent of moral judgment levels, which implies a sex-biased assessment of moral judgment development in favor of men.

Gilligan (Gilligan & Wiggins, 1987) further suggested that the early childhood experiences of inequality and attachment predispose the child to the perception of two moralities of justice and care. The identity of a woman, which is usually defined in terms of
relationships and social connections, is related to her conceptions of a care morality. In contrast, a justice perspective, mostly evidenced in men, focuses on reciprocal rights and equal respect entails a separation identity. Therefore, the two moralities are sex-related, although both sexes use justice and care in their thinking (Gilligan & Attanucci, 1988).

In general, the charge of sex bias in favor of men in moral reasoning has been refuted by empirical evidence (Thoma, 1986; Turiel, 1996; Walker, 1984, 1991). Research with open-ended measures, based on Lyons’s (1983) coding scheme, has shown that women are more likely than men to report interpersonal conflicts and use a care orientation in real-life dilemmas, although no sex differences have been found with regard to hypothetical dilemmas (Walker, 1989; Wark & Krebs, 1996). Because the content of the conflict influences one’s moral orientation more than does one’s sex, moral orientation may be a methodological artifact (Clopton & Sorell, 1993; Walker, 1989, 1997; Wark & Krebs, 1996, 1997).

The present study inquired into the existence of moral orientation by distinguishing dispositional moral orientation from situational moral orientation. Dilemma-free preference measures that assess an individual’s self-concept as a connected/separate self and/or a care/justice oriented person may be more appropriate for assessing dispositional moral orientation, whereas, dilemma-based preference measures may be more suitable for the assessment of situational orientation.

Individual differences, other than sex or gender concepts, may also affect both dispositional and situational orientation. Another intrapersonal attribute that may be related to moral judgment and moral orientation is empathy (Hoffman, 2000). It was the aim of the present study to explore the interrelations among empathy, moral judgment, and moral
orientation from a multidimensional perspective. It is to the relations between empathy and moral development that we now turn.

**Empathy**

Because perspective taking sets the upper limits for the development of justice moral reasoning (Kohlberg, 1984) and affective sharing is the prerequisite for the ethic of care (Lyons, 1983), empathy may link the two together for its close relations with the development of moral judgment and moral orientation, be it care or justice.

In this section, definitions of empathy are reviewed, followed by an examination of developmental changes and sex differences in empathy. Then, empirical literature on the relation of empathy to moral development is examined.

**Definitions of Empathy**

Empathy is a process as well as a response (Strayer & Eisenberg, 1987). As a response, “empathy is a response specific to and elicited by given persons and situations” (Strayer & Roberts, 1997, p. 387). As a process, empathy is “a multidimensional process entailing both emotional arousal and cognitive mediation” (Strayer & Schroeder, 1989, p. 101).

Therefore, empathy has been defined in cognitive terms, as the ability to discern and understand other's internal state (e.g., Hogan, 1969), in affective terms, as the sharing of another's emotion (e.g., Eisenberg, 1986; Hoffman, 2000), and as a set of related constructs encompassing both cognitive and affective reactions to the observed experiences of another (Davis, 1994). It is the last definition of empathy that has been adopted herein.
Dispositional versus Situational Empathy

When empathy is a situational specific response, it is called “responsive empathy” (Strayer & Roberts, 1997, p. 387), “state empathy” (Eisenberg, Shea, Carlo, & Knight, 1991), or “situational empathy” (Miller & Eisenberg, 1988). There is some evidence for individual differences in empathic responses, associated with individual differences in emotionality and emotion regulation (Eisenberg et al., 1996). Findings from twin studies suggest that some of the individual differences in empathy may be heritable (Davis, Luce, & Kraus, 1994; Zahn-Waxler, Robinson, & Emde, 1992).

Individual variation in empathic tendencies, which may affect situational empathy, is called “dispositional empathy” and viewed as a personality trait (Davis, 1983b, 1994). Situational and dispositional empathy may play differential roles in morality (Miller & Eisenberg, 1988). This study focused primarily on the investigation of dispositional empathy and its relation to moral development.

A Multifaceted Approach to Empathy

Either a general trait or a specific response, empathy is a multifaceted phenomenon involving both cognitive and affective processes (e.g., Davis, 1994; Strayer, 1987). There are many cognitive processes likely to be involved in empathy, but they are frequently lumped under the label of perspective taking or role taking (Eisenberg et al., 1991).

Perspective taking is a developed capacity and the ability to take another’s perspective usually is developed adequately by mid-adolescence (Selman, 1976). As a personality trait of empathy, however, perspective taking has low correlations with cognitive or intellectual ability in adolescents and adults (Bernstein & Davis, 1982; Hogan, 1969), suggesting that
perspective taking is not an ability but more a social style, that is, a dispositional likelihood to use one’s role-taking ability to receive the others’ viewpoints (Davis et al., 1994).

Similarly, there are numerous vicarious emotional responses (Hoffman, 2000), and they are called affective empathy (Staub, 1987). Two affective aspects of empathy have been investigated by most researchers (e.g., Batson & Shaw, 1991; Davis, 1994). One is the self-focused, aversive, and distressed reaction to other’s state, which has been labeled “personal distress” (Batson & Shaw, 1991; Davis, 1994; Eisenberg, 1991). The other is the feeling of vicarious emotions that are more other-focused than self-focused, together with feelings of tenderness, compassion, and warmth, or concern for the other’s welfare, which has been called “sympathy” (Eisenberg, 1991), “sympathetic distress” (Hoffman, 2000), or “empathic concern” (Davis, 1994).

This study focused on dispositional empathy with a multidimensional approach that identifies perspective taking as the cognitive component of empathy, and empathic concern and personal distress as the affective components of empathy. There are defined operationally by Davis (1994):

“Perspective taking is defined as the tendency to spontaneously adopt the psychological point of view of others in everyday life.

“Empathic concern is defined as the tendency to experience feelings of sympathy and compassion for unfortunate others.

“Personal distress is defined as the tendency to experience distress and discomfort in response to extreme distress in others.” (p. 57)

The Assessment of Dispositional Empathy

The assessment of dispositional empathy often uses self-report scales (Eisenberg, 1986). Self-report measures of dispositional empathy assess the degree of one’s self-
perception as an empathic person rather than one’s empathic skills or accuracy. The most widely used self-report scales include Hogan’s (1969) Empathy Scale that measures perspective taking, Mehrabian and Epstein’s (1972) Questionnaire Measure of Emotional Empathy Scale (QMEE) that measures affective empathy as a whole, and Davis’s (1994) Interpersonal Reactivity Index (IRI) that measures empathy with four subscales, including perspective taking, empathic concern, and personal distress. A review of empathy measures by Chlopan, McCain, Carbonell, and Hagan (1985) indicates that all three measures have adequate validity and reliability.

The IRI (Davis, 1994) was the preferred measure of empathy for the present study, because its multidimensional operationalization of empathy takes into account the cognitive and affective aspects of empathy, and differentiates between empathic concern and personal distress. The IRI (see Appendix C) will be described in detail in Chapter 3.

**Developmental Changes and Sex Differences in Empathy**

Using the IRI, Davis and Franzoi (1991) found that perspective taking and empathic concern showed year-to-year increase during adolescence, but personal distress decreased with age over time. Sex differences favoring girls were found on all three aspects of empathy. Using the IRI in their study of empathy and prosocial development in late adolescence, Eisenberg, Carlo, Murphy, and Court (1995) also found the same developmental patterns of dispositional empathy, as did Davis and Franzoi (1991).

Likewise, Litvack-Miller, McDougall, and Romney (1997) investigated the structure of dispositional empathy during middle childhood with a multidimensional approach, by modifying the IRI for children. They found that older children scored higher on empathic
concern than did younger children, and that girls scored higher on perspective taking, empathic concern, and personal distress than did boys.

In sum, sex differences favoring girls were found on all three aspects of empathy. Empathic concern and perspective taking tend to increase with age, but personal distress tends to decrease with age in adolescence (Davis & Franzoi, 1991; Eisenberg et al., 1995) and middle childhood (Litvack-Miller et al., 1997).

**Empathy and Moral Development**

The concept of empathy has been used by social and developmental psychologists to explain moral behavior (Wispé, 1987). In the 1970s, the cognitive-developmental approach dominated the field of psychology (Walker, 1986a), and many psychologists (e.g., Hogan, 1973; Kohlberg, 1984; Selman, 1976) emphasized the cognitive aspects of empathy (perspective taking or role taking) in moral judgment development. Research evidence largely supports the relations between perspective-taking ability and moral development (Chandler, 1973; Moir, 1974; Santilli & Hudson, 1992; Sprinthall, 1994; Yussen, 1976). Nonetheless, the cognitive-developmental approach to moral development has been criticized for its inadequacy in explaining moral behavior (Bandura, 1991), and in motivating moral or altruistic behavior, because perspective taking can be used for egoistic or altruistic purposes (Eisenberg, et al., 1991).

Similarly, research in the area of affective empathy (measured by the QMEE) and moral development has been criticized for neglecting the cognitive aspects of empathy and failing to differentiate between empathic concern and personal distress (Miller & Eisenberg, 1988). As a result, inconsistent findings have been reported. For example, some found no relations between affective empathy and delinquency in adolescence (Kaplan & Arubuthnot,
1985; Lee & Prentice, 1988). Some reported that affective empathy is positively related to overall or conventional moral reasoning, but weakly related to principled moral reasoning among school children (Kalliopuska, 1983), adolescent boys with or without behavioral disorders (Schonert-Reichl, 1994b), and college men (Kalle & Suls, 1978). It is, therefore, pertinent to take a multidimensional approach in the examination of the relation of empathy to moral judgment and moral orientation.

A Multidimensional Approach

Coke, Batson, and McDavis (1978) were among the first who explored the relations between moral behavior and the cognitive and affective facets of situational empathy. They conducted two experiments and found support for their proposition that taking the other’s perspective increased empathic affects, which in turn increased helping.

With respect to dispositional empathy, using the IRI (Davis, 1994), Davis reported that only empathic concern was related to helping, but the other aspects of dispositional empathy were not (Davis, 1983a, 1983c). Individual differences in dispositional empathy can influence situational empathic affects and helping, beyond the influence of situational factors (e.g., instructional set manipulation) and the effect of individual differences in empathy is due to variation in affective and not cognitive empathy (Davis, 1983c; Davis et al., 1994). Moreover, dispositional empathy can affect the willingness to seek or enter potentially empathic arousing situations because of its effect on anticipated emotional reactions and satisfaction associated with helping (Davis et al., 1999).

Perspective taking, which is an effortful cognitive process, may lead to a merging of the self and others (Davis, Conklin, Smith, & Luce, 1996). Thus, dispositionally high perspective taking may further increase situational emotional reactions among individuals.
high in empathic concern, but it has an opposite effect on those low in empathic concern (Davis, Hull, Young, & Warren, 1987). Eisenberg (Eisenberg, et al., 1991), on the other hand, suggests that the causal relations between perspective taking and empathic affects can be bidirectional. That is, empathic concern may also lead to perspective taking, which, in turn, leads to moral behavior. In sum, the cognitive and affective aspects of empathy are interrelated, and they may affect moral development in different ways.

**Research findings.** In the Kohlbergian tradition, empirical research investigating the relation of dispositional empathy to moral development from a multidimensional approach has been scant. In their study of juvenile delinquent boys, Lee and Prentice (1988) found that the delinquent group scored lower than did the nondelinquent group on perspective-taking ability, moral reasoning, and logical cognition, but not on any of the four subscales of the IRI or the QMEE. Moreover, correlations among empathy (measured by the IRI or the QMEE), perspective-taking ability, moral reasoning, and logical cognition were statistically nonsignificant. Lee and Prentice suggest that the relation of empathy to moral behavior develops over time, may still be unstable during adolescence, and becomes stable only during adulthood. Another plausible explanation for the inconsistent findings in studies of adolescent delinquent boys (e.g., Ellis, 1982; Kaplan & Arbuthnot, 1985; Lee & Prentice, 1988) is that delinquency, being a legal, not a psychological category, is an inadequate discriminator in these studies (Cohen & Strayer, 1996).

Either with delinquent or nondelinquent samples, research from a multifaceted approach on the relation of empathy to moral orientation is almost nonexistent. Of the few studies that investigated the relations between empathy and moral orientation, Sitzer (1991) reported that the care orientation was positively related to affective empathy and reduced
narcissism in adults. On the contrary, the justice orientation was positively related to grandiosity and reduced affective empathy. Women scored higher on caring and affective empathy, but lower on narcissism than did men. Thus, there seems to be some evidence for the relations between affective empathy and moral orientation.

Summary

This study focused on dispositional empathy with a multidimensional approach that identifies perspective taking as the cognitive component of empathy, and empathic concern and personal distress as the affective components of empathy (cf. Davis, 1994). The IRI (Davis, 1994) was the preferred measure of empathy, because of its multidimensional operationalization of empathy.

Although Kohlberg (1976) emphasized the cognitive aspects of empathy (perspective taking) in moral judgment development, perspective taking alone is inadequate in motivating moral or altruistic behavior (Eisenberg, et al., 1991). Similarly, research on the relations between affective empathy and moral development fails to take into account the cognitive aspects of empathy and to differentiate between empathic concern and personal distress (Miller & Eisenberg, 1988). Thus, a multifaceted approach is most pertinent in studying the relation of empathy to moral development.

Research findings based on the IRI (Davis, 1994) reported that only empathic concern is related to helping. Perspective taking in itself does not lead to moral behavior, but it may affect moral behavior indirectly by facilitating empathic concern, whereas personal distress has little or no relation to moral behavior (Davis, 1983a, 1983c; Davis et al., 1987).

Research on empathy and moral development has been limited and has mostly focused on delinquent boys and men, with a unidimensional approach to empathy (e.g., Ellis,
We remain uncertain of how empathy, as a multifaceted construct, is related to moral reasoning in normal adolescent girls and boys.

Although there is some evidence for the relation between affective empathy and moral orientation in adults (Sitzer, 1991), it is not clear how individual differences in perspective taking, personal distress, and empathic concern are related to moral judgment and moral orientation in adolescence empirically. Therefore, by taking a multifaceted approach, I explored the interrelations among empathy, moral judgment, and moral orientation in adolescence in the present study.

Adolescence was chosen for the present study because it reflects the transition from concrete instrumental interest to conventional concerns, and possibly to principled morality (Kohlberg, 1984). By adolescence, the highest level of empathy is achieved, so that adolescents are able to empathize with a whole group of people, and even humanity (Hoffman, 1978), and to switch or mix moral orientations flexibly (Donenberg & Hoffman, 1988; Garrod & Beal, 1993; Walker, 1989).

The development of abstract and logical thinking, the need for independence and autonomy, and the search for self-identity make adolescence a period of discovery and transformation (Kohlberg & Gilligan, 1971). Moreover, concerns for romantic and sexual relationships may promote conventional morality, a care orientation, and empathic capacities in adolescents (Fabes, Carlo, Kupanoff, & Laible, 1999).
Research Questions and Hypotheses

Research Questions

Although the relevant literature suggests that sex differences on orientation may emerge at adolescence and that more adolescent girls than boys tend to use care or both orientations (Donenberg & Hoffman, 1988; Johnson, 1988), it is still unknown whether adolescents have developed a personal preference for moral orientation(s) (i.e., dispositional moral orientation). If they have, do sex differences in dispositional moral orientation emerge in adolescence? How is dispositional moral orientation related to situational moral orientation and moral judgment in adolescence? What are the relations between dispositional orientations and empathic tendencies in adolescence?

Although there is some evidence for the relations between affective empathy and moral orientation in adults (Sitzer, 1991), we remain uncertain of how empathy, as a multifaceted construct, is related to moral reasoning and situational moral orientation in adolescence. What are the interrelations among the cognitive (perspective taking) and affective aspects (empathic concern and personal distress) of empathy, moral judgment, and situational moral orientation in adolescence?

Hypotheses

Based on the above research questions and the reviewed literature, the following predictions were made:

1. There will be positive correlations between age and indexes of moral reasoning, moral orientation, and empathy, except personal distress. Research suggests that higher grade/older students score higher than do lower grade/younger students on measures of moral
judgment (Rest, Thoma, Naraez, & Bebeau, 1997), moral orientation (Johnson, 1988),
perspective taking, and empathic concern, except personal distress (Davis & Franzoi, 1991).

2. Girls will score higher than boys on all measures of moral reasoning, moral
orientation, and empathy, because of research evidence for sex differences, favoring girls, on
measures of moral judgment (Thoma, 1986), moral orientation (Johnson, 1988), and empathy
(Davis & Franzoi, 1991).

3. There will be positive correlations between care dispositional and care situational
orientation, and between justice dispositional and justice situational orientation, due to the
correlations between self-concept (an index of dispositional moral orientation) and
(situational) moral orientation (Lyons, 1983; Liddell et al., 1992).

4. Adolescents with higher care scores will be more likely to score higher on
empathic concern and personal distress, because there is a correlation between affective
empathy and a care orientation in adults (Sitzer, 1991).

5. Students with both higher care and justice scores will be more likely to score
higher on the P and the N2 scores of the DIT, because of the link between balanced/mix
orientation and higher moral development (Walker et al., 1987).

6. The U score of the DIT will correlate positively with justice scores, and negatively
with care scores, because the U score reflects a participant’s use of justice moral orientation
(Rest, 1993).

7. Adolescents who score higher on perspective taking and empathic concern will be
more likely to score higher on the P and the N2 scores of the DIT. It has been found that only
empathic concern is related to helping, and that perspective taking may mediate the relation
of empathic concern to moral behavior (Davis, 1983a, 1983c; Davis et al., 1987).
CHAPTER 3: METHODOLOGY

In this chapter, I describe the research design and the sampling procedures. A specification of the instruments used for the study is then discussed, followed by a description of the data collection procedures. Finally, an overview of statistical techniques employed is presented.

Research Design

With the purpose of discovering how empathy, moral judgment, and moral orientation are related to one another in adolescence, the present study was a survey across grades. Self-reported questionnaires were used to obtain data.

Sampling Procedure

With resources available to researcher, the study relied on convenience sampling and voluntary participants. The Social Studies Department of a public secondary school in a Western Canadian city volunteered to participate in the study. Participants in the study were drawn from 18 Grade 8-12 Social Studies classes of the participating teachers. Students who themselves gave consent to participate and had parental permission completed the survey measures.

Measures

In the course of test construction of the measures of dispositional and situational moral orientation, four separate trial tests with students from Grades 6 to 11 (n =18, 12, 19, and 15), including White and Asian, were conducted. The DIT (Rest, 1993) and the IRI (Davis, 1994) were also included in some of the trials. Based on feedback from the trial participants, changes were made regarding the measures used in the present study. These changes are reported in the following along with the descriptions of the instruments.
Personal Information

A brief demographic data sheet was used to obtain background information about the participants. It was composed of items concerning the students' sex, age, grade level, ethnicity, family structures, and their parents' occupation. The information from this questionnaire was important to the study in the investigation of sex and developmental changes in empathy, moral judgment, and moral orientation. A full copy of this questionnaire is in Appendix D.

Moral Judgment

The Defining Issues Test (DIT; Rest, 1993) was used to assess moral reasoning. The DIT, a paper-and-pencil test, presents participants with a moral dilemma and a list of 12 statements representing moral judgment stage definitions of the major issues involved. Participants are asked to rate on a scale of importance (e.g., "great," "much," "some," "little," and "no") for each statement in deciding what should be done, and then to rank order their choices of the four most important issues from "Most Important" to "Fourth Most Important."

Derived from Kohlberg's theory and scoring system, the DIT is a recognition task testing the participant's levels of comprehension and preference (Rest, 1979). Being an objective rating and ranking scale, the DIT can be administered to groups of participants simultaneously and scored by computer (Rest, 1993).

The DIT has good reliability and validity. Both the test-retest reliability (over a period of several weeks) and the internal consistency reliability (Cronbach's alpha) of the DIT average in the .80s. The DIT correlated well with the more subjective MJI, age, education, and other measures of cognition (e.g., IQ and achievement test), attitudes (e.g.,
Law and Order Attitude Test), and behavior (e.g., antisocial behavior). The DIT also possesses a validity check for random or inconsistent responding (Rest, 1979, 1986). The DIT has generated over 1000 studies in over 40 countries in the last three decades (Rest, 1994). Critical reviews of the DIT have noted that the test has good reliability and validity (McCrae, 1985; Moreland, 1985).

The DIT, however, is not without problems. There are six hypothetical moral dilemmas in the DIT, and some of the stories have been criticized for being outdated. For example, one story talks about the student takeover of a university building as a sign of protest against the Vietnam War as if it were a current event (Rest, Narvaez, Thoma, & Bebeau, 1999). With the intention of excluding those problematic stories, the short-form DIT with three stories (Heinz, Prisoner, Newspaper) was used. The short-form three-story DIT (with a Cronbach's alpha of .78) has the highest correlation of any three-story set with the full six-story set \((r = .93\) on the P score). Moreover, it produces validity coefficients just a few points under the 6-story DIT (Rest, 1993).

Another problem with using the DIT, particularly with middle adolescents, is that the DIT Standard Subject Reliability Checks generally purges about 23\% \((n = 200)\) from the sample, and that more than half of the 9th Graders (57.5\%) are discarded. The New Participant Reliability Checks, however, developed from empirical trial-and-error procedures, purges only 8.5\% of the ample, and 10.6\% of the 9th Graders (Rest & Narvaez, 1998). Data suggest that the New Checks does not only purge fewer participants from the sample, but also produces stronger developmental indexes than does the Standard Checks (Rest, Narvaez, Thoma, & Bebeau, 1999).
The Standard procedure has four subject-reliability-checks to detect the likelihood of four problems relating to bogus data, but the New Checks deals with them differently and offers new cut-off values for the subject-reliability-checks (Rest, Narvaez, Thoma, & Bebeau, 1999):

(1) Rate-and-rank consistency (RtXRk) is a summed weighted rank-rate inconsistency across stories that checks against random responding. It is assumed that a reliable participant will be consistent in rating (the first task) and ranking (the second task) the same item, but in reality, no one can be perfectly consistent. Nonetheless, if there is too much inconsistency, then the respondent’s responses are regarded as unreliable and the whole questionnaire is purged from the sample. Using the New checks, all inconsistencies with the top rank (i.e., items rated higher than the item in the top rank) are counted and multiplied by 4. In a like manner, all inconsistencies with the second most important item (i.e., items rated higher than the item in the second most important item except the item in the top rank) are counted and multiplied by 3, and so on for the third and fourth ranked items. The summed weighted rank-rate inconsistencies within a story range from 0 to 100, and from 0 to 600 across six stories. The sum of inconsistencies across six stories under 200 can be regarded as innocent confusion and be tolerated (Rest, Narvaez, Thoma, & Bebeau, 1999). Thus, for the three-story DIT used in the present study, a cut-off value of 100 for the rate-and-rank consistency check was chosen.

(2) Meaningless items (M) are “high sounding” but meaningless to the dilemma. If a participant endorses too many of these items, it is assumed that the participant is responding to wording and syntax rather than to meaning. The protocol is thus
invalidated. The M score is arrived at by weighting ranks by 4 for the top rank, by 3 for the second rank, etc. on the M items. Under the New checks, an M score greater than 10 for the 6-story DIT invalidates the protocol (Rest, Narvaez, Thoma, & Bebeau, 1999). For the present study, a cut-off value of 5 for the M Score was adopted for the three-story DIT.

(3) Missing data can appear as missing rates (MISRT) and missing ranks (MISRK). If a subject leaves out too many rates (e.g., 3 out of 12 in any two stories) or too many ranks (e.g., more than 6 ranks in a total of 24 ranks over 6 stories), it is doubtful that the subject is motivated enough to provide reliable data and the protocol is thus eliminated from the sample (Rest & Narvaez, 1998). For the present study, a cut-off point for missing rates was 3 ratings out of 12 in any story, and more than 3 missing ranks in a total of 12 ranks over 3 stories invalidated the protocol.

(4) Non-differentiation of rates or ranks (NoDIF) was designed to deal with the problem of non-discrimination. If a participant rates 11 items the same or ranks the same item in all four places on a story, or fails to discriminate on two or more stories, the protocol is considered invalid (Rest & Narvaez, 1998). For the present study, the same cut-off scores were adopted.

The DIT provides a score for all the stages (Stages 2, 3, 4, 5A, 5B, and 6), a P (Postconventional) score, a U (Utilizer) score, and an N2 score (Rest & Narvaez, 1998). For the purposes of the study, the U score, the P score, and the N2 score were employed.

The U Score is a measure of participants’ reliance on justice reasoning that estimates the degree of agreement between the story decisions (e.g., should Heinz steal the drug?) and moral judgment decisions (i.e., item responses). It reflects justice moral orientation used by
respondents to arrive at their story decisions (Rest, 1993). Thus, it was of particular interest to the study to see whether the U score correlates positively with justice orientation, and negatively with care orientation.

The P Score, ranging from 0 to 95, reflects principled moral reasoning (i.e., the sum of Stages 5A, 5B, and 6). The latest N2 Score has been found to perform better than the P score, because the N2 index uses more data and contains a larger portion of “true score” variance than does the P index (Rest, Thoma, Narvaez, & Bebeau, 1997). N2 consists of two components: the P score of the ranking data, and the HL score of the rating data. The HL score is the difference between the average of the high items (i.e., Stages 5 and 6) and the average of the low items (i.e., Stages 2 and 3) divided by the standard deviation of the ratings for that story (Rest et al., 1998). Nevertheless, the P score is still useful in the investigation of the relations of postconventional moral reasoning to empathy and moral orientation, because previous research (e.g., Schonert-Reichl, 1994b) has suggested that affective empathy does not seem to have strong correlations with postconventional thinking. Thus, both the N2 and the P scores were used to assess developmental changes in adolescents’ moral judgment for the present study.

The DIT requires a reading level of 12-13 years or equivalent. Although participants below Grade 9 or whose language is not English may have trouble understanding the tasks, there are ways to help the participants. For example, dictionary definitions to certain words in the story may be given to students if they have difficulty understanding the story. The students should be encouraged to try to make sense out of the answer item as best they can or mark it “No importance” if the item still does not make sense to them (Rest, 1993).
I pilot tested the DIT procedure with several representative samples to find out where the difficulties might be and asked these participants to suggest any special instructions that would make the task easier or more comprehensible. Based on feedback from the trial participants, instructions for the DIT were shortened and simplified into three steps, and printed in bigger fonts to suit adolescents' reading levels (see Appendix B). The main points of the rating and the ranking tasks were highlighted. Students were told explicitly to choose the four most important items first from items marked “great,” then “much,” and so on. The purpose of the meaningless items was also made explicit in the instructions. In order to make the task meaningful for adolescents, a different sample story, “Nicole’s Dilemma” (see Appendix B) adapted from the Ethic of Care Interview (Skoe, 1993) for children, was used to familiarize the teenagers to the rating and ranking tasks of the DIT.

To facilitate the process of reading stories and answering questions, each story was placed on the top of the items of the same page. Even number items were highlighted to avoid confusions between items or misplacement of marks. The marking of the four most important items was changed to circling the number of the participant’s choice. Later on, a research assistant transferred the participants’ answers to the DIT answer sheets. I checked the accuracy of the transfers, before the answer sheets were shipped to the Center for the Study of Ethical Development for computer scoring and preliminary data analyses.

At the beginning of the administration of the questionnaires, I read through the instructions of the DIT with the students and went over the sample story, “Nicole’s dilemma,” as a group exercise before students proceeded on their own. After the participants had finished all the questionnaires, I would ask their permission to check their answers to see if they had understood and followed the instructions correctly and answered all the questions.
Participants were requested to clarify their responses when rating and ranking inconsistencies or missing data appeared, if time allowed.

Moral Orientation

The Development of the Objective Measure of Dispositional Moral Orientation

For the assessment of dispositional moral orientation, I developed the Objective Measure of Dispositional Moral Orientation (OMDMO) for adolescents and adults. The goal of this measure was to survey people's self-concept as a care and/or justice person by asking about how they generally make decisions or solve problems. It aimed to measure an individual's preference for the ethics of care and justice, as characterized by Gilligan (1982) in her critique of Kohlberg's (1981) theory of moral development. The OMDMO was adapted from the self-description care and justice rating scales of the Measure of Moral Orientation (MMO; Liddell, 1990).

The MMO is a self-report questionnaire for college students. The MMO contains two parts. The first part includes nine moral dilemmas common to college students, each followed by several response statements, which represent either a care or justice orientation. The second part of the MMO consists of 14 self-descriptive statements that the participants are asked to rate themselves on a 4-point scale ("strongly agree," "agree," "disagree," and "strongly disagree") reflecting their self-perceptions as care and/or justice people. For the purposes of the present investigation, only the second part was chosen as the blueprint of the OMDMO, because it is dilemma-free and thus can avoid the confound of dilemma content in the assessment of dispositional moral orientation.

The MMO has been reported to have adequate reliability, and convergent and discriminant validity (Liddell & Davis, 1996; Liddell et al., 1992). The MMO has also been
reported to display more evidence of construct and criterion validity than Friedman, Robinson, and Friedman's (1987) and Yacker and Weinberg's (1990) objective measures of moral orientation (Mosion, 1996). The MMO has generated more studies (e.g., Jones & Watt, 1999; Liddell & Davis, 1996) than the other preference measures of moral orientation.

Because the MMO was constructed for college students, its self-descriptive items had to be modified to suit the reading and comprehension levels of adolescent and ESL participants. A concern for ESL participants' reading and comprehension levels in the development of an instrument for moral orientation, I believe, is essential for conducting educational research in our pluralistic society.

There were seven items for each of the care and justice scales of the OMDMO (see Appendix E). Three university faculty members and three graduate students in educational psychology were asked to read the definitions of care and justice moral orientations and rate each item as either a care or justice item, or neither. Twelve items received 100% interrater agreement. The other two items were rewritten according to raters' feedback. Sample items follow: “My responsibilities to my friends and family are more important than my own rights.” “I do what I think is right, even if my friends and family do not like it.”

Based on feedback from the trial participants, the original 4-point rating scale of the MMO was changed to a 9-point rating scale on a line from 1 ("Strongly Disagree") to 9 ("Strongly Agree") for the OMDMO. A 9-point rating scale on a line does not only allow more flexibility and variability in response, but also better reflects the continuous nature of moral orientation. With a continuous line, the 9-point rating scale is more equipped to capture the true scores of the variable, without forcing the respondents to choose sides when uncertainty is the reality.
Scores for the DMO-justice and DMO-care scales were formed by summing the values of the justice items and care items separately, so that participants can get all high or low scores on both the justice and care scales. Besides, it avoids dichotomizing care and justice orientations (Cohen, 1990). The scores for the justice and the care ratings ranged from 7 to 63.

With the intention of assessing a respondent’s dispositional moral orientation as balanced or care-/justice-oriented, a difference score between the respondent’s DMO-Justice and DMO-Care scores was computed. This computed score was called the DMO-Justice Orientation Score (DMO-JO). A positive DMO-Justice Orientation score represents a justice-oriented dispositional orientation, whereas, a negative DMO-Justice Orientation score represents a care-oriented dispositional orientation. A zero or close to zero DMO-Justice Orientation score represents a balanced dispositional orientation. This score, which is continuous, reflects individual differences in justice dispositional orientation on a continuum.

With regard to the reliability of the scores, four items, two from each of the care and justice scales, were written in exact opposite, to serve as a consistency check. For example, a care-item (Item 2) says, “I make decisions based on feeling rather than reasoning” and a justice-item (Item 10) says, “I make decisions based on reasoning rather than feeling.” This pair of items was called feeling/thinking consistency (FTCon); and the other pair (Items 7 and 14) was called principle/people consistency (PPCon). It was expected that the total score of either pair of consistency items would be 10, if the respondent were perfectly consistent in his/her responses. To allow for some degree of inconsistency (i.e., +/-2), a total score in the range of 8-12 was considered tolerable for each pair of the consistency items. A total DMO-Consistency score (DMO-Con) was formed by summing the values of the four consistency
items (i.e., Items 2, 7, 10, and 14). A total DMO-Consistency score in the range of 16-24 was regarded as acceptable; outside this range (i.e., < 16 or > 24) would be a sign of unreliable responses or inconsistency.

The Development of the Objective Measure of Situational Moral Orientation

For the assessment of situational moral orientation, I developed the Objective Measure of Situational Moral Orientation (OMSMO) for adolescents and adults. The goal of the OMSMO was to assess the importance of various justice and care issues in a respondent’s consideration of a moral conflict. The OMSMO was adapted from the care and justice rating scales developed by Wark and Krebs (1996).

Following the work of Ford and Lowery (1986), Wark and Krebs (1996) asked undergraduates to write about their real-life dilemmas and to rate on 8-point Likert scales the degree they viewed the real-life dilemmas they reported in terms of issues of care and justice. Issues of care were defined as centered on concern for others, relationships, interpersonal responsibility, trust, and the connection between people. Issues of justice were defined as emphasizing rights, independence, reciprocity, and fairness, with reference to moral principles.

Nevertheless, Wark and Krebs’ (1996) definitions of the care and justice orientations were too long for comprehension, especially for younger and ESL participants. Moreover, a single test item containing two or more ideas were likely to cause confusion among respondents so that they might not know which idea they should base their responses on. Likewise, the researcher might not know to which idea of the test item that the respondent responded (DeVellis, 1991). For example, one may endorse highly the issue of “fairness,” but not with reference to any “moral principles,” with regard to the ethic of justice, or one
may pay attention to “concern for others” but not “relationships”, in the consideration of the care ethic (cf. Wark & Krebs, 2000).

Therefore, the single item of the care and justice rating scales was broken down into smaller units for the OMSMO. The wordings of the items/issues were simplified for adolescents and ESL participants. The breaking down of care and justice issues allowed deeper understanding and analysis of the participant’s consideration of each issue, such as “relationships” and “fairness,” in their resolution of the dilemmas, as well as the relations between age/sex and issues in the two orientations. It thus had an advantage over summarizing/lumping care or justice issues into one item statement.

Based on the operational definitions of care and justice orientations adopted for the present research, the situational care rating scale accounted for six care issues: relationships, feelings, responsibilities in relationships, caring about others, connections between people, and how much harm will be done to everyone involved in the situation. Correspondingly, the situational justice rating scale contained six justice issues: rules and laws, fairness, each person’s rights, duties to the society, thinking carefully about all the facts, and principles that tell us what is right and what is wrong. The six care issues were combined with the six justice issues under a single question: “How important are the following issues in your decision (on a specific moral dilemma)?” The participants were asked to rate each issue separately, by making an “X” on a line of a 9-point scale from 1 (“Not at all important”) to 9 (“Really important”).

For providing a standardized measure for both moral judgment and moral orientation, the three stories of the short-form DIT (Rest, 1993) were used for the present project to assess situational moral orientation. The DIT stories, however, being hypothetical and abstract,
have been criticized for failing to reflect real-life moral decisions and being biased toward a justice orientation (Gilligan, 1982). Therefore, a realistic story, “Lisa and Derek,” adapted from the abortion stories of the Ethic of Care Interview (Skoe, 1993), was added to balance the justice and hypothetical flavor of the three DIT stories in the assessment of situational moral orientation in the present study.

The realistic story has relevance to teenagers, because both Lisa and Derek are high school seniors. In the story, they are successful students and involved in the school drama club. They started dating last year. Recently, Lisa has told Derek that she is pregnant with his child. They know they have limited choices. They could get married, get a job, and forget about university, or have an abortion.

Participants were first asked to make a story decision (i.e., should they get married or have an abortion?) and then rate and rank the importance of a list of 12 items in their decision (see Appendix F) as they did for the three DIT stories. These items were not meant to measure the participants’ moral judgment development or moral orientation, but to induce equal attention and similar amount of time in their consideration of the dilemma as the DIT stories would require. Because all four stories were given by the researcher and were in the same format, they could provide a standardized measure for situational moral orientation that included hypothetical and real-life like, as well as justice-pulling and care-pulling, dilemmas.

Scores for the SMO justice and care ratings were formed by summing the values of the six justice issues and six care issues separately. The scores for the SMO justice and care ratings each ranged from 6 to 54 for each story. There were four SMO justice scores and four SMO care scores derived from the four stories. They were labeled Heinz-Justice/Care score, Prisoner-Justice/Care score, Newspaper-Justice/Care score, and Abortion-Justice/Care score.
There were four total SMO scores. The SMO-Justice 3 score and the SMO-Care 3 score, ranging from 18-162, were formed by summing up the respective SMO justice and care scores of the three DIT stories separately. The SMO-Justice 3 and SMO-Care 3 scores represented the respondent’s SMO-Justice and SMO-Care total scores with regard to the three DIT hypothetical dilemmas.

Summing up the respective SMO justice and care scores of all four stories separately formed the SMO-Justice 4 score and the SMO-Care 4 score, each ranging from 24-216. The SMO-Justice 4 and SMO-Care 4 scores represented the respondent’s SMO-Justice and SMO-Care total scores with respect to all four dilemmas.

Similar to the computation of the DMO-Justice Orientation score, the SMO-Justice Orientation Score was formed by subtracting the SMO-Care score from the SMO-Justice score. That is, there were four individual SMO-Justice Orientation scores for each story (e.g., Heinz-Justice Orientation score) and two total SMO-Justice Orientation scores, one for the three DIT stories (i.e., SMO-Justice Orientation 3 score) and one for all four stories (i.e., SMO-Justice Orientation 4 score).

These SMO-Justice Orientation scores represented the respondent’s situational moral orientation as balanced or care- or justice-oriented. A positive SMO-Justice Orientation score represents a justice-oriented situational orientation, whereas, a negative SMO-Justice Orientation score represents a care-oriented situational orientation. A zero or close to zero SMO-Justice Orientation score represents a balanced situational orientation. The SMO-Justice Orientation scores, which are continuous, reflect individual differences in situational orientation on a continuum.
Empathy

The Interpersonal Reactivity Index (IRI; Davis, 1994) was used to measure dispositional empathy for the present study, due to its multidimensional approach to empathy. The IRI was constructed for adults, but it has been modified and used for adolescents by other researchers (e.g., Schonert-Reichl, 1994a). Because the participants were adolescents, the modified version of the IRI developed by Schonert-Reichl (1994a) was adapted for the present study.

The IRI (Davis, 1994), a self-report questionnaire, consists of four subscales, each tapping different aspects of empathy. For the purposes of the present study, only three of them were used: the Perspective Taking (PT) subscale assessing one’s tendency to spontaneously adopt the others’ viewpoints; the Empathic Concern (EC) subscale tapping the tendency to experience feelings of sympathy and concern for unfortunate others; and the Personal Distress (PD) subscale measuring the tendency to experience feelings of personal anxiety and distress in tense interpersonal settings.

The internal reliabilities (alpha coefficients) of the subscales, ranging from .70 to .78 for seven items, are considered acceptable. The test-retest reliabilities ranging from .61 to .81 after an interval of about 2 months, and from .50 to .62 over a 2-year period during adolescence indicate a satisfactory degree of score stability over time. Some statements are worded negatively, so that response pattern can be disturbed (Davis, 1994).

For the modified version of the IRI, the internal reliability alpha coefficients of the three subscales were established as follows: empathic concern, .75; perspective taking, .77; and personal distress, .72 (Schonert-Reichl, 1994a). Although there are only seven items in each subscale, the assessment of each aspect of empathy seems to be adequate.
The IRI also demonstrated adequate validity. First, the intercorrelations of the IRI subscales showed that they are indeed separate constructs. Second, the correlations between the IRI subscales and two empathy scales, the Hogan (1969) Empathy Scale and Mehrabian and Epstein’s (1972) Questionnaire Measure of Emotional Empathy Scale (QMEE), provided not only convergent and discriminant validity of the subscales, but also support for the multidimensional view. For instance, the PT scale correlated most highly with the cognitive Hogan scale but least to the emotional QMEE, while the EC scales exhibited the opposite pattern.

Third, relations between IRI subscales and other psychological measures, such as self-esteem, emotionality, sensitivity to others, intelligence, and interpersonal functioning (e.g., shyness, loneliness, social anxiety, extroversion), provided further convergent evidence for the subscales and suggested that the theoretical mechanisms underlying the IRI subscales could be identified. For example, the EC scale was strongly related to reported emotional reactions and helping behavior, whereas the PT scale displayed no direct relations with either emotional reactions or subsequent helping; and the PD scale was related to shyness and anxiety. Therefore, the construct representation of the scale seems to be satisfactory (Davis, 1983b). Moreover, a study (Eisenberg, Schaller, et al., 1988), trying to differentiate between personal distress and empathic concern, found that adults’ facial sadness during a sympathy induction was associated with scores on the IRI empathic concern scale, whereas facial distress during a distress induction was associated with scores on the personal distress scale.

In the adult version of the IRI (Davis, 1994), respondents are asked to indicate the degree to which the statements describe them by rating on a 5-point Likert-type scale ranging from 0 (does not describe me very well) to 4 (describes me very well). For the modified
version of the IRI (Schonert-Reichl, 1994a), another 5-point rating scale ("not at all true," "a little true," "somewhat true," "pretty true," and "really true") was used instead. Adolescents were asked to indicate how well the sentences describe them by circling how true it is for them. The scores of the subscales were formed by summing the values of the items of each subscale separately. The scores for each of the subscale ranged from 5 to 35.

For the present study, the instructions for the IRI and the statements were simplified to suit teenagers and ESL students, as well as to avoid sexist language. For example, qualifiers, such as "always" and "sometimes," were deleted from the statements to reduce confusion. In the statement, "When I’m upset at someone, I try to ‘put myself in his shoes’ for a while," "his shoes" was changed to "his/her shoes." The 5-point rating scale of the modified version of the IRI (Schonert-Reichl, 1994a) was changed to a 9-point rating scale on a line, in order to collect responses on a standard rating scale as in the OMDMO and OMSMO. Participants were asked to indicate how well each item describes them by making an "X" on a line of a 9-point scale from 1 ("Not at all true") to 9 ("Really true") (See Appendix C).

Social Desirability Response

Paper-and-pencil tests tend to show lower social desirability responding (SDR) than computerized assessment and face-to-face interviews (Martin & Nagao, 1989). Nevertheless, 16 items of the 48-item Children’s Social Desirability scale (CSD; Crandall, Crandall, & Katkovsky, 1965) were included as a measure of SDR tendency in adolescents to assess the effect of intentional faking or stereotypic responses due to SDR.

Modeled after the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960), the CSD assesses SDR in children, as motivated by a need for social approval
(Crandall et al., 1965). The construct was later reinterpreted as fear of approval (Crandall, 1966). The CSD has been reported to have good reliability and adequate convergent validity (Crandall, 1966; Crandall & Gozali, 1969).

The CSD contains 48 true-false statements representing behaviors and attitudes which are culturally approved but are unlikely incidences, for instance, "When I make a mistake, I always admit I am wrong" and "I never get angry." Twenty-six items are keyed true. Because of time constraint, 16 items, with eight keyed positively, were included in the study as a measure of SDR tendency for adolescents (see Appendix G). They were put together with the IRI as a set of questionnaire that assesses how the respondents think and feel in different situations.

For the present study, the true-false format was changed to a 9-point rating scale on a line, in order to collect responses on a standard rating scale as in the OMDMO and OMSMO. Participants were asked to indicate how well each item describes them by making an "X" on a line of a 9-point scale from 1 ("Not at all true") to 9 ("Really true").

Honesty Check

A short honesty check was developed for assessing the reliability of the respondent's answers directly. A few questions were asked at the end of the survey about whether the students had followed the instructions carefully and answered the questions honestly. Participants were asked to answer the questions by circling either "Yes" or "No." The aim of this honesty check is to identify uncooperative participants who cannot be trusted to provide valid information (see Appendix H).

The first two items, "Have you followed all the directions carefully?" and "Have you answered all the questions honestly?" were positive questions. A "Yes" response was
expected. The third item, "Have you purposefully skipped any of the questions?" was a negative question that a "No" response should be typical. Although these direct questions may not capture subtle attempts at distortion, a "No" to Question 2 would clearly indicate a questionable protocol.

**Data Collection Procedures**

Students were initially contacted in their classrooms and solicited for participation in the study, during a 10-minute class presentation in one of their Social Studies classes. During the presentation, I explained the purpose and the procedure of the study. Participants’ rights, as well as confidentiality of their answers and protection of their identities were emphasized. In order to obtain consent, students were provided with a recruitment letter and given a parental permission request letter that they were asked to bring home to their parents.

After parental consent forms and student consent forms were collected, participating students were administered the questionnaires in their classrooms within 2 weeks. At that time, students’ rights to withdraw from the study were stressed again. To show our respect for their rights, they were asked to sign an informed consent if they were willing to allow the researchers to utilize their data for the study. It was the belief that only genuine willingness and cooperation could bring out honest and complete answers reflecting the students’ inner thoughts and feelings.

Before the administration of the questionnaires, participating students were again assured of the confidentiality and anonymity of their answers because perceived anonymity can reduce the situational demand for SDR (Becker, 1976). Participants were asked to sit apart from one another, put no identifying marks on the questionnaires, and not to talk to each other or look on others’ questionnaires. To discourage bogus responses, students were
warned that the measures, such as the DIT, contained methods or items for detecting faking (cf. Montag & Comrey, 1982).

The questionnaires were then group-administered during a 75-minute class period. Participants typically completed all of the questionnaires in 40-65 minutes. There were five sets of questionnaires. These questionnaires asked about: (1) the students’ background, (2) their opinions about several social problems, (3) how they think and feel in different situations, (4) how they generally make decisions or solve problems, and (5) their feedback on the questionnaires.

The first questionnaire was a brief demographic data sheet asking about the students’ background. The DIT and the SMO were administered together as a set of questionnaires assessing students’ opinions about social problems. That is, at the end of the ranking task of each DIT story, the OMSMO items for the same story followed immediately. On the other hand, the 21-item IRI and the 16-item CSD were put together as a set of questionnaire because they both ask about how the respondents think and feel in different situations. The 14-item OMDMO asked how the participants usually make decisions or solve problems. The last questionnaire was the 3-item honesty check surveying the participants’ test-taking attitudes.

When the participants had completed their questionnaires, they were instructed to put their consent forms and the questionnaires into an envelope and remain in their seats. They were thanked and reminded once again to keep their answers private and not to disclose the content of the questionnaires to other students. They could then read quietly or work on their own. Students who did not participate were given Social Studies work to do and seated in a separate area of the same classroom.
Alternate Forms

To control for the possible influence of order effect, the questionnaires were presented in two orders, Forms 1 and 2. Participants in the same class were randomly assigned to either Form 1 or Form 2. Approximately half of each grade level was assigned to Form 1 and the other half to Form 2.

For Form 1, the questionnaires appeared in the order as specified above. That is, the DIT and SMO came after the demographic data sheet, followed by the IRI and CSD. Then, the DMO was administered before the Validity Scale. For Form 2, the DMO was presented right after the demographic data sheet, followed by the IRI and the CSD. Then, the DIT and the SMO were administered before the honesty check.

Overview of Data Analysis Techniques

Multivariate Analysis of Covariance (MANCOVA), Pearson product moment correlation coefficients, and Hierarchical Multiple Regressions Analysis (HMRA) were the main data analysis techniques used in the present study.

For the investigation of sex and cultural differences on empathy, moral judgment, dispositional and situational moral orientation, MANCOVA was the preferred analysis technique over a series of ANOVAs or ANCOVAs, because the measures for the above variables all involved two or more moderately correlated indexes or dependent variables (DV$s$). MANCOVA, which combines a family of DV$s$ in a single test, could reduce the risk of inflating Type I error due to multiple tests of correlated DV$s$. MANCOVA could also examine interaction effects between independent variables, such as sex and ethnic groups, and provide control for differences on age, all at the same time (Tabachnick & Fidell, 1996).
Pearson product moment correlation coefficients were used for examining developmental changes in and the relationships between the dependent variables. The correlation coefficient was the appropriate descriptive statistic because the linear relationships between the dependent variables were of interest for the present study. The amount of variance shared between two variables can be calculated by squaring the correlation. When the correlation coefficient of two variables is determined, prediction of a respondent's performance on one of the variables can be made based on the respondent's score on the other variable (Crocker & Algina, 1986).

For the exploration of the interrelations among empathy, moral judgment, and dispositional and situational moral orientations, HMRA was the preferred analysis technique because of its capacity to reflect the complexity of the interrelations among three or more variables that characterize the behavioral sciences. HMRA is flexible in that it can examine the relation of a DV, which is a continuous variable, with one or more independent variables (IVs), which can be continuous or categorical, simultaneously, and that these relations can be linear or nonlinear. Though HMRA may not provide proof of a causal relation, it can be a useful tool in establishing and testing asymmetrical causal relations between the DV and its IV(s). That is, it is possible to predict one variable from one or more independent variables, including categorical variables such as sex (Tabachnick & Fidell, 1996).
CHAPTER 4: RESULTS

In this chapter, I describe the results of the study, beginning with a description of the final sample because of a data purging process. Then I report on the results of preliminary and main data analyses.

Participants

Over 360 potential participants of a large public secondary school in a Western Canadian city were contacted. A total of 313 students volunteered to participate in the study. Of those who participated, five did not sign their informed consent forms and were removed from the study. According to the data purging procedures adopted for the present study, three of the remaining 308 participants were purged from the study, and seven of the final sample of 305 were excluded from analyses involving the DIT indexes (i.e., the N2, P, and U scores).

As indicated in Table 1, girls and boys were almost equally distributed in each grade. The average age of the students was 14.96 years.

Table 1

<table>
<thead>
<tr>
<th>Grade</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>% of Total N</td>
</tr>
<tr>
<td>8</td>
<td>24</td>
<td>13.00</td>
<td>8%</td>
</tr>
<tr>
<td>9</td>
<td>32</td>
<td>14.00</td>
<td>10%</td>
</tr>
<tr>
<td>10</td>
<td>33</td>
<td>15.00</td>
<td>11%</td>
</tr>
<tr>
<td>11</td>
<td>34</td>
<td>16.00</td>
<td>11%</td>
</tr>
<tr>
<td>12</td>
<td>26</td>
<td>17.04</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>149</td>
<td>15.05</td>
<td>49%</td>
</tr>
</tbody>
</table>

Note. One case was excluded because of missing value.
The sample consisted of multiple ethnic groups. Half of the participants were Asian (Chinese, Japanese, and Korean) and 32% White. The other ethnic groups (e.g., Black, First Nation, East Indian, Latin, and Philipino) were grouped together because their numbers were too small to form a group. The three ethnic groups, White, Asian, and Others, have roughly equal numbers of boys and girls. The three ethnic groups did not differ statistically significantly in age \((F(2,302) = .97, p = .38)\). Age means in years and the breakdown of boys and girls for ethnic groups are listed in Table 2.

Table 2

_Age Means in Years for Sex and Ethnic Groups_

<table>
<thead>
<tr>
<th>Ethnic Groups</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n)</td>
<td>(M)</td>
<td>% of Total N</td>
</tr>
<tr>
<td>White</td>
<td>52</td>
<td>14.79</td>
<td>17%</td>
</tr>
<tr>
<td>Asian</td>
<td>68</td>
<td>15.15</td>
<td>22%</td>
</tr>
<tr>
<td>Others</td>
<td>29</td>
<td>15.28</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>149</td>
<td>15.05</td>
<td>49%</td>
</tr>
</tbody>
</table>

*Note.* One case was excluded because of missing value.

In general, the participants came from a lower middle-class neighborhood. Most of the participating students were serious, honest, and sincere in answering the questionnaires. They complied with all my requests including sitting apart from one another, not talking, and not looking on others' questionnaires during the administration of the questionnaires. Discipline was not a problem usually and most students completed all their questionnaires in 40-65 minutes. A few active students, however, liked to make noise to attract attention after they had finished their questionnaires. Therefore, Social Studies work (e.g., worksheets) was

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\(^6\) Chinese, Japanese, and Korean were grouped together because they supposedly have the same ancestors.
given not only to those who did not participate, but also to those who finished early, so that they would not disturb the working participants.

I read through the DIT instructions with the students and went over the sample story, “Nicole’s dilemma,” as a group exercise before they proceeded on their own. Some students, however, were too eager to start working and did not have the patience to listen to my instructions or to read the instructions carefully on their own. Many failed to understand the ranking task of the DIT. Participants were very cooperative, however, when they were requested to clarify their responses when rating and ranking inconsistencies appeared and to fill in unanswered questions. Despite the fact that most participants were very cooperative and honest, three were purged and seven were excluded from the DIT analyses due to the following data purging process.

Data Purging Process

The data purging process involved three parts: the honesty check, the DIT reliability check, and the DMO consistency check. A pass on any of the three reliability checks would carry one point. A total score of all three checks ranged from 0-3, and a score of 1 or 0 would invalidate the protocol. That is, a participant who violated any two of the three checks would be purged from the study.

The Honesty Check

As stated earlier, the aim of this honesty check was to identify uncooperative participants who might provide invalid information. Three questions were asked in order to assess the respondents’ test-taking attitude, only the second question, “Have you answered all the questions honestly?” served as an honesty check.
The trustworthiness of the participants could be best demonstrated by their answers to question two, “Have you answered all the questions honestly?” While the majority \((n = 300, 97\%)\) said “Yes,” five boys and two girls said “No.” One boy did not answer that question. At least they were honest about their dishonesty. A closer look at their questionnaires suggested that most of them were quite serious in the way they answered the questionnaires. It was suspected that some of them might have been dishonest about their parents’ occupation.

Nevertheless, a “No” to question two did arouse suspicions over the validity of the participant’s responses, because it was difficult to tell where in the questionnaires these participants lied. Thus, a “Yes” to question two would render a score of one to the participant’s honesty check and a score of 0 for a “No” or missing data. If the self-proclaimed dishonest participants did not violate either the DIT or the DMO check, then their protocols remained in the study. Consequently, of the eight who did not pass the honesty check, two were purged from the study.

The DIT Reliability Check

The scoring and analysis of the DIT data were done by the Center for the Study of Ethical Development at the University of Minnesota, as designated by Rest (1993). According to the previously adopted cut-off values for the DIT reliability checks (i.e., \(RtXRk < 100, MISRT < 2, MISRK < 6, NoDIF < 2, \) and \(M < 6\)), only four had violated the first four reliability checks, but 31 scored 6 or above on the M (Meaningless items) score. A less stringent cut-off value of 7 was chosen for the M score instead of the recommended 5, in consideration of the nature of the M score and the present sample’s characteristics.
Participants who passed all five DIT reliability indexes (i.e., RtXRk < 100, MISRT < 2, MISRK < 6, NoDIF < 2, and M < 8) scored 1 and those who failed either one of the five DIT checks scored 0 on the DIT reliability check. Based on the new cut-off value for the M score (i.e., M < 8), eight (4 boys and 4 girls) failed the DIT check, but only one was purged from the study because she had also failed the honesty and/or DMO checks. The remaining seven, however, were excluded from analyses related to any DIT indexes, but included in other analyses.

According to the DIT manual (Rest, 1993), the M score is arrived at by weighting ranks by 4 for the top rank, by 3 for the second rank, etc. on the meaningless items. As there are two meaningless items in each story, M score ranges from 0 to a maximum of 21 for the three-story DIT. Because the cut-off values are empirically derived by trial-and-error, these values may not be the optimal cut-offs for a particular sample, and researchers are encouraged to experiment with new cut-off values for their specific samples (Rest, Narvaez, Mitchell, & Thoma, 1998). An M score of 7 was considered acceptable for the present sample, because the results based on the new cut-off value (i.e., M < 8) did not differ significantly from those using the old (i.e., M < 6). That is, the correlations between the DIT indexes and age, and other DVs were roughly the same.

Nonetheless, an M score greater than 7 would somehow depress or distort the participant’s P and possibly N2 scores, as both M and P items compete against each other for the four ranks. Therefore, a participant with an M score greater than 7 should be excluded from data analysis related to the DIT indexes, because their P and N2 scores might be unreliable, although the participant did not violate the DMO consistency check or the honesty check.
Similarly, participants who had violated any of the other four DIT reliability checks were excluded from DIT data analyses, though they might have survived the purging system. For that reason, seven were excluded from further DIT data analyses.

The DMO Consistency Check

As described previously in Chapter 3, two pairs of care/justice items (i.e., Items 2, 7, 10, and 14) written as direct opposites served as consistency checks for the OMDMO. Summing the values of the four consistency items formed a total DMO consistency score, ranging from 4 to 36. A total DMO consistency score in the range of 16-24 had been set up as the cut-off range for the DMO consistency score, but it was considered to be too stringent as 52 (17%) participants scored outside this range. A wider range of 15-25 for the DMO consistency score was selected instead, in an attempt to allow more participants to stay in the study. Participants were assigned a value of one to their DMO check if their DMO consistency scores fell inside the range of 15-25, and a zero if outside the range. As a result, 37 (16 boys and 21 girls) scored 0 on their DMO checks and two of them were purged from the study because they had also failed the DIT reliability check and/or the honest check.

With the aim of assessing the differences between consistent and inconsistent participants, a DMO-Justice 5 score, a DMO-Care 5 score, and a DMO-Justice Orientation 5 were calculated, with the exclusion of the consistency items, and independent-samples t-tests were performed (see Appendix I). The consistent group scored statistically significantly lower than did the inconsistent group on the two DMO-Justice scores, two DMO-Care scores, one of the SMO-Justice scores, and three of the SMO-Care scores, but higher on the U score of the DIT.
The two groups, however, did not differ in age ($t (303) = .55, ns$) and years of living in Canada ($t (303) = -.93, ns$), or on indexes for social desirability responding, empathic concern, perspective taking, personal distress, and the N2 and the P scores of the DIT. On the whole, the inconsistent group tended to have similar variances of the scores, as did the consistent group, except for DMO-Justice, DMO-Justice 5, DMO-Care 5, Newspaper-Justice, the P, and the U scores. Moreover, none of the inconsistent participants failed the DIT reliability checks or the honesty check.

These findings suggested that the inconsistent group came from the same population because they had similar variances on most of the variables as their consistent counterpart. It seemed unlikely that their inconsistencies were due to item response sets, carelessness, low motivation or insufficient English proficiency. Because a higher U score represents a higher utilization of justice orientation in moral reasoning, the inconsistent group might be more care-oriented and less justice-oriented than the consistent group. Their inconsistencies might represent different ways of responding or different attitudes to moral orientation measures. It would restrict the range of response if their responses were excluded. The inconsistent group was thus included in further data analyses.

Summary

A total of 313 students from grades 8-12 volunteered to participate in the study. Five were removed from the study because they did not sign the informed consent. Based on exclusion criteria (consent and reliable responses), the final sample consisted of 305 of diverse ethnicity. Of the 305, seven were excluded from DIT analyses, so as to ensure data reliabilities.
Preliminary Data Analyses

This section focuses on preliminary data analyses, starting from order effects, and followed by an examination of orientation-pulling effects of the DMO and SMO measures. The reliabilities of the dependent variables and their intercorrelations are reported, as well as the correlations between age and the dependent variables.

Order Effects

Of the 305 participants, 150 (79 boys and 71 girls) responded to Form 1, and 155 (70 boys, 84 girls, and one unknown) to Form 2. Because there were no statistically significant differences between the two order forms on all the measures, including age ($t(303) = -0.38, ns$), years living in Canada ($t(303) = 0.21, ns$), the OMDMO and OMSMO scales, as well as the IRI and DIT indexes (see Appendix J), the data were merged for all analyses.

Moral Orientation Analyses

For the examination of dispositional and situational justice moral orientations, one sample $t$-tests were performed. In testing the null hypotheses, it was found that the participants were generally care-oriented in their dispositional moral orientation ($M = -3.76, t(288) = -6.13, p < .00$), but varied from story to story in their situational moral orientation. These variations seemed to reflect the situational factors or the justice- or care-pulling effects of the dilemma content. That is, the content of the story may call for a justice or care orientation in resolving the dilemma for most respondents.

The story, “Heinz and the Drug,” tended to pull for care ($M = -5.04, t(293) = -8.27, p < .00$), whereas “The Escaped Prisoner” and “Newspaper” tended to pull for justice ($M = 6.57$ and $5.92, t(295), (291) = 9.45$ and $10.04$ respectively, $p < .00$). Consequently, the total
SMO-Justice Orientation 3 for the three DIT hypothetical stories showed a justice-pulling effect ($M = 7.70$, $t(272) = 5.52$, $p < .00$).

The real-life-like abortion dilemma, “Lisa and Derek,” on the other hand, pulled for care ($M = -9.48$, $t(295) = -19.40$, $p < .05$). By combining the four stories together, however, a neutralization effect was found, that is, SMO-Justice Orientation 4 for four stories did not show any pulling effects ($M = -1.65$, $t(263) = -1.03$, ns).

Therefore, in the following analyses, the total SMO scores for the three DIT stories (i.e., SMO-Justice 3, -Care 3, and -Justice Orientation 3) and for all four stories (i.e., SMO-Justice 4, -Care 4, and -Justice Orientation 4) were used for main data analyses. The former was used in relating indexes of the SMO to those of the DIT, because they were both related to the same stories. The latter was particularly informative in understanding the relations between SMO indexes and personality indexes (e.g., empathy and DMO), because a combination of all four stories had a neutral orientation-pulling effect.

**Internal Consistency**

An estimate of internal consistency was computed for each of the dependent variables. The alpha coefficients are reported in Table 3 on the diagonal. Estimates for the three IRI scales and the 16-item CSD were consistent with those reported in literature (e.g., Crandall et al., 1965; Davis, 1994): .72 (Empathic Concern), .69 (Perspective Taking), .71 (Personal Distress), and .72 (Social Desirability). Nevertheless, estimates for the N2 (.33) and P (.37) indexes of the DIT were lower than expected.
Table 3
Cronbach's Alpha Coefficients and Intercorrelations among Age, Social Desirability Responding, and Indexes of the DMO, SMO, IRI, and DIT

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Note. N = 287 for the DMO scales, 268 for the SMO-3 scales, 258 for the SMO-4 scales, 287 for the IRI scales, and 283 for the DIT scales.

* p < .05.
Estimates for two DMO scales and six SMO scales were mostly in the acceptable range of .77 to .80, except those for DMO-Justice, DMO-Care, SMO-Justice Orientation 3, and SMO-Justice Orientation 4 that were in the range of .50 to .60.

**Social Desirability and the Dependent Variables**

Pearson product moment correlation coefficients were calculated to examine the relation of social desirability to indexes of the DMO, SMO, IRI, and DIT. These coefficients are listed in Table 3.

Overall, social desirability correlated statistically significantly more with the dispositional indexes (i.e., the DMO and the IRI indexes) than with the situational indexes (i.e., the SMO-3 and -4, and the DIT indexes). Somewhat surprisingly, social desirability correlated statistically significantly only with the justice scales (i.e., DMO- and SMO-Justice and -Justice Orientation), but not the care scales, signifying that the care items and issues were not socially desirable to the respondents. These results seem to suggest that social desirability is more a personality trait that is related to a concern for being morally just or right (cf. Paulhus & John, 1998) than a response set that induces inflated or unreliable scores on self-reported scales. Therefore, social desirability was not included in the main analyses.

**Summary**

The two forms were merged in data analyses because no order effects were found. The total SMO scores for the three DIT stories were used in relating the SMO indexes to those of the DIT, and the total SMO scores for all four stories to those of the IRI and the DMO. Estimates of internal consistency reliability for the dependent variables were mostly in the expected and acceptable range. Because social desirability did not seem to function as a response set, it was not included in data analyses.
Main Analyses

Analyses on developmental changes, sex differences, and the relations between the dependent variables were performed to test the research hypotheses. Cultural differences were explored because of the presence of multiple ethnic groups in the sample, although no hypothesis had been put forth. The interrelations among empathy, moral orientation, and moral judgment were also explored.

Developmental Changes

Hypothesis 1 stated that age would be positively correlated to indexes of moral reasoning, moral orientation, and empathy, except personal distress. Pearson product moment correlation coefficients listed in Table 3 were used to examine developmental changes in the dependent variables.

As can be seen in Table 3, age had statistically significant positive correlations with empathic concern (.16), perspective taking (.14), the N2 (.15), and the P (.19), suggesting that empathic concern, perspective taking, N2, and P tend to increase with age. With respect to moral orientation, age had statistically significant negative correlations with DMO-Justice Orientation (-.12), SMO-Justice Orientation 3 (-.12), and the U score (-.18), which is also a measure of justice orientation (Rest, 1993). These results suggest that, with increasing age, adolescents become less justice-oriented in their dispositional and situational moral orientations.

The results of the present study supported developmental changes in empathy and moral judgment, except for the U score. However, present results on moral orientation development were inconsistent with the predictions of Hypothesis 1. Thus, Hypothesis 1 was only partially supported.
Group Differences

For the investigation of group differences, five MANCOVAs were performed. For all five, independent variables were sex and ethnic groups, with age the covariate. Dependent variables were grouped into five: (1) DMO-Justice, -Care, and -Justice Orientation, (2) SMO-Justice 3, -Care 3, and -Justice Orientation 3; (3) SMO-Justice 4, -Care 4, and -Justice Orientation 4; (4) empathic concern, perspective taking, and personal distress; and (5) N2, P, and U.

Although less powerful than Wilks' Lambda, Hotelling's trace criterion, and Roy's gcr criterion, Pillai's trace was the criterion of choice for the present study. Because the three ethnic groups had unequal n's, Pillai's trace criterion had an advantage over the other criterions in terms of robustness (Tabachnick & Fidell, 1996). In order to prevent the risk of committing Type I error, Bonferroni adjustment was used to adjust for multiple comparisons in stepdown analyses.

Sex and ethnic group interaction effects were statistically nonsignificant for all five groups of dependent variables. Therefore, the results of the analyses are summarized in Appendixes K and L, each reflecting group differences for sex and ethnic groups respectively, on all the dependent variables.

Sex Differences

Hypothesis 2 stated that girls would score higher than boys would on all measures of moral reasoning, moral orientation, and empathy. As indicated in Appendix K, girls scored statistically significantly higher than boys did on SMO-Justice 3 and 4 ($F(1, 261) = 9.71$ and $F(1, 251) = 8.53$ respectively, $p = .00$), empathic concern, perspective taking, personal distress ($F$s $(1, 281) = 44.02$, 10.25, and 16.91 respectively, $p = .00$), N2, and P score ($F$s $(1, 279) = 7.08$...
and 5.06 respectively, \( p = .01 \) and .03). Boys and girls, however, did not differ statistically significantly on any of the DMO indexes, SMO-Care and -Justice Orientation scales, or the U score. The means are presented in Appendix K.

Results were largely consistent with previous reports on sex differences favoring girls on measures of moral judgment (Thoma, 1986) and empathy (Davis & Franzoi, 1991). However, the results on moral orientation seem to contradict Gilligan’s (1982) theory of two sex-related moral orientations, because girls and boys did not differ on any DMO scales or the SMO-Care and -Justice Orientation scales. The results of girls scoring higher than boys on the SMO-Justice scales also contradicted many existing findings of girls being more care-oriented than boys are (e.g., Johnson, 1988). Therefore, Hypothesis 2 was only partially supported.

Cultural Differences

As can be seen in Appendix L, ethnic groups differed statistically significantly on indexes of DMO-Justice and -Care \( (F_s (2, 281) = 5.86 \) and 5.41, \( p = .00 \) and .01), SMO-Justice 3 \( (F (2, 261) = 3.54, p = .03) \), SMO-Justice 4 \( (F (2, 251) = 4.77, p = .01) \), perspective taking and personal distress \( (F_s (2, 281) = 4.12 \) and 4.58, \( p = .02 \) and .01).

Stepdown multiple comparisons adjusted by Bonferroni adjustment indicated that Asian scored statistically significantly higher than White on DMO-Justice (mean difference = 2.94, \( p = .00 \)), DMO-Care (mean difference = 3.06, \( p = .00 \)), SMO-Justice 3 (mean difference = 6.62, \( p = .04 \)), SMO-Justice 4 (mean difference = 10.02, \( p = .01 \)), perspective taking (mean difference = 3.39, \( p = .01 \)), and personal distress (mean difference = 3.31, \( p = .02 \)). Asian also scored higher than Others did on DMO-Justice (mean difference = 2.92, \( p = .02 \), and
Others scored higher than White on DMO-Care (mean difference = 2.98, \( p = .02 \)). The means are listed in Appendix L.

Relations between the Dependent Variables

Correlations between dispositional and situational moral orientation, moral judgment, and empathy were examined by using Pearson product moment correlation coefficients, listed in Table 3.

Relations between Dispositional and Situational Moral Orientation

Hypothesis 3 stated that there would be positive correlations between care dispositional orientation and care situational orientation, and between justice dispositional orientation and justice situational orientation. The correlation coefficients listed in Table 3 indicated that there were statistically significant correlations between DMO-Justice and SMO-Justice 4 (.28), DMO-Care and SMO-Care 4 (.28), as well as DMO-Justice Orientation and SMO-Justice Orientation 4 (.34). So, Hypothesis 3 was fully supported.

Relations between Moral Orientation and Empathy

Hypothesis 4 stated that adolescents with higher care scores would be more likely to score higher on empathic concern and personal distress. As indicated in Table 3, empathic concern had a positive correlation with DMO-Care (.25) and a negative correlation with DMO-Justice Orientation (-.19). Personal distress also had a positive correlation with DMO-Care (.14) and a negative correlation with DMO-Justice Orientation (-.12). Perspective taking, on the other hand, had positive correlations with both DMO-Justice and DMO-Care (.23 and .14). With respect to situational moral orientation, empathic concern had positive correlations with both SMO-Justice 4 and SMO-Care 4 (.15 and .18), so did personal distress (.14 and .14) and perspective taking (.21 and .17).
However, when perspective taking was partialed out, empathic concern no longer had any statistically significant correlations with the SMO scales, but still had a positive correlation with DMO-Care \((r = .22, p = .00)\), and negative correlations with DMO-Justice and DMO-Justice Orientation \((r = -.14 \text{ and } -.26, p = .04 \text{ and } .00)\). On the other hand, when empathic concern was partialed out, perspective taking still had statistically significant correlations with DMO-Justice, SMO-Justice 4, and SMO-Care 4 \((r = .25, .15, \text{ and } .16, p = .00, .03, \text{ and } .02)\), but not with DMO-Care \((r = .10, ns)\). With either perspective taking or empathic concern partialed out, personal distress no longer had any statistically significant correlations with the DMO or SMO scales.

When personal distress was partialed out, perspective taking still had statistically significant correlations with DMO-Justice and -Care, as well as SMO-Justice 4 and -Care 4 \((r = .21, .20, .18, \text{ and } .22, p = .00, .00, .01, \text{ and } .00)\). Likewise, empathic concern still had statistically significant positive correlations with DMO-Care and SMO-Care 4 \((r = .26 \text{ and } .16, p = .00 \text{ and } .02)\), and a negative correlation with DMO-Justice Orientation \((r = -.22, p = .00)\), except its correlation with SMO-Justice 4 became statistically non-significant.

These findings suggest that perspective taking may be related to a justice orientation, and empathic concern to care, and that these relations are not mediated. At the same time, perspective taking could mediate the relation of empathic concern to situational moral orientation, but not to dispositional moral orientation. Empathic concern could also mediate the relation of perspective taking to care dispositional moral orientation, but not to care/justice situational moral orientation. Together, they seem to mediate the relation of personal distress to dispositional and situational moral orientation.
Hypothesis 4 was considered fully supported because empathic concern and personal
distress were statistically significantly and positively correlated to care dispositional and
situational orientations.

Relations between Moral Orientation and Moral Judgment

Hypothesis 5 stated that students with both higher care scores and justice scores
would be more likely to score higher on the P and the N2 scores of the DIT, and Hypothesis 6
claimed that the U score of the DIT would correlate positively with justice scores, and
negatively with care scores. As can be seen in Table 3, N2 had statistically significant
positive correlations with DMO-Justice (.15), DMO-Justice Orientation (.18), SMO-Justice 3
(.13), and SMO-Justice Orientation 3 (.24), but a negative correlation with SMO-Care 3 (-
.12). The P score also had a statistically significant positive correlation with SMO-Justice
Orientation 3 (.14), so did the U score with SMO-Justice 3 (.15).

These results indicated that students with higher justice scores and lower care scores
were more likely to score higher on the N2 and possibly the P scores. As a consequence,
Hypothesis 5 was not established. Hypothesis 6, on the other hand, was partially supported
because the U score did correlate positively with a justice score, but did not correlate
negatively with any care scores.

Relations between Empathy and Moral Judgment

Hypothesis 7 stated that adolescents who scored higher on perspective taking and
empathic concern would be more likely to score higher on the P and the N2 scores of the
DIT. It was obvious from Table 3 that there were statistically significant positive correlations
between empathic concern and the N2 (.14) and the P score (.15), as well as between
perspective taking and the N2 (.12).
With perspective taking partialed out, empathic concern no longer had any statistically significant correlations with N2 or P scores. Similarly, the positive correlation between perspective taking and N2 disappeared when empathic concern was partialed out. Thus, the interrelations between perspective taking, empathic concern, and moral judgment are mediated.

Hypothesis 7 was largely supported, because students with higher scores on perspective taking and empathic concern were more likely to score higher on the N2 and the P scores.

Interrelations among Empathy, Moral Orientation, and Moral Judgment

In order to examine how interpersonal characteristics and situational factors influence moral reasoning, Hierarchical Multiple Regressions Analyses were performed. Because perspective taking is a necessary condition for moral judgment development (Kohlberg, 1984), and empathic affect is the basis of care (Gilligan, 1982; Lyons, 1983), indexes of empathy were entered first, followed by DMO indexes, and finally SMO indexes, to predict the N2 scores of the DIT. The P score was not included in the analyses because N2 and P were highly correlated (.90). Besides, the P is less powerful than the N2, in terms of assessing moral judgment development, as Rest, Thoma, Narvaez, and Bebeau (1997) suggest.

As can be seen in Tables M1 and M2 of Appendix M, perspective taking, empathic concern, and personal distress had little effect in predicting N2 ($R^2_{\text{change}} = .02$, $F_{\text{change}} = 1.36$, ns), though empathic concern seemed to have some effect in predicting N2 ($\beta = .14$, $t = 1.99$, $p < .05$) when the DMO indexes were entered into the equation at Order 2. The DMO indexes, on the other hand, performed better than the IRI indexes in predicting the N2 score
$R^2_{\text{Change}} = .04)$. The SMO indexes, in turn, performed better than the DMO indexes ($R^2_{\text{Change}} = .05$). Overall, the combination of DMO and SMO indexes seemed to have some predictive power on N2.

Summary

Present results supported developmental changes and sex differences in empathy and moral judgment, but not moral orientation. Exploratory analyses for ethnic groups suggested cultural differences in moral orientation, perspective taking, and personal distress. The interrelations among dispositional and situational moral orientation, moral reasoning, and empathy were generally supported. The DMO and SMO indexes, however, were found to perform better than empathic concern and perspective taking in predicting moral judgment (i.e., the N2 score of the DIT).
CHAPTER 5: DISCUSSION

The question of whether moral orientation is dispositional or situational has divided moral psychologists for more than two decades. In the present study, I attempted to answer this question by differentiating dispositional from situational moral orientation. Similarly, a distinction has been made between dispositional and situational empathy (Strayer & Roberts, 1997). Kohlberg (1984) emphasized the roles of the cognitive aspects of empathy (e.g., perspective taking) in moral development, whereas Hoffman (2000) emphasized the affective aspects (e.g., empathic concern and personal distress).

It is generally agreed that empathy is multifaceted (e.g., Strayer, 1987). Empirical research also supported interrelations among perspective taking, empathic concern, and personal distress (Davis, 1983b). However, most researchers studied the relation of moral development to either cognitive (e.g., Chandler & Moran, 1990) or affective empathy (e.g., Schonert-Reichl, 1994b). As a result, the multifaceted nature of empathy has been largely ignored. Moreover, I know of no studies examining the relation of empathy to moral judgment and moral orientation.

Adopting a multifaceted perspective, I examined the interrelations among empathy, moral orientation, and moral judgment. I explored the interplay of intrapersonal characteristics (dispositional empathy and dispositional moral orientation) and contextual factors (content of moral dilemma) on situational moral orientation and moral judgment. Age and sex differences, as well as cultural differences, with respect to the above variables in adolescence were also investigated.

In this chapter, I address the findings presented in chapter 4, and discuss the validity of the Objective Measures of Dispositional and Situational Moral Orientation. I then
speculate on the implications of the study, noting the limitations of the present cross-sectional findings and the need for further developmental and longitudinal research.

**Developmental Changes**

Findings of the present study supported hypothesized developmental changes in empathy and moral reasoning, except the U score. Present results indicate that the U score differs from the N2 and the P in that it has no correlation with empathic concern, perspective taking, DMO-Justice, and DMO-Justice Orientation, as do the N2 and the P scores. Instead, the U score correlated positively with social desirability responding, but the N2 and P did not. The only similarity between the U and the N2 and P scores was their link with SMO-Justice scores. It is doubtful that the U score reflects moral judgment development, as do the N2 and the P scores. Because the U score reflects one’s utilization of a justice orientation in moral reasoning (Rest, 1993) it may be better to be considered as a measure of moral orientation rather than a measure of moral judgment development.

On the subject of moral orientation development, present findings indicate that adolescents in general are care-oriented in their dispositional and situational moral orientation and that they become less justice-oriented with age, regardless of sex. Moreover, statistically significant positive correlations between SMO-Justice and SMO-Care indexes (.42 and .55) and nonsignificant correlations between DMO-Justice and DMO-Care (-.05) further suggest that adolescents use both justice and care orientations in their situational moral orientation to a substantial degree, despite their more or less justice- or care-oriented dispositional orientation. These results are similar to those reported by previous researchers (Donenberg & Hoffman, 1988; Walker, 1989) that adolescents mix or switch orientations in resolving moral dilemmas.
Group Differences

Sex Differences

Present findings supported hypothesized sex differences in empathy and moral judgment, but not in moral orientation. Results suggest that adolescent boys and girls do not differ in their dispositional moral orientation, and that they are generally care-oriented in their dispositional orientation. The findings of positive correlations between social desirability and justice orientation indexes seem to support Gilligan’s (1982, 1994, 1996) assertion that our society is justice-oriented.

However, the findings of girls scoring higher on situational justice scales seem to contradict Gilligan’s (1994, 1996; Brown & Gilligan, 1991, 1992) theory that adolescent girls would adopt the ethic of care because of a desire for relationships. These findings were also in direct contrast to previous research that sex differences on moral orientation emerged at adolescence and that more adolescent girls than boys tended to use care or both orientations (Donenberg & Hoffman, 1988; Johnson, 1988). These results may reflect the changing social expectation that allows boys to express care more easily today than in the past (Donenberg & Hoffman, 1988). Nevertheless, Lyons (1983) reported that men’s concern for justice maintained greater consistency than did women’s considerations of care, notwithstanding adolescent boys’ persistence of a care ethic. For the investigation of sex differences in moral orientation in adults, cross-sectional data from ages 19 to 50 will be needed.

The findings of girls scoring higher on justice situational orientation might seem surprising at first, but a link between a justice orientation and the DIT indexes unraveled the mystery. The DIT is a measure of justice moral judgment development, as Rest (1993) has professed. Present findings also supported a positive correlation between justice orientation
(in both DMO and SMO scores) and moral judgment, as well as a negative correlation between SMO-Care (but not DMO-Care) and N2. Logically, if girls are to score higher on the DIT, they must be more justice-oriented in their situational moral orientation in resolving the DIT moral dilemmas, in spite of their dispositional moral orientation. The results of girls scoring higher than boys on the N2 and U scores of the DIT, as well as the SMO-Justice scales, bear witness to this logic.

The findings of girls outperforming boys on empathy indexes were in harmony with previous findings (e.g., Davis & Franzoi, 1991; Eisenberg et al., 1995). Moreover, the results of girls scoring higher than boys on both empathy and moral judgment made complete sense when a link between empathy and moral judgment was also supported. Therefore, although Hypothesis 2 was not fully supported, the findings were logical and consistent with one another.

Cultural Differences

In the exploration of cultural differences, the results were rather surprising. Asian participants were supposedly coming from collectivist cultures. I expected them to be more care-oriented or score higher on the care scales than the White. Quite the opposite, Asian adolescents were more justice-oriented than adolescents of other ethnic groups and White were, in both dispositional and situational moral orientation, although the differences were small. These results may reflect the individualistic movement or westernization of Asian cultures in the past decades. Confucian thought may be fading not only in Communist China (Walker & Moran, 1991), but from other Asian cultures as well.

On the other hand, Asian adolescents did not differ from adolescents of other ethnic groups on DMO-Care, and they both scored higher than White adolescents did on DMO-
Care. Again, the differences were small. These results, however, may suggest that adolescents of other ethnic groups may be more care-oriented than White adolescents, and that Asian adolescents are trying to achieve a balance between care and justice orientations. Further research on cultural differences in moral orientation is warranted.

**Interrelations among Moral Orientation, Moral Judgment, and Empathy**

**Relations between Dispositional and Situational Moral Orientation**

Present findings supported the moderate but positive correlations between DMO- and SMO-Justice scales, DMO- and SMO-Care scales, as well as DMO- and SMO-Justice Orientation scales. The correlation between DMO-Justice and DMO-Care (-.05) was statistically nonsignificant, but correlations between SMO-Justice and SMO-Care scales were (.38 to .42). Moreover, the correlations between DMO-Justice and SMO-Care (.09 and .07), as well as between DMO-Care and SMO-Justice (-.01 and .06), were all statistically nonsignificant.

These results suggest that dispositional and situational moral orientations are two different constructs, and so are justice and care (c.f. Liddell et al., 1992). These results also indicate that adolescents have a dispositional moral orientation, which is similar to Ford and Lowery’s (1986) notion of primary orientation. However, other factors (e.g., dilemma content) may interact with dispositional orientation on situational orientation, so that adolescents are only moderately consistent between their dispositional and situational moral orientations. Moreover, adolescents are able to use both justice and care in their situational orientation, despite their dispositional orientation.
Relations between Moral Orientation and Empathy

Present findings supported the hypothesized relations between empathy and moral orientation. That is, perspective taking is related to a justice orientation (Kohlberg, 1984), and empathic feelings to care (Gilligan, 1982; Sitzer, 1991). However, the interrelations among perspective taking, empathic concern, and personal distress in moral orientation are not simple. Because the relations between personal distress and moral orientation are largely mediated by perspective taking and empathic concern, the role of personal distress in moral orientation should be different from that of empathic concern. The different roles of these two empathic affects in moral orientation may be the roots of a differentiation between a "feminine" and a "feminist" ethic of care (Gilligan, 1995).

Perspective taking can mediate the correlations between empathic concern and situational moral orientation, but it cannot mediate the correlations between empathic concern and dispositional orientation. Similarly, empathic concern can mediate the correlations between perspective taking and care dispositional orientation, but it cannot mediate the correlations between perspective taking and situational orientations. These results further provide evidence for a differentiation between dispositional and situational orientation, as well as the links between perspective taking and justice orientation, and empathic concern and care.

Moreover, the results seem to support the bidirectional links between perspective taking and empathic concern (Eisenberg et al., 1991) rather than the unidirectional link between perspective taking, empathic concern, and morality (Coke et al., 1978; Davis et al., 1987).
Relations between Moral Orientation and Moral Judgment

Present results indicated a positive correlation between the P score and the SMO-Justice scores. By using the latest N2 score, a positive relationship between justice orientation and moral judgment, and a negative relationship between care and moral judgment were clearly demonstrated. Present findings differ from previous findings of a balanced/mix orientation representing moral maturity measured by the MJI (Walker, 1989). Usually, qualitative findings differ from quantitative ones (cf. Liddell, 1998), because different tasks may tap different information (Rest, 1979).

Present findings also differ from Liddell and Davis's (1996) findings that both care and justice scales correlated negatively with the P score of the DIT. These inconsistencies may be the results of using different stories in assessing moral orientation and moral judgment, because different stories could have very different justice- or care-pulling effects. Liddell and Davis used real-life like stories, not the DIT stories, to assess moral orientation, unlike the present study, in which the same DIT stories were used to assess moral judgment and moral orientation.

Relations between Empathy and Moral Judgment

Present findings supported positive correlations between empathy and moral reasoning. Based on a multidimensional approach to empathy and the latest N2 score of the DIT, results showed that both perspective taking and empathic concern are positively correlated to the N2 and the P scores, in adolescence. The latest N2 score seem to perform better than the P score in assessing moral judgment (Rest et al., 1997), because the N2 had more statistically significant correlations with justice indexes, empathic concern, and perspective taking than the P score had (seven versus two). Although there was a positive
relationship between the U score and justice scores, the U score should be regarded as a measure of moral orientation rather than a measure of moral judgment.

The findings of statistically nonsignificant correlations between personal distress and moral judgment indexes (-.04, -.09, and .05) were consistent with previous findings that personal distress was not related to moral behavior (Davis, 1983a, 1983c). With perspective taking partialed out, empathic concern no longer had any statistically significant correlations with N2 or P scores. Similarly, the positive correlation between perspective taking and N2 disappeared when empathic concern was partialed out. Again, the relations between perspective taking and empathic concern in moral judgment are mediated and bidirectional (Eisenberg et al., 1991) rather than unidirectional (Coke et al., 1978; Davis et al., 1987).

**The Validity of the OMDMO and OMSMO**

**Internal Consistency**

Estimates of internal consistency reliability for the two DMO scales (.50 and .53) were low but not unexpected, because the constructs of care and justice dispositional moral orientations are not unitary concepts. Wark and Krebs (2000) reported that justice and care issues could be classified into many subtypes, including upholding justice, self, others, and relationships. The complexity of the concepts of justice and care orientations can be perceived from the adopted definitions of care and justice (Liddell et al., 1992) for the present study. In order to assess the consistency of respondents’ responses to the DMO scales, two pairs of consistency items were designed. These consistency items seem to be able to identify respondents who have responded inconsistently, as manifested in the present study. Estimates for the SMO-Justice and -Care scales were in the acceptable range of .77 to .80, but those for SMO-Justice Orientation 3 and 4 were in the range of .50 to .60. It was
because the stories had very different care- or justice-pulling effects. These variations
reflected the situational factors or the care- or justice-pulling effects of the dilemma content.
That is, a high internal consistency coefficient only indicates that the stories are all geared
toward one orientation. Estimates for SMO-Justice Orientation differ from those for SMO-
Justice and -Care in that the former reflect story consistency and the latter item consistency of
the scales. Thus, the low estimates for SMO-Justice Orientation should not be a concern.

Convergent and Discriminant Validity

Positive correlations between DMO- and SMO-Justice scales, DMO- and SMO-Care
scales, as well as DMO- and SMO-Justice Orientation scales provided evidence for
convergent validity of the justice, care, and justice orientation scales of the OMDMO and
OMSMO.

The positive correlations between the justice scales and the DIT indexes provided
evidence for convergent validity for both the OMDMO and OMSMO scales. For example,
the N2 had statistically significant positive correlations with DMO-Justice, DMO-Justice
Orientation, SMO-Justice 3, and SMO-Justice Orientation 3. The P score also had a
statistically significant positive correlation with SMO-Justice Orientation 3, so did the U
score with SMO-Justice 3. At the same time, the negative correlation between N2 and SMO-
Care 3 provided discriminant validity for the OMSMO care scale.

Moreover, present findings of the relations between empathy and dispositional moral
orientation validated the relations of the ethics of justice and care, as measured by the
OMDMO and OMSMO, to the cognitive and affective aspects of empathy respectively, as
theorized by Kohlberg (1984) and Gilligan (1982). For instance, perspective taking had
positive correlations with both DMO-Justice and DMO-Care. However, with empathic
concern partialed out, perspective taking no longer had a statistically significant correlation with DMO-Care, though its correlation with DMO-Justice remained statistically significant. These findings suggest that empathic concern is a mediator modifying the relationships between perspective taking and DMO-Care, but empathic concern cannot mediate the relations between perspective taking and justice orientation. On the other hand, empathic concern had a positive correlation with DMO-Care and a negative correlation with DMO-Justice Orientation, even when perspective taking was partialed out. Personal distress also had a positive correlation with DMO-Care and a negative correlation with DMO-Justice Orientation; though these correlations disappeared when empathic concern or perspective taking was partialed out. These findings do not only provide convergent but also discriminant validity for the OMDMO measures. That is, the OMDMO is a measure of dispositional moral orientation, which is related to a measure of dispositional empathic tendency, namely, the IRI.

With respect to the OMSMO measures, empathic concern had positive correlations with both SMO-Justice and SMO-Care scores. Nonetheless, when perspective taking was partialed out, empathic concern no longer had any statistically significant correlations with the SMO scales. On the other hand, when empathic concern was partialed out, perspective taking still had statistically significant correlations with SMO-Justice and SMO-Care scores. These findings suggest that dispositional and situational moral orientations are two different constructs.

Further discriminant validity for dispositional and situational moral orientations came from findings of low and nonsignificant correlations between DMO-Justice and DMO-Care, but strong correlations between SMO-Justice and SMO-Care (.47 and .55). These findings
indicate that, despite their more or less care-oriented dispositional moral orientation, adolescents are able to use both justice and care orientations in their situational moral orientation, as previous research has suggested (e.g., Donenberg & Hoffman, 1988; Johnson, 1988). These findings also reflect the non-mutually exclusivity of the two orientations of the OMSMO (c.f. Walker et al., 1987), and provide further evidence for the differentiation between dispositional and situational moral orientation.

Implications

Differentiation between Dispositional and Situational Moral Orientation

Past research on moral orientation mostly used dilemma-based measures, and thus confounded dispositional moral orientation with situational factors (e.g., dilemma content). Present study was unique in two ways: (a) there was a differentiation between dispositional and situational moral orientation; and (b) the content effect of the dilemmas was neutralized by combining the three hypothetical stories with a realistic dilemma, in the examination of the relations between dispositional and situational moral orientation.

Present findings support the differentiation between dispositional and situational moral orientation. Adolescents were not only aware of their dispositional moral orientation, in terms of justice and care, but also able to mix or switch orientations when resolving particular dilemmas. Therefore, future research should expand the conceptions of moral orientation to include both dispositional and situational dimensions, and their interaction. The assessment of situational moral orientation needs to consider the content effects of the moral dilemmas, so as to ensure unbiased assessment (cf. Jaffee & Hyde, 2000).
Beyond Sex Differences

In the present study, adolescent boys and girls had very similar means and variances on most of the dispositional and situational moral orientation indexes, particularly the DMO-Justice Orientation ($M_s = -3.70$ and $-4.67$, $SDs = 10.35$ and $10.55$ for boys and girls, respectively). With a total mean of $-3.76$ and a standard deviation of $10.43$, the DMO-Justice Orientation score ranged from $-33$ to $+33$, suggesting that boys and girls were almost equally distributed on the normal curve of DMO-Justice Orientation score. In other words, about one-third of the boys and girls whose DMO-Justice Orientation scores were below or above one standard deviation were more care/justice oriented than most of their friends. These findings suggest that there are individual differences in dispositional moral orientation among adolescents, but that sex is not a good identifier.

Present findings support personality correlates of empathy to moral orientation, as well as intercorrelations among moral judgment, social desirability, and moral orientation. Besides sex, psychological theories of moral development should explore other personal attributes (e.g., social desirability) and how these personality factors interact with situational ones (e.g., parenting styles), in moral development. In order to investigate the possible developmental shifts for individuals with certain personality traits, further developmental and longitudinal research is needed.

Inclusion of ESL Participants

We are living in a multicultural society nowadays. The need of a multicultural education (i.e., unbiased school curriculum and instructional materials reflecting the pluralistic nature of our society) has been greatly emphasized (Gollnick & Chinn, 1983). Nevertheless, little research has been done with the inclusion of ESL participants, partly
because most instruments, developed for Caucasian students, require a certain degree of verbal fluency. Therefore, I urge researchers to consider the language they use in their research and try to include ESL participants in their research design as much as possible.

The inclusion of ESL participants is different from a cross-cultural study. The inclusion of ESL participants in our research may provide teachers and educators the necessary information about ESL students in their classrooms. This information may facilitate teachers and educators' understanding of ESL students, so that they can better help ESL students to integrate into the mainstream, without losing sight of their cultural heritage.

Future Directions for Research and Moral Education

Research and education are interconnected. The results of the present study have added to the literature on empathy and moral development in adolescence. These results are useful to teachers and counsellors in understanding, educating, and helping adolescents in their social, emotional, and moral development, particularly for counsellors and teachers of the participating school. The assessment of dispositional and situational moral orientations can be a valuable tool for teachers in moral education instruction and for counsellors counselling adolescents in conflict resolution and decision-making. It can also be a useful tool for researchers in exploring the interaction of intra-personal and situational factors in moral reasoning, and the relation of dispositional and situational moral orientations to other factors, such as depression and learning styles, as well as the development of dispositional and situational moral orientations.

The findings of moral orientation performing better than empathic concern and perspective taking in predicting moral judgment suggest that moral orientation may be an important element, not only in moral psychology, but also in moral education. Future
research should explore how moral orientation is related to behavior. For example, one’s dispositional moral orientation may exert a more subtle or unconscious influence on one’s behavior than conscious deliberation of moral judgment does, especially when situations require immediate actions or reactions. Needless to say, more research is required, before effective intervention programs or instructional designs aimed at increasing moral behavior or reducing school violence can be properly designed.

Morality involves the interplay of emotion, thought, and behavior, which are interdependent and interconnected. However, past research on moral psychology has been trichotomized because different theoretical traditions have focused their study of moral development on different aspects of morality (Walker, 1986a). Present findings spell the need for a multifaceted approach as well as a multidirectional perspective to empathy and moral development. Because human psychology is complex and complicated, we need to free ourselves from a traditional unidimensional, unidirectional viewpoint, so that we may start to untangle the mystery of the human psyche.

Conclusions

In the present study, I differentiated between dispositional and situational moral orientations and developed the Objective Measures of Dispositional and Situational Moral Orientation for the assessment of justice and care orientations, related to Gilligan’s (1982) critique of Kohlberg’s (1984) theory of cognitive moral development. The separate assessment of dispositional and situational moral orientation can be a valuable tool for theorists, educators, and counselors in revealing the interaction of intrapersonal and contextual factors in moral reasoning, and in helping students to find their own moral preferences.
Present findings supported most of the hypotheses. The exploration of the interrelations among empathy, moral orientation, and moral judgment revealed the multidirectional relations between cognitive and affective factors in morality, and the influence of intrapersonal factors (dispositional empathy and dispositional orientations) and situational factors (situational moral orientation) on moral reasoning. The examination of developmental changes, and sex and cultural differences helped to identify sex and cultural differences in adolescence, with respect to the above variables.

In conclusion, interdisciplinary investigation integrating moral psychology with other fields may help to expand our understanding of human psychology in general, and human morality in particular. Whether in the investigation of empathy, moral orientation, moral judgment, or other constructs, I believe, a multidimensional and multidirectional approach is indispensable.
REFERENCES


Appendix A

Kohlberg's Six-stage Model of Moral Judgment Development

Level 1 Preconventional Morality (Early to Middle Childhood)

Stage 1 Punishment and Obedience Orientation
At this stage, children are egocentric, that is, failing to understand that others have different perspectives from his/her own. They conform in order to avoid punishment.

Stage 2 Individualism and Instrumental Orientation
A concrete individualistic perspective marks this stage. Focusing on self-interests, children become aware of the differences between others’ and one’s own needs and perspectives. Reciprocity is based on self-serving purposes.

Level 2 Conventional Morality (Adolescence to Early Adulthood)

Stage 3 Interpersonal Norms
At this stage, early adolescents take a relational perspective. They become aware of shared feelings and social expectations that take primacy over individual interests. Good behavior is defined in terms of getting social approval, maintaining good relationships, and living up to social expectations.

Stage 4 Social Systems Morality
The advancement of a societal perspective enables adolescents to take the viewpoint of the social system, which defines roles and rules, and to consider individual relations in terms of place in the system. Social obligation takes precedence to interpersonal responsibility.

Level 3 Postconventional Morality (Adulthood)

Stage 5 Community Rights versus Individual Rights
A prior-to-society perspective characterizes this stage. A rational adult is aware of moral values like life and liberty prior to the relative social attachments and contracts, and finds it difficult to integrate the moral and the legal points of view when they conflict.

Stage 6 Universal Ethical Principles
Morality at this stage rests upon a moral perspective that universal moral principles of justice chosen by rational individuals respect the equality of human rights and the dignity of individual persons.

Appendix B

The Defining Issues Test

YOUR OPINIONS ABOUT SOCIAL PROBLEMS

This is NOT a test. This is a questionnaire that asks about your opinions about social problems. Different people have different opinions about questions of right and wrong. There are no “right” answers to such problems in the way that math problems have right answers. We would like you to tell us what you think about several problem stories.

Please read each story and tell us what you think a person(s) should do.

Second, read each of the items numbered 1 to 12. If the item is important in making your decision, then mark the circle by “great.” If that item is not important or doesn’t make sense to you, mark “no.” If you think the item has much, some or little importance, mark “much,” “some” or “little,” according to your opinion.

Third, after you have marked each of the 12 items, choose the item that is the most important in making your decision. Then the second most important, third, and fourth most important. Choose the four most important items first from items marked “great,” then “much,” and so on.

Although this is not a test, it has methods to detect faking. For example, some of the items are meaningless. If a person marks those items “great,” the person’s honesty in answering the questions will become questionable, and the person’s answers could be discarded. Therefore, if an item does not make sense to you, it is better to mark it “no” than to guess its meaning.

Note. Adapted from Instruction Booklet and DIT op-scan Answer Sheet (pp. 1-2) by J. Rest, 1979, Minneapolis, MN: University of Minnesota Press. Copyright 1979 by James Rest.
SAMPLE STORY

Nicole's Dilemma

Nicole has been invited by her friend, Amy, to come with her for dinner after school on Friday. The next day, another friend, Pam, invites Nicole on the same Friday to see their favorite rock band perform as she has tickets for two good seats. Nicole wants to go to the concert, but she feels bad about breaking her promise to Amy.

What should Nicole do?

- Go to the concert with Pam
- Can't decide
- Keep her promise to Amy

How important are the following items in your decision?

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1. How much does Nicole want to see the rock band?
2. Is Nicole a very good friend of Amy?
3. Would Nicole's parents allow her to break her promise?
4. What would other friends think of Nicole if she broke her promise to Amy?

Choose the four most important items in your decision, first from items marked "great," then "much," and so on. Please circle the number of your choice.

Most important item

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |

Second most important

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |

Third most important

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |

Fourth most important

| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |

Note. Adapted from The Ethic of Care Interview Manual by E. E. A. Skoe, 1993, Norwegian university of Science and Technology, Trondheim, Norway. Copyright 1979 by E. E. A. Skoe.
Appendix C

Interpersonal Reactivity Index

YOUR THOUGHTS AND FEELINGS IN DIFFERENT SITUATIONS

For each sentence, please indicate how well it describes you by making an "X" on the line.

1. I have tender, concerned feelings for people less fortunate than me. NOT AT ALL TRUE 1 5 9 REALLY TRUE

2. I find it difficult to see things from the other person's point of view. NOT AT ALL TRUE 1 5 9 REALLY TRUE

3. I don't feel sorry for other people when they are having problems. NOT AT ALL TRUE 1 5 9 REALLY TRUE

4. I look at everybody's side of a disagreement before I make a decision. NOT AT ALL TRUE 1 5 9 REALLY TRUE

5. When I see someone being taken advantage of, I feel protective towards them. NOT AT ALL TRUE 1 5 9 REALLY TRUE

6. I try to understand my friends better by imagining how things look from their point of view. NOT AT ALL TRUE 1 5 9 REALLY TRUE

7. Other people's misfortunes do not disturb me a great deal. NOT AT ALL TRUE 1 5 9 REALLY TRUE

8. If I'm sure I'm right about something, I don't waste time listening to other people's arguments. NOT AT ALL TRUE 1 5 9 REALLY TRUE

9. When I see someone being treated unfairly, I don't feel pity for them. NOT AT ALL TRUE 1 5 9 REALLY TRUE

10. I'm touched by things that I see happen. NOT AT ALL TRUE 1 5 9 REALLY TRUE
11. I believe that there are two sides to every question and I look at them both.

12. I would describe myself as a soft-hearted person.

13. When I’m upset at someone, I try to “put myself in his/her shoes” for a while.

14. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

15. In emergency situations, I feel worried and ill-at-ease.

16. I feel helpless when I am in the middle of a very emotional situation.

17. When I see someone get hurt, I remain calm.

18. Being in tense emotional situations scares me.

19. I am effective in dealing with emergencies.

20. I lose control during emergencies.

21. When I see someone who badly needs help in an emergency, I fall apart.

Appendix D

Personal Information

ID# ____________________________

TELL US ABOUT YOURSELF

We are interested in learning about your background. Please follow the directions carefully, and answer all of the questions.

1. Are you male or female? (Circle One) Male Female

2. How old are you? ___________ (years)

3. What grade are you in this year? (Circle One) 8th 9th 10th 11th 12th

4. How do you describe yourself? (Circle One)
   1 ...... White (Anglo, Caucasian, European descent, etc.)
   2 ...... Black (African, Haitian, Jamaican, etc.)
   3 ...... First Nation (Aboriginal, Native Indian, etc.)
   4 ...... Asian (Oriental, Chinese, Japanese, Korean, etc.)
   5 ...... Latin (Spanish, Mexican, South American, etc.)
   6 ...... East Indian
   7 ...... Philipino

If your race or cultural heritage is not listed above, please describe your heritage here___________________________________________

6. What language(s) do you speak at home? ________________________________________________________________

7. How long have you lived in Canada? ________________ (years)

8. Which of these adults do you live with MOST OF THE TIME?
   (Circle all of the adults you live with)
   1 ...... Both my parents
   2 ...... My mother only
   3 ...... My father only
   4 ...... My mother and a stepfather
   5 ...... My father and a stepmother
   6 ...... Grandparents
   7 ...... Other persons (Please indicate who this Other Person is. For example, aunt, uncle, mom’s boyfriend, etc.)

___________________________________________
9. Please describe the job held by your **FATHER** (stepfather or male guardian).

________________________________________

10. Please describe the job held by your **MOTHER** (stepmother or female guardian).

________________________________________
Appendix E
The Objective Measure of Dispositional Moral Orientation

HOW YOU GENERALLY MAKE DECISIONS OR SOLVE PROBLEMS

Please indicate how much you agree or disagree with each sentence, by making an “X” on the line.

1. In solving problems, each person’s rights are more important than relationships.

2. I make decisions based on feeling rather than reasoning.

3. When solving problems, I treat those people I know and people I do not know equally.

4. A better society stresses connections between people rather than rules and laws.

5. I would like to be known as being objective and fair rather than considerate of other’s feelings.

6. My responsibilities to my friends and family are more important than my own rights.

7. I make decisions based upon the principles or rules rather than the people involved.

8. I do what I think is right, even if my friends and family do not like it.

9. In solving problems, looking after the poor and the sick is more important than obeying the law.

10. I make decisions based on reasoning rather than feeling.
11. I am willing to agree in order to have good relationships with my friends and family.  

12. When solving problems, I try to do the least harm to everyone involved in the situation.  

13. Duties to the society are more important than caring for my friends and family.  

14. I make decisions based upon the people involved rather than the principles or rules.
Appendix F

The Objective Measure of Situational Moral Orientation

HEINZ AND THE DRUG

How important are the following issues in your decision of the story “Heinz and the Drug”?

Please indicate your answers by making an “X” on the line.

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<tr>
<th></th>
<th>a) rules and laws</th>
<th>b) relationships</th>
<th>c) fairness</th>
<th>d) each person’s rights</th>
<th>e) responsibilities in relationships</th>
<th>f) thinking carefully about all the facts</th>
<th>g) feelings</th>
<th>h) caring about others</th>
<th>i) duties to the society</th>
<th>j) connections between people</th>
<th>k) principles that tell us what is right and what is wrong</th>
<th>l) how much harm will be done to everyone involved in the situation</th>
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<td>NOT AT ALL IMPORTANT</td>
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</table>
ESCAPED PRISONER

How important are the following issues in your decision of the story “Escaped Prisoner”?

Please indicate your answers by making an “X” on the line.

<table>
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<tr>
<th></th>
<th>NOT AT ALL IMPORTANT</th>
<th>1</th>
<th>5</th>
<th>9</th>
<th>REALLY IMPORTANT</th>
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<tbody>
<tr>
<td>a)</td>
<td>rules and laws</td>
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<td>b)</td>
<td>relationships</td>
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<td>responsibilities in relationships</td>
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</tr>
<tr>
<td>f)</td>
<td>thinking carefully about all the facts</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>g)</td>
<td>feelings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h)</td>
<td>caring about others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>duties to the society</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j)</td>
<td>connections between people</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k)</td>
<td>principles that tell us what is right and what is wrong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l)</td>
<td>how much harm will be done to everyone involved in the situation</td>
<td></td>
<td></td>
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</tbody>
</table>
How important are the following issues in your decision of the story “Newspaper”?  

Please indicate your answers by making an “X” on the line.

<table>
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<tr>
<th></th>
<th>NOT AT ALL IMPORTANT</th>
<th></th>
<th></th>
<th></th>
<th>REALLY IMPORTANT</th>
</tr>
</thead>
<tbody>
<tr>
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<td>b) relationships</td>
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<tr>
<td>c) fairness</td>
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<tr>
<td>d) each person’s rights</td>
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<td></td>
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</tr>
<tr>
<td>e) responsibilities in relationships</td>
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<td>f) thinking carefully about all the facts</td>
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<tr>
<td>g) feelings</td>
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<td></td>
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<tr>
<td>h) caring about others</td>
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<tr>
<td>i) duties to the society</td>
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<tr>
<td>j) connections between people</td>
<td></td>
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</tr>
<tr>
<td>k) principles that tell us what is right and what is wrong</td>
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<tr>
<td>l) how much harm will be done to everyone involved in the situation</td>
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<td></td>
<td>REALLY IMPORTANT</td>
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</tbody>
</table>
LISA AND DEREK

Lisa and Derek are high school seniors who plan to enter college or university after high school. Last year, they were involved in the school drama club and started dating after a few months. Recently, Lisa has told Derek that she is pregnant with his child. They know they have very limited options. They could either get married or have an abortion.

What should they do?

- Should get married
- Can’t decide
- Should have an abortion

How important are the following items in your decision?

<table>
<thead>
<tr>
<th></th>
<th>1. What would their parents want them to do?</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>2. Whether Derek wants to get married and be a father at such a young age.</td>
</tr>
<tr>
<td>R</td>
<td>3. Whether Lisa wants to get married and be a mother at such a young age.</td>
</tr>
<tr>
<td>E</td>
<td>4. Whether their own or their parents' religious beliefs forbid the killing of an unborn child.</td>
</tr>
<tr>
<td>C</td>
<td>5. Are they really in love with each other?</td>
</tr>
<tr>
<td>H</td>
<td>6. Whether Lisa and/or Derek have high marks and good grades.</td>
</tr>
<tr>
<td>M</td>
<td>7. Should they pay the price for having premarital sex?</td>
</tr>
<tr>
<td>S</td>
<td>8. Whether any of their friends have had an abortion(s) before.</td>
</tr>
<tr>
<td>L</td>
<td>9. Would Lisa’s or Derek’s parents help them raise their child?</td>
</tr>
<tr>
<td>N</td>
<td>10. Is abortion acceptable to society and the law?</td>
</tr>
<tr>
<td>E</td>
<td>11. Whether their freedom of choice is more important than the life of their unborn child.</td>
</tr>
<tr>
<td>T</td>
<td>12. Whether they could be good parents at such a young age.</td>
</tr>
</tbody>
</table>

Choose the four most important items in your decision, first from items marked “great,” then “much,” and so on. Please circle the number of your choice.

<table>
<thead>
<tr>
<th>Most important item</th>
<th>1 2 3 4 5 6 7 8 9 10 11 12</th>
</tr>
</thead>
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<tr>
<td>Second most important</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>Third most important</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
<tr>
<td>Fourth most important</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
</tr>
</tbody>
</table>
LISA AND DEREK

Please indicate your answers to the following questions by making an “X” on the line.

How important are the following issues in your decision of the story “Lisa and Derek”?

a) rules and laws

b) relationships

c) fairness

d) each person’s rights

e) responsibilities in relationships

f) thinking carefully about all the facts

g) feelings

h) caring about others

i) duties to the society

j) connections between people

k) principles that tell us what is right and what is wrong

l) how much harm will be done to everyone involved in the situation
Appendix G
Social Desirability Scale

For each sentence, please indicate how well it describes you by making an “X” on the line.

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Scale</th>
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</thead>
<tbody>
<tr>
<td>I never shout when I feel angry.</td>
<td></td>
</tr>
<tr>
<td>2. I try to get even when someone does something to me that I don’t like.</td>
<td></td>
</tr>
<tr>
<td>3. I always do the right thing.</td>
<td></td>
</tr>
<tr>
<td>4. I have never been tempted to break a rule or a law.</td>
<td></td>
</tr>
<tr>
<td>5. I tell a little lie sometimes.</td>
<td></td>
</tr>
<tr>
<td>6. When I make a mistake, I always admit I am wrong.</td>
<td></td>
</tr>
<tr>
<td>7. I always help people who need help.</td>
<td></td>
</tr>
<tr>
<td>8. Sometimes I don’t like to share my things with my friends.</td>
<td></td>
</tr>
<tr>
<td>9. I get mad when people don’t do what I want.</td>
<td></td>
</tr>
<tr>
<td>10. Sometimes I say something just to impress my friends.</td>
<td></td>
</tr>
<tr>
<td>11. I sometimes feel angry when I don’t get my way.</td>
<td></td>
</tr>
<tr>
<td>12. I have never felt like saying unkind things to a person.</td>
<td></td>
</tr>
<tr>
<td>13. I would never hit a boy or girl who was smaller than me.</td>
<td></td>
</tr>
</tbody>
</table>
14. I want to do things my parents think I am too young to do.

15. Sometimes I don't like it when another person asks me to do things for him or her.

16. I never let anyone else get blamed for what I did wrong.

Appendix H

Honesty Check

Please answer the following questions by circling either “Yes” or “No.”

1. When answering the questions in the above questionnaires, have you followed all the directions carefully?  
   Yes  No

2. Have you answered all the questions honestly?  
   Yes  No

3. Have you purposefully skipped any of the questions?  
   Yes  No

If you have answered all the questions completely, please put the questionnaires back into the envelope.

You may read quietly. The researcher will collect the envelope at the end of the class.

Finally, in order to keep your answers private, please do NOT discuss with other students about your or their answers and the content of this study.

Thank you very much and have a good day!!!
## Appendix I

### Means and Standard Deviations for DMO-Consistent Group and DMO-Inconsistent Group on All Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Consistent ((n = 264))</th>
<th>Inconsistent ((n = 35))</th>
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<th>(p^*)</th>
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<tr>
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<td>14.83 (SD = 1.29)</td>
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<td>.58</td>
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<td>Years in Canada</td>
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<td>ODMO</td>
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<tr>
<td>DMO-J</td>
<td>36.28 (SD = 6.84)</td>
<td>41.61 (SD = 9.02)</td>
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<tr>
<td>DMO-C</td>
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<td>46.22 (SD = 8.82)</td>
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<td>.00*</td>
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<tr>
<td>DMO-JO</td>
<td>-3.69 (SD = 10.49)</td>
<td>-4.33 (SD = 10.13)</td>
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<td>.74</td>
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<tr>
<td>DMO-J5</td>
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<td>DMO-C5</td>
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<td>33.05 (SD = 7.34)</td>
<td>-2.16</td>
<td>.04*</td>
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<tr>
<td>DMO-JO5</td>
<td>-4.64 (SD = 7.56)</td>
<td>-4.21 (SD = 8.40)</td>
<td>-.31</td>
<td>.76</td>
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<tr>
<td>OMSMO-Hypothetical</td>
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<tr>
<td>Heinz-J</td>
<td>35.99 (SD = 9.04)</td>
<td>38.44 (SD = 10.42)</td>
<td>-1.46</td>
<td>.15</td>
</tr>
<tr>
<td>Heinz-C</td>
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<td>43.74 (SD = 6.01)</td>
<td>-1.91</td>
<td>.06</td>
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<tr>
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<td>-5.53 (SD = 9.54)</td>
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<tr>
<td>Prisoner-J</td>
<td>39.76 (SD = 8.43)</td>
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<tr>
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<td>.00*</td>
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<td>3.49 (SD = 10.95)</td>
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<td>.11</td>
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<tr>
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<td>EC</td>
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</table>
Note. *Equal variances not assumed.

*p < .05.

SDR = Score from 16 items of the Children’s Social Desirability Scale

OMDMO = The Objective Measure of Dispositional Moral Orientation
DMO-J = Score from 7-item Justice Scale of the OMDMO
DMO-C = Score from 7-item Care Scale of the OMDMO
DMO-JO = Difference score between DMO-J and DMO-C that reflects Dispositional Justice Orientation

DMO-J5 = Score from 5 items of the Justice Scale of the OMDMO, excluding Items 7 and 10
DMO-C5 = Score from 5 items of the Care Scale of the OMDMO, excluding Items 2 and 14
DMO-JO5 = Difference score between DMO-J and DMO-C that reflects Dispositional Justice Orientation excluding thinking/feeling and principles/people decision-making preferences (i.e., Items 2, 7, 10, and 14)

OMSMO = The Objective Measure of Situational Moral Orientation
Heinz-J = Score from 6-item Justice Scale of the OMSMO for the DIT hypothetical story “Heinz and the Drug”
Heinz-C = Score from 6-item Care Scale of the OMSMO for the DIT hypothetical story “Heinz and the Drug”
Heinz-JO = Difference score between Heinz-J and Heinz-C that reflects Situational Justice Orientation with regard to the story “Heinz and the Drug”

Prisoner-J = Score from 6-item Justice Scale of the OMSMO for the DIT hypothetical story “Escaped Prisoner”
Prisoner-C = Score from 6-item Care Scale of the OMSMO for the DIT hypothetical story “Escaped Prisoner”
Prisoner-JO = Difference score between Heinz-J and Heinz-C that reflects Situational Justice Orientation with regard to the story “Escaped Prisoner”

Newspaper-J = Score from 6-item Justice Scale of the OMSMO for the DIT hypothetical story “Newspaper”
Newspaper-C = Score from 6-item Care Scale of the OMSMO for the DIT hypothetical story “Newspaper”
Newspaper-JO = Difference score between Heinz-J and Heinz-C that reflects Situational Justice Orientation with regard to the story “Newspaper”

Abortion-J = Score from 6-item Justice Scale of the SMO for the realistic story “Lisa and Derek”
Abortion-C = Score from 6-item Care Scales of the SMO for the realistic story “Lisa and Derek”
Abortion-JO = Difference score between LD-Justice and LD-Care that reflects Situational Justice Orientation with regard to the realistic story “Lisa and Derek”

IRI = The Interpersonal Reactivity Index
EC = Score from 7-item Empathic Concern Scale of the IRI
PT = Score from 7-item Perspective Taking Scale of the IRI
PD = Score from 7-item Personal Distress Scale of the IRI

DIT = The Defining Issues Test
N2 = Score from 3 DIT stories that reflects the growth of postconventional thinking and decrease of preconventional reasoning
P = Score from 3 DIT stories that reflects postconventional reasoning
U = Score from 3 DIT stories that reflects the use of a justice orientation in moral reasoning

<table>
<thead>
<tr>
<th>P</th>
<th>20.68</th>
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### Appendix J

#### Means and Standard Deviations for Form 1 and Form 2 on All Measures

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<tr>
<th>Measure</th>
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<td>8.85</td>
<td>33.90</td>
<td>9.94</td>
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<tr>
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<td>N2</td>
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<td>24.99</td>
<td>10.58</td>
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<tr>
<td>P</td>
<td>21.28</td>
<td>14.09</td>
<td>19.18</td>
<td>12.92</td>
</tr>
<tr>
<td>U</td>
<td>1.80</td>
<td>3.64</td>
<td>1.89</td>
<td>3.73</td>
</tr>
</tbody>
</table>
Note. *p < .05.

SDR = Score from 16 items of the Children's Social Desirability Scale

OMDMO = The Objective Measure of Dispositional Moral Orientation
DMO-J = Score from 7-item Justice Scale of the OMDMO
DMO-C = Score from 7-item Care Scale of the OMDMO
DMO-JO = Difference score between DMO-J and DMO-C that reflects Dispositional Justice Orientation

OMSMO = The Objective Measure of Situational Moral Orientation
Heinz-J = Score from 6-item Justice Scale of the OMSMO for the DIT hypothetical story “Heinz and the Drug”
Heinz-C = Score from 6-item Care Scale of the OMSMO for the DIT hypothetical story “Heinz and the Drug”
Heinz-JO = Difference score between Heinz-J and Heinz-C that reflects Situational Justice Orientation with regard to the story “Heinz and the Drug”

Prisoner-J = Score from 6-item Justice Scale of the OMSMO for the DIT hypothetical story “Escaped Prisoner”
Prisoner -C = Score from 6-item Care Scale of the OMSMO for the DIT hypothetical story “Escaped Prisoner”
Prisoner -JO = Difference score between Heinz-J and Heinz-C that reflects Situational Justice Orientation with regard to the story “Escaped Prisoner”

Newspaper-J = Score from 6-item Justice Scale of the OMSMO for the DIT hypothetical story “Newspaper”
Newspaper-C = Score from 6-item Care Scale of the OMSMO for the DIT hypothetical story “Newspaper”
Newspaper-JO = Difference score between Heinz-J and Heinz-C that reflects Situational Justice Orientation with regard to the story “Newspaper”

Abortion-J = Score from 6-item Justice Scale of the SMO for the realistic story “Lisa and Derek”
Abortion-C = Score from 6-item Care Scales of the SMO for the realistic story “Lisa and Derek”
Abortion-JO = Difference score between LD-Justice and LD-Care that reflects Situational Justice Orientation with regard to the realistic story “Lisa and Derek”

IRI = The Interpersonal Reactivity Index
EC = Score from 7-item Empathic Concern Scale of the IRI
PT = Score from 7-item Perspective Taking Scale of the IRI
PD = Score from 7-item Personal Distress Scale of the IRI

DIT = The Defining Issues Test
N2 = Score from 3 DIT stories that reflects the growth of postconventional thinking and decrease of preconventional reasoning
P = Score from 3 DIT stories that reflects postconventional reasoning
U = Score from 3 DIT stories that reflects the use of a justice orientation in moral reasoning
Appendix K

Adjusted Marginal Means for Sex and Summary of Multivariate Analyses of Covariance on All Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Boys ( (n = 149) )</th>
<th>Girls ( (n = 155) )</th>
<th>Univariate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillai’s Trace = .00</td>
<td>Multivariate ( F (2, 280) = .54 )</td>
<td></td>
<td>( \eta^2 = .00 ) (( N = 288 ))</td>
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<tr>
<td>DMO-Justice</td>
<td>36.90</td>
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<td>1.07</td>
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<td>DMO-Care</td>
<td>40.52</td>
<td>40.66</td>
<td>.02</td>
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<tr>
<td>DMO-Justice Orientation</td>
<td>-3.61</td>
<td>-4.74</td>
<td>.68</td>
</tr>
<tr>
<td>Pillai’s Trace = .04</td>
<td>Multivariate ( F (2, 260) = 4.97 )</td>
<td>( p = .02^* )</td>
<td>( \eta^2 = .04 ) (( N = 268, 4 ) cases excluded)</td>
</tr>
<tr>
<td>SMO-Justice 3</td>
<td>112.33*</td>
<td>120.30*</td>
<td>9.71</td>
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<td>SMO-Care 3</td>
<td>105.96</td>
<td>111.12</td>
<td>2.82*</td>
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<td>SMO-Justice Orientation 3</td>
<td>6.37</td>
<td>9.19</td>
<td>.80</td>
</tr>
<tr>
<td>Pillai’s Trace = .03</td>
<td>Multivariate ( F (2, 250) = 4.26 )</td>
<td>( p = .02^* )</td>
<td>( \eta^2 = .03 ) (( N = 258, 6 ) cases excluded)</td>
</tr>
<tr>
<td>SMO-Justice 4</td>
<td>147.12*</td>
<td>156.69*</td>
<td>8.53</td>
</tr>
<tr>
<td>SMO-Care 4</td>
<td>150.03</td>
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<td>2.86</td>
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<td>.46</td>
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<tr>
<td>Pillai’s Trace = .17</td>
<td>Multivariate ( F (3, 279) = 18.89 )</td>
<td>( p = .00^* )</td>
<td>( \eta^2 = .17 ) (( N = 288, 5 ) cases excluded)</td>
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<tr>
<td>Empathic Concern</td>
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<td>50.16*</td>
<td>44.02</td>
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<tr>
<td>Perspective Taking</td>
<td>36.89*</td>
<td>40.67*</td>
<td>10.25</td>
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<tr>
<td>Personal Distress</td>
<td>30.39*</td>
<td>35.18*</td>
<td>16.91*</td>
</tr>
<tr>
<td>Pillai’s Trace = .04</td>
<td>Multivariate ( F (3, 277) = 3.91 )</td>
<td>( p = .01^* )</td>
<td>( \eta^2 = .05 ) (( N = 286, 4 ) cases excluded)</td>
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<tr>
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<td>26.43*</td>
<td>7.08</td>
</tr>
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<td>DIT-P</td>
<td>17.31*</td>
<td>20.89*</td>
<td>5.06</td>
</tr>
<tr>
<td>DIT-U</td>
<td>1.52</td>
<td>2.37</td>
<td>3.03</td>
</tr>
</tbody>
</table>

Note: Outliers outside 3 standard deviations were excluded from analyses.

The error variance is unequal across groups.

The mean difference is significant at the .05 level based on estimated marginal means adjusted for multiple comparisons: Bonferroni adjustment

\( p < .05 \)
Appendix L

Adjusted Marginal Means for Ethnic Groups and

Summary of Multivariate Analyses of Covariance on All Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>White ((n = 98))</th>
<th>Asian ((n = 151))</th>
<th>Others ((n = 55))</th>
<th>Univariate</th>
<th>(F)</th>
<th>(p)</th>
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</thead>
<tbody>
<tr>
<td>Pillai’s Trace = .08</td>
<td>(M)</td>
<td>(M)</td>
<td>(M)</td>
<td>(p) = .00*</td>
<td>(\text{Eta}^2 = .04) ((N = 288))</td>
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</tr>
<tr>
<td>Multivariate (F(4, 562) = 5.66)</td>
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<td></td>
</tr>
<tr>
<td>DMO-Justice</td>
<td>35.43(^a)</td>
<td>38.37(^{a,b})</td>
<td>35.45(^b)</td>
<td>5.86</td>
<td>.00*</td>
<td></td>
</tr>
<tr>
<td>DMO-Care</td>
<td>38.57(^{a,b})</td>
<td>41.63(^a)</td>
<td>41.56(^b)</td>
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</tr>
<tr>
<td>DMO-Justice Orientation</td>
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<td>-6.11</td>
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<td>.22</td>
<td></td>
</tr>
<tr>
<td>Pillai’s Trace = .03</td>
<td>Multivariate (F(4, 522) = 1.97)</td>
<td>(p) = .10</td>
<td>(\text{Eta}^2 = .02) ((N = 268, 4 \text{ cases excluded}))</td>
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</tr>
<tr>
<td>SMO-Justice 3</td>
<td>113.60(^a)</td>
<td>120.23(^a)</td>
<td>115.11</td>
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<td>111.14</td>
<td>108.96</td>
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<td>Pillai’s Trace = .04</td>
<td>Multivariate (F(4, 502) = 2.41)</td>
<td>(p) = .05*</td>
<td>(\text{Eta}^2 = .02) ((N = 258, 6 \text{ cases excluded}))</td>
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<tr>
<td>SMO-Justice 4</td>
<td>147.25(^a)</td>
<td>157.27(^a)</td>
<td>151.20</td>
<td>4.77</td>
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<td>SMO-Care 4</td>
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<td>153.58</td>
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<td>SMO-Justice Orientation 4</td>
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<td>1.89</td>
<td>-2.38</td>
<td>1.31(^v)</td>
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<tr>
<td>Pillai’s Trace = .07</td>
<td>Multivariate (F(6, 560) = 3.57)</td>
<td>(p) = .00*</td>
<td>(\text{Eta}^2 = .03) ((N = 288, 5 \text{ cases excluded}))</td>
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<tr>
<td>Empathic Concern</td>
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<td>47.33</td>
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<td>.99</td>
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<td>40.65(^a)</td>
<td>39.51</td>
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<tr>
<td>Personal Distress</td>
<td>31.73(^a)</td>
<td>35.04(^a)</td>
<td>32.16</td>
<td>4.58</td>
<td>.01*</td>
<td></td>
</tr>
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<td>Pillai’s Trace = .04</td>
<td>Multivariate (F(6, 556) = 1.82)</td>
<td>(p) = .09</td>
<td>(\text{Eta}^2 = .02) ((N = 286, 4 \text{ cases excluded}))</td>
<td></td>
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</tr>
<tr>
<td>DIT-N2</td>
<td>23.98</td>
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</tr>
</tbody>
</table>

Note. Outliers outside 3 standard deviations were excluded from analyses.

\(^v\) The error variance is unequal across groups.

\(^a,b\) The mean difference is significant at the .05 level based on estimated marginal means adjusted for multiple comparisons: Bonferroni adjustment

\(^*p < .05\)
Appendix M

Interrelations among Empathy, Moral Orientation, and Moral Judgment

Table M1

Summary of Hierarchical Multiple Regressions Analyses for Perspective Taking, Empathic Concern, Personal Distress, DMO-Justice, DMO-Care, SMO-Justice 3, and SMO-Care 3 Predicting N2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Adjusted $R^2$</th>
<th>F</th>
<th>$R^2_{\text{Change}}$</th>
<th>$F_{\text{Change}}$</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
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</table>

Note. Outliers outside 3 standard deviations were excluded from analyses.

*p < .05.
Table M2

Summary of Hierarchical Multiple Regressions Analyses for Perspective Taking, Empathic Concern, Personal Distress, DMO-Justice Orientation, and SMO-Justice Orientation Predicting N2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Adjusted $R^2$</th>
<th>$F$</th>
<th>$R^2_{\text{Change}}$</th>
<th>$F_{\text{Change}}$</th>
<th>$B$</th>
<th>$SE\ B$</th>
<th>$\beta$</th>
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<td>.05</td>
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</table>

Dependent Variable: N2 ($N = 247, 1$ case was excluded)

*Note.* Outliers outside 3 standard deviations were excluded from analyses.

*p < .05.