

PREDICTING MORAL JUDGMENT COMPETENCE
FROM DEVELOPMENTAL BUILDING BLOCKS
AND MORAL EMOTIONS: A STRUCTURAL
EQUATION MODEL

By

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CHAPTER I

INTRODUCTION

“Two things fill the mind with ever new and increasing wonder and awe - the starry heavens above me and the moral law within me.” - Immanuel Kant

Karol nervously glanced up and down the short aisle of candy bars, chewing gum, and assortment of other convenience items. He then fixated, chin down, on the bottom shelf where some 5 cent baseball cards were and remained completely stoic. His hands were dug deep in the hot pockets of his coat, sweating profusely. The sound of his heart pounding was the only thing audible to him. Karol felt a heavy spotlight pressing down upon him, revealing his fraudulent intentions to the world. He could barely breathe. The cashier in the convenience store paid him no mind and continued to chat with the man from pump 4. Only seconds passed but it felt like an eternity to Karol. His thoughts were circular and panicky. *Just do it! Just do it! Just do it!* Finally, Karol could stand it no longer and acted on the compulsion to stop his torment. He quickly lunged forward toward the bottom shelf, snatching a package of 5 cent baseball cards like a snake striking its prey. Putting the baseball cards in his pocket, Karol mechanically exited the store without making eye contact with anyone. Once outside the store, Karol leaped on his bike and made the get-a-away of the century. Several blocks away from the convenience store, Karol began to slow down. Looking back, he saw no one was following him. The heist was a success. He quickly surveyed his environment, searching for a nice spot to examine the loot. A small, vacant loading dock next to a close-by building seemed to be

the perfect place. As soon as he got there, he tossed his bike on the grass and went over to sit on the concrete. He joyfully unwrapped the package and examined the cards carefully. Two out of the three cards were new! Karol considered himself very lucky. As a child on Christmas morning with that special toy, Karol carefully examined each card, reading every fact and statistic numerous times. He even did this with the third card that he already owned. When he had finally satiated himself, he wrapped up the cards, placed them in his pocket and laid back on the warm concrete, closing his eyes.

Not too long after this did Karol begin to get an unsettling feeling. A rush of panic and fear began to press down upon him, not unlike what he felt right before he had stolen the baseball cards. Karol knew what he had done was not right. He just knew God wouldn't approve. Karol looked around to see if someone from the convenience store had discovered him. There was still no one in sight. Karol felt an overwhelming sense of guilt and shame. He felt tortured and tormented. Karol finally reasoned that the only way to make amends would be to return the baseball cards to the store and apologize. With heart hung low, Karol pedaled his way back to the convenience store to return the stolen item.

Karol entered the convenience store and walked directly to the cashier. He reached into his pocket for the baseball cards and laid the torn, open package on the counter. The cashier stared at him blankly. Karol tried to explain but before the words could reach his mouth the emotions reached his eyes and he burst out crying. The shocked cashier stood looking very confused at this young child having a melt-down in the 7-11. Between gasps of air, Karol tried to explain how he had stolen the cards and how sorry he was. The cashier, realizing the lack of severity of the situation and looking

very uncomfortable, wanted to calm the child and end the melt-down as soon as possible. The cashier quickly doled out forgiveness, which Karol accepted and left the store.

What caused Karol to realize that he had done something wrong? Did his family show him that stealing was wrong? Was he influenced by Sunday school? How were the emotions of shame and guilt associated with morality? These are just a few of the questions that prompted the current study of moral development. It was hypothesized that the foundation or building blocks of moral development such as one's family interactions, spiritual life, and ascription to different sources of moral authority (e.g., teachers and peers, religious institutions, and one's concern for society's welfare and human equality, etc.) would impact individual moral emotional development, particularly empathy, shame, and guilt. These moral emotions were further hypothesized to predict moral judgment competence, defined as the cognitive reasoning ability to be consistent in the application of moral principles across situations. These hypothesized relationships were tested in a structural equation model that represents the first known attempt to combine moral developmental building blocks, moral emotions, and moral judgment competence.

CHAPTER II

REVIEW OF LITERATURE

“A moral being is one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them.” -Charles Darwin

Morality and its development has entertained philosophers throughout time from Aristotle to Aquinas to Descartes. From a Western perspective, three philosophical platforms have commonly been presented about the moral human condition. First, Christian doctrine presents humankind as being born with original sin, that is a proclivity to concupiscence (Chadwick, 1991). According to this viewpoint, individuals have a wounded nature and need to be saved from sin as shown in Psalms 52: 4-7.

“Wash away all my guilt; from my sin cleanse me. For I know my offense; my sin is always before me. Against you alone have I sinned; I have done such evil in your sight that you are just in your sentence, blameless when you condemn. True, I was born guilty, a sinner, even as my mother conceived me” (The New American Bible, 1992).

The second philosophical platform, proposed by Swiss-born, French philosopher Jean-Jacques Rousseau, was developed in opposition to the Christian view of original sin. Rousseau thought that humans were born good and for moral development to take place little intervention was needed from parents and the community. In fact, Rousseau felt humans were lead astray by societal institutions, conceptualizing the ideal human as one uncontaminated from society or what he termed the *noble savage* (Hergenbahn, 2001, p.

184). Rousseau considered society an interference with the natural, good human impulse as shown in his work *Emile* (1762/1974) “God makes all things good; man meddles with them and they become evil.” (pp. 5).

The third philosophical platform, proposed by English philosopher John Locke, is the idea that individuals are born amoral - neither good nor bad. Locke proposed this concept in opposition to church dogma of his time that taught morality as being innate ideas originating from God. Locke felt ideas were not innate (moral ideas, mathematical ideas, theological ideas, or any ideas) and emphasized the value of experience. Locke proposed the idea of *tabula rasa*, which means “blank slate”, implying that morality was completely derived by interactions with the environment (Hergenhahn, 2001; pp. 114-119; pp.161; Locke, 1690). These three early philosophical platforms inspired psychologists to scientifically determine the nature of morality and its development.

The first step in the psychologist’s scientific repertoire is theory building. To date, two predominate theoretical orientations of moral development have emerged - social learning/social cognition (e.g., Bandura, 1977, 1986, 1990, 1991; Rotter, 1982; Eisenberg & Fabes, 1988; Kurtines & Gewirtz 1991a, 1991b; Musser & Leone, 1986; see Thomas, 1997 for a review) and cognitive structuralism (e.g., Kegan, 1982, Kohlberg, 1967, 1971, 1984; Piaget, 1965, 1973; Piaget & Inhelder, 1969; see Thomas, 1997 for a review). Both theoretical orientations posit the human condition as amoral (neither good nor bad), thus stressing the importance of experience in moral development.

Furthermore, both have a life-span approach with the strongest emphasis placed on the first two decades of life (Thomas, 1997). However, both are substantively unique and will be individually explored in depth, looking first at the social learning/social cognition

orientation.

To understand different theoretical orientations, it is helpful to examine where the orientation places its focus. The social learning/social cognition orientation places focus on the values (i.e., convictions) held by the group in which a person resides (e.g., a family, a community, a nation). “An individual value is a conviction a person holds about good and bad ways to act towards others. A shared value is such a conviction that is held in common by a variety of people.” (Thomas, 1997, pp. 69). Simple forms of values/convictions are “the respect for life”, “the respect for other’s property”, and “the importance of supporting others’ in their times of need” (Thomas, 1997, pp. 68). In the social learning/social cognition orientation, successful moral development is defined as adopting the values/convictions of the group in which the individual belongs while unsuccessful development involves continually engaging in behaviors with negative consequences (i.e., the inability to learn from consequences). The adoption of values/convictions of the group is posited to most readily take place via environmental modeling (Bandura, 1977, 1986, 1990, 1991).

These values/convictions can then translate into behavior if put into action. The social learning/social cognition orientation does not outline specific behaviors as being moral or immoral since it is relative to the social context. There are, however, certain common behaviors (i.e., common values/convictions translated into action) that reoccur in societies such as the value of “the respect for life” translating into the behavior of “not killing others” and the value of “the respect for other’s property” translating into the behavior of “not stealing others’ things”. According to the social learning/social cognition orientation, these are not termed as moral behaviors per se but are a function of

what societies across time have found works for successful communities (Kurtines & Gewirtz 1991a, 1991b; Musser & Leone, 1986; Thomas, 1997). Hence, the reoccurrence of these behaviors across time shows that they are adaptive for a functioning community irregardless of whether or not these behaviors are seen as moral.

Two additional unique aspects of the social learning/social cognition orientation that will be explored involve the conceptualization of personality and the conceptualization of growth. Personality is described as having rational and irrational sources and an individual must find balance between them. There are three rational sources (values, prudential considerations, and ego-protection techniques) and one irrational source (strong emotions such as shame, sympathy, guilt, fear, lust, etc.). Values are convictions held by an individual and were explored earlier (e.g., “upholding fairness, justness, and preserving honesty”). Prudential considerations involve reflection on consequences of specific actions (e.g., receiving a poor grade on an exam) and ego-protection techniques involve balancing any discrepancies between values and prudential considerations (Bandura, 1977, 1986, 1990, 1991). For instance, an individual may have the prudential consideration that s/he did not study for an exam and will likely receive the consequence of a failing grade. The individual may want to avoid this negative consequence by cheating on the exam. However, this same individual also holds the value of “upholding fairness, justness, and preserving honesty”. Hence, an ego-protection technique is needed to balance the discrepancy by either changing the individual’s value (to allow cheating) or accepting the negative consequences of receiving a failing grade.

Turning towards developmental growth, in the social learning/social cognition orientation it is conceptualized as the gradual day-by-day accumulation of moral

reasoning and understanding across the life-span with no sharp developmental trends.

However, an emphasis is placed on the first two-decades of life as being highly influential in moral development because it is felt subsequent development relies on this foundation (Rotter, 1982; Eisenberg & Fabes, 1988). This growth conceptualization as gradual across the lifespan is unique from the stage conceptualization of growth (sharp developmental trends) of the cognitive structuralism orientation. However, before describing the specifics of the cognitive structuralism conceptualization of growth, it is helpful to examine where the orientation places its focus.

Cognitive structuralism orientation places focus on the acquisition of rules, as opposed to the social learning/social cognition orientation's acquisition of values. Hence, successful moral development is then defined as the acquisition of rules instead of values. Rules can be thought of as external properties of the world, whether they be physical properties like that of water or social interaction properties like that of a marital relationship. Rules are thought to be universal and distinct from the cultural-relativist position of values in the social learning/social cognition orientation (Thomas, 1997). To further elaborate on the cognitive structuralism rules and how they compare to social learning/social cognitive values, the theory of Jean Piaget (1896-1980) will be briefly highlighted.

Jean Piaget, the premiere cognitive structuralism theorist, felt morality was a system of rules and each individual can be thought of as playing a game with the object being to acquire the rules (Piaget, 1965, 1973; Piaget & Inhelder, 1969). For instance, Piaget theorized that children (ages of 7 through 11) are able to understand the physical property that water is conserved (i.e., the same amount retained) when poured from one

container to another regardless of the shape of the receiving container. Even though this example shows acquisition of a mental rule, Piaget felt mental development was the foundation for subsequent moral reasoning (Piaget, 1965, 1973; Piaget & Inhelder, 1969).

Another example illustrating cognitive structuralism rules is Piaget's autonomous morality. Autonomous morality involves individuals basing moral judgments on mutual regard, equality, and respect to guide their interactions with others (Piaget, 1965).

Therefore, it is possible to see Piaget's autonomous morality played out in marital relationships as a spouse gathers rules or social properties from marital interactions such as functioning with mutual regard, equality, and respect as shown in the rules "do not commit adultery" and "do not abuse intimate power". However, even though conceptualization differs, these rules or properties of the relationship can readily be mapped onto the specific values of the social learning/social cognition orientation. For instance, the rules surrounding the ideas of equality and fairness such as "do not cheat" and "do not steal" are extremely similar, if not identical, to the values of "upholding fairness, justness, and preserving honesty" and "the respect for other's property". In fact, in a marital relationship, the value of "mutual regard" thankfully overlaps with the rule of "do not kill". In sum, it is important to note the theoretical focus of each orientation rather than attempt to narrow down specific orthogonal rules and values for each.

As mentioned previously, the cognitive structuralism orientation conceptualization of development involves sharp developmental trends or stages of development. Typical stage progression in cognitive structuralism theories involve the endorsement of equality and the releasing of self-centeredness. Stage progression can also be more generally framed as conforming to the prescribed thoughts/behaviors

outlined by a theorist during a specific stage of development (Thomas, 1997). Two of the most renowned cognitive-structuralism stage theorists are Jean Piaget (highlighted earlier) and Lawrence Kohlberg (1927-1987) and their theories will be detailed below.

First, as alluded to earlier, Jean Piaget hypothesized that morality is a system of acquiring different rules. He proposed that this process is similar to the one that an individual goes through when s/he is playing a new game. The foundation for acquiring these moral rules relies on cognitive abilities, which Piaget classified into developmental stages. The first stage is the *sensorimotor period*, lasting between birth to about 2 years of age, with successful stage progression involving the mental representation of objects. The second stage is the *preoperational-thought period*, lasting between 2 to 7 years of age, with successful stage progression involving a transition from perception-dependent problem solving to the use of logic in problem solving. The third stage is the *concrete-operations period*, lasting between 7 to 11 years of age, with successful stage progression involving mastery of the conservation of properties such as mass and volume. The fourth and final stage is the *formal-operations period*, lasting between 11 to 15 years of age, with successful stage progression involving abstract reasoning and symbolic thought. Piaget hypothesized that individuals apply their current cognitive abilities to interact with the environment and, subsequently, morals are acquired. Cognitive abilities therefore play a key role in moral development (Piaget, 1965, 1973; Piaget & Inhelder, 1969).

Piaget also put forth specific stages of moral development that occur concurrently with the cognitive stages of development. The first stage *heteronomous morality*, lasting between 4 to 7 years of age, is characterized by the unquestioning of authority and an inflexible rule system. The second stage is a transitional stage, lasting between 7 to 10

years of age, where characteristics of the first and third stage are exhibited. The third and final stage *autonomous morality*, starting at 10 years of age, is characterized by more flexibility in the rule system and ideas like justice, equality, and reciprocity are prevalent (Piaget, 1965).

Second, Lawrence Kohlberg had similar ideas to Piaget about moral development; however, he developed a more detailed six stage model. Kohlberg's stage one (*heteronomous morality*), like Piaget's, involves unquestioning acceptance of authorities' rules while stage two (*individualistic, instrumental morality*) involves the maximization of benefits to the self while minimizing negative consequences. Stage three (*impersonally normative morality*) involves shared social norms of interaction while stage four (*social system morality*) involves pursuing the common good. At stage five (*human-rights and social-welfare morality*), people begin to promote universal values and rights while at stage six (*morality of universalizable, reversible, and prescriptive general ethical principles*) positive prescriptions are typically given such as "respect for human dignity" and "a quality life for everyone" (Kohlberg, 1967, 1971, 1984).

As can be seen, both Piaget's and Kohlberg's stage theories rely heavily on internal cognitive processing. A key feature of the cognitive structuralism orientation as a whole is the emphasis on mental phenomena. For example, personality for the cognitive structuralism orientation is divided into three parts: cognitive structures, schemas, and operation mechanisms. First, cognitive structures are malleable views of the world based on current maturation. Cognitive structures can be thought of as developmental "lenses". Second, schemas are adaptable storage blocks of information used to relate to the world. As an individual relates to the world, new information is incorporated into these storage

blocks which, in turn, affect moral behavior. Finally, operation mechanisms are the skills used to adapt and change schemes when new information is presented (Thomas, 1997).

In conclusion, both the social learning/social cognition orientation and the cognitive structuralism orientation have had a profound impact in shaping the field of moral development today. Both approach the scientific study of moral development in a dynamic way. Social learning/social cognition focuses on contextual factors while cognitive structuralism focuses on conscious mental operations. Another difference is that cognitive structuralism theories do not cite emotion as a salient factor in moral development as do the social learning/social cognition theories as seen in the irrational personality component (i.e., shame, sympathy, guilt, fear, lust, etc.). Both orientations also differ in research practice. Cognitive structuralism theorists tend to investigate what individuals would do rationally in a hypothetical situation (i.e., tapping cognitive processes) while social learning/social cognition theorists tend to address the possible difference between rational thought and actual behavior in real-life situations, with the source of that difference being emotionality (Thomas, 1997). For instance, a cognitive structuralism theorist may have someone complete a questionnaire asking her or his reactions and judgments in a hypothetical situation while a social learning/social cognition theorist may assess someone's reactions to a situation and compare them to actual behavior in the real-life situation. Even though it may appear that social learning/social cognition theorists form a bridge across the two areas of thought, the rational assessment of reactions prior to real-life observations is still from a social learning/social cognition framework rather than a cognitive structuralism framework.

Currently, the field of moral development has shifted from a focus on cognitive

processes and judgments like that seen in the cognitive structuralism orientation to a focus on emotions and cultural influences like that seen in the social learning/social cognition orientation. For example, early prominent moral development theorists in the field included Piaget and Kohlberg who were cognitive structuralists studying rational, cognitive judgments. As time went on, the field has turned the focus towards emotions (e.g., empathy), gender differences, prosocial behaviors (e.g., helping, giving), and cultural influences (see Turiel, 2006 for a review). Even though the current direction of the field is towards the social learning/social cognition theoretical orientation, it is thought that advancement in the field could be attained by bridging the theoretical orientations of cognitive structuralism and social learning/social cognition. By integrating previously separated areas of research, greater complexity is achieved and a closer approximation of human life is simulated.

Thus, the central goal of the present study is to uniquely integrate both theoretical orientations of social learning/social cognition and cognitive structuralism in the construction of a structural equation model of moral development. However, before describing the model in detail, the primary outcome variable of the current study - moral judgment competence as measured by the Moral Judgment Test - will be discussed.

Measuring Moral Development Empirically: The Moral Judgment Test

The Moral Judgment Test (MJT; Lind, 2005, 2006, in press; Lind & Wakenhut, 1985) was designed to bridge the gap between theory and measurement in the area of moral development. In the mid-seventies, Georg Lind, a German Professor of psychology, postulated the dual-aspect theory which delineates the idea that moral development is composed of both principles (i.e., moral attitudes/values) and the

application of those principles (i.e., cognitive abilities/capacities). Yet, the moral development research measures available at the time only measured moral attitudes according to Lind. Hence, Lind sought to develop a measure to assess moral development that would not only evaluate individual moral attitudes but also moral cognitive abilities. This quest resulted in the development of the Moral Judgment Test (MJT). Lind noted several theoretical influences in the design and construction of the MJT, some of which were E. Brunswick's diacritical method (1955), N. Anderson's cognitive algebra (1991), G. Kelly's personal constructs (1955), and L. Guttman's facet analysis (1961). Since its inception, the Moral Judgment Test has been used in research for over 30 years, has 29 foreign language versions, and has been administered to over 38,000 participants across the globe (Lind, 2004, 2005, in press; Lind & Wakenhut, 1985).

In order to measure cognitive abilities, Lind thought a difficult moral task must be presented. The MJT presents participants with moral dilemmas which are narrative stories where the dilemma arises because the situation involves the transgression of important moral values or principles. Participants then must make a decision about the acceptability of the person's action in the dilemma and the acceptability of arguments for and against that action. For example, in the *Doctor's Dilemma* of the MJT (see *Appendix F*) participants judge the acceptability of euthanasia. There are several moral principles that could be violated such as "The preservation of life", "Helping someone in need", "Upholding the law", and "The quality of life". The MJT asks participants to rate their agreement with someone's actions in the situation and then rate the acceptability of arguments for and against the person's behavior. The arguments for and against the

person's behavior directly relate to Lawrence Kohlberg's six stage model of moral development. Each stage is equally represented with one pro and one con argument per stage for a total of twelve arguments per dilemma. Most importantly, the presentation of arguments and judging both pro and con arguments is inherent in creating a challenging moral task of cognitive ability (Lind, 2005, in press; Lind & Wakenhut, 1985).

Lawrence Kohlberg's influence is also seen in the conceptual definition behind the MJT. The MJT uses the same definition that Lawrence Kohlberg used for *moral judgment competence* which was "the capacity to make decisions and judgments which are moral (i.e., based on internal principles) and to act in accordance with such judgments" (Kohlberg, 1964, p.425). In other words, the ability to be consistent in the application of moral principles in moral judgments results in moral judgment competence. Hence, the MJT is designed to measure the construct moral judgment competence which involves the cognitive reasoning ability to be consistent in the application of moral principles across situations.

Closer examination of the MJT's *Doctor's Dilemma* reveals how one could consistently apply her or his moral principles, resulting in a higher moral judgment competence score on the test. For example, Kohlberg's stage six (*morality of universalizable, reversible, and prescriptive general ethical principles*), involving positive prescriptions and typically encompassing principles such as "respect for human dignity" and "a quality life for everyone", is represented within two arguments concerning the doctor's action of committing euthanasia. One argument is worded in favor of the action and one argument is worded against the action. The pro argument reads "because the doctor had to act according to his conscience. The woman's condition justified an

exception to the moral obligation to preserve life.” The con argument reads “because the protection of life is everyone’s highest moral obligation. We have no clear moral criteria for distinguishing between mercy killing and murder.” If an individual has a principle/value from Kohlberg’s stage 6 moral reasoning such as “respect for human dignity” then s/he should accept both arguments to relatively the same degree even though they are opposing arguments. Stated differently, regardless of her or his opinion of the doctor’s actions, a high level of moral judgment competence would result in endorsing both arguments similarly (e.g., +3 and +4 “I strongly accept” rather than -4 “I strongly reject” and +3 “I strongly accept” for pro and con arguments, respectively).

The actual scoring of the MJT is rather unique compared to most questionnaires that involve simple sum scores. The MJT is scored by calculating a global index of moral development. MJT scoring results in a C-score (or C-index or C) defined as *moral judgment competence* which is derived by intraindividual variation in responding using MANOVA calculations. Hence, the moral judgment competence score reflects the ability to be consistent in the application of moral principles because it is a measure of that variance. The C-score can range from 1 to 100 and can be categorized as falling into one of six different areas: (1-9) very low, (10-19) low, (20-29) medium, (30-39) high, (40-49) very high and (above 50) extraordinarily high (Lind, in press). The mean C-score for each collected sample should be within the range of 10 and 40 (Lind, 2006).

To reiterate, the more inconsistent an individual is in the application of her or his moral principles’ (e.g., stage inconsistency), the lower that individual’s moral judgment competence score (Lind, 2005, in press; Lind & Wakenhut, 1985). *Figure 1* shows two fictitious participants’ data from rating one dilemma in order to display the patterns that

would result in a low C-score and a high C-score (from Lind, 2006). As can be seen, across rows (or within stages), when items are rated more similarly across pro and con arguments (i.e., principles from that stage are more consistently applied), a larger C-score results.

It is important to point out that the MJT does not rely on classical test theory with the typical psychometric property of internal reliability. Internal reliability does not apply to the MJT since variance in responses is the theoretical construct of interest rather than some property of the test to be minimized (Lind, 2005, in press; Lind & Wakenhut, 1985). *Figure 2* shows an example calculation of one fictitious participant's ratings on the MJT and the calculations behind the C-score. As can be seen, there are nine major steps in the MANOVA or the calculation of the C-score: (1) summation of arguments for each stage; (2) squaring the stage sums, (3) total sum; (4) summing step two; (5) sum of squares; (6) step three squared divided by 24; (7) step five minus step six; (8) step four divided by 4 minus step six; and (9) step 8 divided by step 7 times 100. This fictitious participant had a moral judgment competence score of 34.76 which would be categorized as high.

The C-score of the MJT is strictly a calculation of moral judgment competence and not a calculation of other types of participant response consistency or inconsistency. For instance, if a participant were to consistently rate all items on the test the same score this would not inflate her or his C-score. In fact, this would result in a very low C-score. At first glance, this statement would seem counterintuitive because by rating all items the same score, stage consistency is achieved. However, stage consistency is not the only factor to consider when examining MJT scores. Additionally, two theoretical facets of

Kohlberg's six stage model need to be taken into consideration: (1) stage order preference and (2) stage quasi-simplex structure. First, stage order preference involves the preference of moral reasoning in the order of stage number such that 6 is preferred over 5 and 5 is preferred over 4 and so on with 6 being the highest and 1 being the lowest. Second, stage quasi-simplex structure involves the correlation between neighboring stages such as stages 4 and 5 should have a higher degree of correlation than more distant stages such as 4 and 6. Both of these structures have consistently been found in research using Kohlberg's six stage model (Kohlberg, 1958; Lind, 2005, in press; Lind & Wakenhut, 1985; Rest, 1979; Walker, 1986). In other words, Kohlberg's six stage model is arranged in a hierarchy with stage 1 being the lowest stage of cognitive reasoning and stage 6 being the highest stage of cognitive reasoning. Hence, if these structures do not emerge, then the participant is not able to differentiate the quality of arguments in the hierarchy. The C-score does not involve weighting scores according to Kohlberg's stages in the MANOVA calculation; however, if a participant showed no or little differentiation or variation in responses across stages that would result in a lower C-score. For instance, if a participant rated all arguments as "+4", which would actually be highly consistent in regards to stage, this would result in a C-score of 0. A C-score of 0 would be due to the lack of variance in the MANOVA calculation or, theoretically, the participant's lack of cognitive ability to differentiation between the moral quality of arguments. Even C-scores that are not 0 but are relatively low have the same characteristics.

Besides judging the acceptability of arguments, it was also noted that participants initially rate their opinion of the action in the dilemma. This opinion rating is not used to calculate the C-score. In fact, moral judgment competence is defined as the ability to

judge the moral quality of arguments irrespective of personal opinion of the situation. Thus, moral competence is not a function of opinion agreement. It is the ability to judge the moral quality of arguments regardless of the particular stance an individual takes in the dilemma (Lind, 2005, in press; Lind & Wakenhut, 1985). In other words, the C-score measures the degree to which an individuals' judgments are determined by moral principles rather than by other psychological forces like the human tendency to make arguments agree with one's opinion or decision about a certain issue (Lind, 2005, 2006, in press; Lind & Wakenhut, 1985).

Even though C-score calculations are independent of opinion ratings, there are other indexes calculated from the MJT which take participant opinion under consideration such as the C+ index and the PC-Index. The C+ index is an adjusted version of the original C-score. Research has shown that even individuals with very high moral judgment competence scores tend to rate counter-arguments slightly lower than supportive arguments which would result in the inability to obtain the maximum C-score of 100 (Lind, 2006). The C+ index was developed to remedy this problem. However, the correlation between the C+ index and the original C-score is very high ($r > 0.95$) and, therefore, the adjusted index is rarely used (Lind, 2006). The PC-Index is a squared multiple correlation involving the relationship between pro and con ratings, factoring in participant opinion. This is also an optional index calculation which indicates if the participant is responding in the same manner to the pro and con items. However, the present study's main focus is moral judgment competence and, as such, only the C-score is calculated.

In summary, the Moral Judgment Test (MJT) is an innovative measure of moral

development. It has seen strong global popularity with multiple language translations and numerous cross-cultural validation studies (Lind, 2005, in press). The theoretical, structural, and scoring distinctions of the MJT cause the measure to be very appealing to moral development researchers. Hence, the present study will apply the MJT, with moral judgment competence as the major outcome variable, in the construction of a structural equation model of moral development. Prior to current model presentation, previous research using structural equation models in the realm of moral development will briefly be reviewed.

Previous Structural Equation Models of Moral Development

Past research has utilized the statistical techniques of structural equation modeling in order to explore moral development from a multi-construct perspective. Practical applications of structural equation modeling in the field of moral development has been seen in such areas as the medical field, with moral reasoning in medical residents (Sheehan et al., 1985), and the business world, with moral commitment in employee turnover rates (Jaros, Jermier, Koehler, & Sincich, 1993). An additional application in the field of marketing has been noted with a study that explored marketing ethical dilemmas, moral philosophies, and religiosity (Singhapakdi, Vitell, & Franke, 1999). However, there is no one universal structural equation model for moral development researchers. In fact, there are only a handful of moral development studies that have been conducted which utilize this statistical technique and many of the constructs that compose the models do not overlap.

For example, Matsueda (1989) used structural equation modeling to explore tenth-grade boys' minor deviance and moral beliefs (e.g., Question: "Is this a good thing for

people to do?"; Rate on 6-point Likert scale: "Not copying during a test even though others in the class are copying"). Over and above other relationships in the model, such as socioeconomic status, the results showed that moral beliefs had a strong inverse relationship with minor deviance. Compared to the use of the Moral Judgment Test (Lind, 2005, 2006, in press; Lind & Wakenhut, 1985) in the current study, Matsueda's three simple moral belief items, such as the one shown above, cannot be extrapolated as a measure of moral cognitive ability as can the C-score from the Moral Judgment Test. Thus, the novel use of the Moral Judgment Test within a structural equation model is a strength of the current study.

Another example using an adolescent sample is Benda's work (Benda, Musticchi-Hogg, & Benda, 2000; Benda, 2002) which uses structural equation modeling to explore violence and religion. Across both studies, Benda and colleagues found that, in general, religious expression was inversely related to violence. Similar to the present study, one of the theoretical orientations behind Benda and colleagues' structural equation model was social learning theory. What is unique about the present study is that the theoretical orientation of social learning/social cognition¹ is applied as well as that of cognitive structuralism such that the present structural equation model attempts to bridge the theoretical gap between the two orientations.

While some moral development researchers have focused on the period of adolescence, others have conducted research with a focus on the early portion of the

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The social learning/social cognition theoretical orientation actually developed out of the social learning theory tradition. The major distinction is the social learning/social cognition's new addition of cognition such that individuals learn from their environment not only through modeling and consequences but also from reflecting on their past, present, and future actions as well as the actions of others.

lifespan. For instance, Aksan and Kochanska (2005) explored a structural equation model in the context of toddler gaze (33 and 45 months) with moral emotions (guilt and empathic distress) and rule-compatible conduct (maternal prohibitions and another adults' rules). Aksan and Kochanska found support for their two factor model (what they termed "conscience in childhood") and also found that the structure was stable over time. Like Aksan and Kochanska, the current study explores the moral emotions of guilt and empathic distress. However, the assessment of these emotions are in the form of self-report questionnaires on college-aged participants.

King and Furrow (2004) tested a structural equation model with constructs such as religion (religious importance, attendance importance, and number of attendance), social interactions (parents and friends), social capital (access to actual and potential relationships/acquaintances such as within an institutionalized environment as school) and moral outcomes (empathic concern, perspective taking, and altruism) during adolescence (ages 13 to 19 years). King and Furrow found that religiously active youth had higher levels of social capital resources and social capital resources served as a mediation variable between religiousness and moral outcomes.

The present study is similar to King and Furrow's (2004) study in that both empathic concern and perspective taking are measured and they are measured by the same instrument, Davis' Interpersonal Reactivity Index (1983; see *Appendix D* as well as Chapter III: Methodology). Furthermore, the current study measures family functioning (health/competence, conflict, cohesion, leadership, and emotional expressiveness) which can at the very least be considered in a similar vein as that of family social interactions as measured by King and Furrow. Thus, other researchers have considered family

influences important in moral development. King and Furrow also measured the social interaction of friends, deeming their influences important in moral development. The current study measures the influence of friends in moral thought via White's Revised Moral Authority Scale (1997; see *Appendix C* as well as Chapter III: Methodology).

A major difference between the current study and King and Furrow's study (2004), as well as other studies that have explored religion, is a bias towards either Judeo-Christian ideals or the institution of organized religion or both in the measurement of religion. Not all religions involve the Westernized idea of organized, attended services as a indicator of one's religiousness (e.g., certain Native American tribes, certain sects of Buddhism, etc.). The current study sought to measure one's spiritual life rather than religiosity which is not rooted in a particular religion or tied to an organized institution. One's spiritual life is defined as an individual's personal relationship with a higher power and behaviors and thoughts associated with that relationship. Spiritual life is measured by Hatch, Burg, Naberhaus, and Hellmich's Spiritual Involvement and Beliefs Scale-Revised (1998; see *Appendix B* as well as Chapter III: Methodology). However, the influence of organized religion in moral development is also not discounted and is likely to be a strong influence in moral development. Hence, the present study also assessed the amount of moral ascription individuals give the influence of their church/religion, as measured by the White's Revised Moral Authority Scale (1997; see *Appendix C* as well as Chapter III: Methodology).

Lastly, Derryberry and Thoma (2005) used structural equation modeling to explore moral judgments, four types of self-concept, and three types of moral behaviors (honesty, altruism, and taking a stand for civil liberties) in college students. To explore

moral judgments, Rest's Defining Issues Test (DIT; Rest et al., 1999b) was used which is similar to Lind's Moral Judgment Test (MJT; Lind, 2005, 2006, in press; Lind & Wakenhut, 1985) because moral dilemmas are presented with some items corresponding to Kohlberg's six stages of moral reasoning. However, the DIT is theoretically and structurally distinct as well as scored differently from the MJT. Derryberry and Thoma found that the three forms of moral actions were conceptually distinct and differentially related to the variables of self-understanding and moral judgments.

The current study is similar to Derryberry and Thoma (2005) in that a measure of moral judgments is used where college students respond to moral dilemmas with items that have a relationship to Kohlberg's six stages of moral reasoning. Furthermore, Derryberry and Thoma also measured the moral action of "taking a stand for civil liberties" which can be considered in a similar vein as the current study assessing the amount of moral ascription individuals give the influences of "social equality" and "a greater good for society", as measured by White's Revised Moral Authority Scale (1997; see *Appendix C* as well as Chapter III: Methodology). A major difference between the current study and Derryberry and Thoma's study is the distinction between the MJT and the DIT. Generally, the MJT is considered an assessment of moral cognitive abilities rather than just moral attitudes, which is what the DIT is considered to measure (see Lind 2005, in press; Lind & Wakenhut, 1985 for a detailed discussion and Rest, 1997 for a rebuttal). Hence, the application of an instrument that assesses moral cognitive abilities draws distinction to the current study.

In conclusion, past researchers have sought to understand moral development by utilizing a multi-construct perspective, and structural equation modeling is currently the

best statistical method for this approach. Practical application of this research has been seen in the medical, business, and marketing fields. However, only a handful of these research studies have been conducted and models typically have few overlapping constructs. Thus, exploring moral development using this higher level statistical technique, as well as drawing from the constructs of past studies, are strengths of the current study. Keeping past research in mind, the current structural equation model will next be described.

Current Structural Equation Model of Moral Development

The current structural equation model is unique in several respects and will be explained in detail (refer to *Figure 3* for a visual representation of the constructs). First, two types of influences are explored in the prediction of moral judgment competence - developmental influences and emotional influences. Second, the current model can be mapped onto the lifespan such that as progression towards the prediction of the outcome variable of moral judgment competence occurs, the corresponding constructs occur at later points in the lifespan. Third, the model integrates two previously separated theoretical orientations, social learning/social cognition and cognitive structuralism, in an attempt to advance the field of moral development.

The present model predicting moral judgment competence can be divided into developmental and emotional influences. The three developmental influences (also called early building blocks of moral development) explored in the present model are (1) family functioning, (2) spiritual life, and (3) ascription to moral authority sources (e.g., friends, family). The inclusion of these three constructs in a model predicting moral development is supported by the previously reviewed research (e.g., Benda 2002 and

Benda, Mustcchi-Hogg, & Benda, 2002 for spiritual life as well as King & Furrow, 2004 for family functioning, spiritual life, and ascription to moral authority sources) as well as research that has shown links between prosocial behavior (i.e., moral behavior) and family, friends, and religious influences (e.g., see Eisenberg & Morris, 2004 for a review). The three emotional influences (also called moral emotions) explored in the present model are (1) empathy, (2) shame, and (3) guilt. The inclusion of these three constructs in a model predicting moral development is supported because the emotions of guilt, shame and empathy are cited by researchers as being the main emotions in moral development (for a review see Eisenberg, 2000).

The current model can also be mapped onto the lifespan such that as progression towards the outcome variable of moral judgment competence occurs, the corresponding constructs occur at later points in the lifespan. Not unlike their labels, the three early moral developmental building blocks are theorized to exert their influence in the early portion of the lifespan. It is from these foundational pieces that subsequent moral variables are predicted in the model. Next, out of these early moral developmental building blocks, it is theorized that moral emotions in young adulthood are fostered (this will be detailed in a moment). Lastly, all three moral emotions are theorized to predict the outcome variable of moral judgment competence (i.e., cognitive development), which is being fostered into young adulthood by indirect developmental influences and direct emotional influences.

The theoretical claim that early moral developmental building blocks foster the development of moral emotions may at first seem contrary to previous research. Emotional development is typically seen as something that takes place early in

development rather than later in development such as with the formation of temperament (Chess & Thomas, 1977; Thomas & Chess, 1991) and emotional regulation (Rothbart & Bates, 1998) in infancy. In fact, the formation of the specific moral emotions of guilt and empathy have been shown in early development (Aksan & Kochanska, 2005; reviewed earlier). Further evidence, such as infant reactive crying and mimicry, also suggests an early formation of empathy (see Eisenberg, Fabes, & Spinrad, 2006 for a review). The current model, however, assesses moral emotions in young adulthood. There is evidence to suggest discontinuity as well as some continuity across the lifespan between infancy to young adulthood in emotionality and emotional regulation (Block, 1993). The discontinuity in emotionality across the lifespan is likely attributed to outside environmental influences shaping emotional development. The current study hypothesizes that these intervening environmental influences which foster moral emotions are family functioning, spiritual life, and ascription to moral authority sources.

The final way the current model is unique is that it integrates two previously separated theoretical orientations, social learning/social cognition and cognitive structuralism, in an attempt to advance the field of moral development. The predictive links between the moral emotions and moral judgment competence are the theoretical bridge between social learning/social cognition and cognitive structuralism. The Moral Judgment Test (Lind, 2005, 2006, in press; Lind & Wakenhut, 1985), assessing moral judgment competence, is strongly aligned with cognitive structuralism due to the presentation of cognitive, rational dilemmas and the representation of Kohlberg's six stages of moral reasoning. The early building blocks of moral development and the moral emotions are strongly aligned with the social learning/social cognition orientation due to

the focus on emotionality, environmental context, and real-life experiences. Hence, these unique, predictive links between the moral emotions and moral judgment competence are the first attempt to bridge these distinct areas of thought.

The current theoretically integrative lifespan model of developmental and emotional influences predicting moral judgment competence is displayed in *Figure 3*. In typical structural equation model fashion, latent variables (or constructs) are displayed in ellipses with arrows between those ellipses which represents the structural model while boxes underneath each latent represent its measure (or indicators) which constitutes the measurement model. The predicted direction of effect for each parameter estimate is represented as either a “+” or “-” symbol. As can be seen in *Figure 3*, the three developmental influences are displayed on the far left - dysfunctional family life, spiritual life, and ascription to moral authority sources. Family functioning has been labeled as dysfunctional family life (which is the inability for a family to function properly) because dysfunctional families have been shown to differentially relate to the three moral emotions of interest in the present study. The double-headed curved arrows between the three developmental influence variables represent correlations among the latent variables.

Turning to the conceptual definition of each of the developmental influences, dysfunctional family life is defined as involving regular stereotyped relational patterns as well as consistent themes across family life which are negative and unhealthy. To understand unhealthy patterns, a major dimension of functional families is health and competence which involves themes such as happiness, optimism, problem-solving and negotiation skills, family love, minimal blaming, and autonomy. Dysfunctional families, on the other hand, more often exhibit the polar opposites of these themes such as sadness,

negativity, poor problem-solving and negotiation skills, inconsistent or absent love, blaming, and dependency. Other dimensions of functional family life include conflict, cohesion, leadership, and emotional expressiveness. Dysfunctional families tend to exhibit the negative patterns within these dimensions. For instance, in dysfunctional families the dimension of conflict involves themes of overt unresolved conflict, fighting, and arguing. Cohesion involves themes of dissatisfaction, lack of togetherness, and disconnection. Leadership involves themes of the absence of strong and consistent adult leadership in the family. Lastly, emotional expressiveness involves themes of little or no feelings of closeness, little or no physical and verbal expressions of positive feelings, and the unease in the expression of warmth and caring by family members (Beavers & Hampson, 1990).

Spiritual life is defined as an individual's personal relationship with a higher power and behaviors and thoughts associated with that relationship. Spiritual life in the current study is not associated with any particular religion in order to be accessible to every participant. In a similar vein, spiritual life is also not associated with an organized institution such that spiritual life becomes defined as how often one attends religious services rather than a personal relationship with a higher power. A main dimension of spiritual life is core spirituality. Core spirituality is characterized by a connection with a higher power/nature, ritual involvement, the ability to have faith, a sense of meaning, involvement in a community/talking with someone about faith, and spiritual experiences. Other dimensions of spiritual life include existential activities, personal application, and insight. Existential activities involve meditation, spiritual perspective, and reflecting on the meaning of life. Personal application involves the application of humility and

applying spirituality in day-to-day living. Insight involves the ability to accept things which cannot be changed (Hatch, Burg, Naberhaus, & Hellmich, 1998).

The last developmental influence, ascription to moral authority sources, is defined as the individual attributed level of influence to different sources of moral authority in moral decision making. In other words, ascription to moral authority sources is what persons and/or groups are having an impact on the individual's moral decision making. Sources of moral authority influence include (a) self-interest, (b) family, (c) teachers, friends, and the media, (d) society's welfare, (e) equality (f) religious/church institutions, and (g) governmental institutions² (White, 1997).

As shown in *Figure 3*, the three emotional influences are represented in the middle ellipses - empathy, shame, and guilt. Moral development researchers most often cite the moral emotions of empathy, shame, and guilt as being the main emotions in moral development (for a review see Eisenberg, 2000). Thus, empathy, shame, and guilt were deemed appropriate moral emotions to include in the current model. The moral emotion of empathy is defined as separate but related dispositional tendencies of perspective taking, empathic concern, personal distress, and fantasizing. Perspective taking involves the tendency to spontaneously adopt another's point of view. Empathic concern involves the tendency to experience feelings of compassion for unfortunate others. Personal distress involves the tendency to experience distress and discomfort in response to others in extreme distress. Fantasizing involves the tendency to imaginatively transpose oneself into fictional situations (Davis, 1983, 1996).

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The sources of religious/church and governmental institutions were added for the current study and were not a part of White's original scale. It was thought that these were salient sources of authority for moral development which needed to be represented.

The remaining two emotional influences of shame and guilt are highly similar yet are distinct, separate emotions. Conceptually, shame and guilt are often associated with the acquisition of moral principles and both have additional similarities such as negative valance and internal attributions (Tangeny & Dearing, 2002). However, guilt and shame have been shown to represent distinct concepts (e.g., Baldwin, Baldwin, & Ewald, 2006; Eisenberg, 2000; Tangeny & Dearing, 2002). Hence, the current model defines shame as a painful, negative, global evaluation of the self with associated feelings of worthlessness and powerlessness. A person who is shamed has the desire to hide, escape or strike back. Shame is typically more devastating and painful than guilt. Guilt, on the other hand, is defined as generally less painful than shame because guilt is associated with a specific behavior rather than the self-concept. Feeling of guilt, however, can be painful and accompanied with nagging preoccupations with the specific transgression causing wishes about how the transgression hadn't occurred. Associated feelings with guilt are tension, remorse, and regret, and a person who is experiencing guilt has the desire to confess, apologize, or repair (Tangeny & Dearing, 2002).

The last latent variable in *Figure 3*, located on the far right side of the model, is the outcome variable of moral judgment competence. Moral judgment competence, its meaning and measurement, has already been discussed at length (see *Measuring Moral Development Empirically: The Moral Judgment Test* of this section) and will not be detailed here. However, to reiterate, moral judgment competence is defined as the cognitive reasoning ability to be consistent in the application of moral principles across situations. A summary of all seven key constructs, their definitions, the instrument that measures them, and their indicators in the measurement model are presented in *Table 1*.

As can be seen in *Figure 3*, the measurement model is represented under each latent variable as a box containing single capital letters or numbers. Focusing first on the three developmental influences, the measurement model will be described. Underneath each of the developmental influence latent variables are abbreviations of the sub-scales from each questionnaire that were used to measure the abstract latent variables or concepts. Each one is called an indicator. The latent variable of dysfunctional family life has five indicators (H, F, C, L, and E) which correspond to the measurement sub-scales of the *Self-Report Family Inventory Version II* (HHealth/Competence, ConFlict, Cohesion, Leadership, and Expressiveness). Next, the latent variable of spiritual life has four indicators (C, E, H, and A) which correspond to the measurement sub-scales of the *Spiritual Involvement and Beliefs Scale-Revised* (Core Spirituality, Spiritual Perspective/Existential, Personal Application/Humility, and Acceptance/Insight). Lastly, the latent variable of ascription to moral authority sources has seven indicators (S, F, T, W, E, R, and G) which correspond to the measurement sub-scales of the *Revised Moral Authority Scale* (Self-Interest, Family, “Teachers, Friends, and the Media”, Society’s Welfare, Equality, Religious/Church Institutions, and Government Institutions).

Continuing with the measuring model, indicators are also shown for the three emotional influences (empathy, shame, and guilt) shown in the middle of the model and the outcome variable (moral judgment competence) shown on the far right of the model. The latent variable of empathy has four indicators (P, C, D, and F) which correspond to the measurement sub-scales of the *Interpersonal Reactivity Index* (Perspective Taking, Empathic Concern, Personal Distress, and Fantasy). Next, the latent variable of shame has eleven indicators (1 through 11) which correspond to the item numbers on the *Test of*

Self-Conscious Affect 3-Short Version. Similarly, the latent variable of guilt has eleven indicators as well (1 through 11) which correspond to the item numbers on the *Test of Self-Conscious Affect 3-Short Version*. Lastly, the latent variable of moral judgment competence has one indicator (C) which corresponds to the C-score on the *Moral Judgment Test*. Again, each of the seven constructs, the definitions of the constructs, the measures, and the indicators are summarized in *Table 1*.

As noted earlier, the double-headed curved arrows between the three developmental influence variables represent correlations between the latent variables. The three developmental influences or early building blocks of moral development are hypothesized to be intercorrelated due to the common context of the home environment during early childhood experiences. There has been no known empirical research to date on the relationships among these three specific variables. However, adults shamed in childhood as the result of dysfunctional families have been more likely to exhibit problems forming healthy relationships with others' as seen in therapeutic work (Middelton-Moz, 1990). Hence, it is hypothesized that the construct of dysfunctional family life will have a negative correlation with both spiritual life (i.e., the relationship with a higher power) and ascription to moral authority sources (i.e., the relationship to society, family, teachers, peers, etc.). In other words, individuals coming from dysfunctional families will have a maladaptive way of relating to the world. This ineffective interaction with the world is often expressed in therapy as "not receiving the manual for life" (Middelton-Moz, 1990). The constructs of spiritual life and ascription to moral authority sources are hypothesized to have a positive correlation because of the overlap in construct domains (i.e., a higher power is considered the ultimate moral

authority source).

Next, the developmental influence of dysfunctional family life is hypothesized to predict the moral emotions of empathy and shame as represented by the straight, single-headed arrows going into each predicted latent (see *Figure 3*). Specifically, it is predicted that higher amounts of reported dysfunctional family life will be predictive of lower amounts of reported empathy and higher amounts of reported shame. Of note, dysfunctional family life is not hypothesized to predict the moral emotion of guilt.

Research has shown that individuals from dysfunctional families are more likely to express shame, but not guilt, in adulthood (Pulakos, 1996). It has been suggested that dysfunctional families are far from society's ideal family life and; hence, more shame develops as a result of this discrepancy (Hadley, Holloway, & Mallinckrodt, 1993). Furthermore, parents from dysfunctional families express fewer emotions, reinforce emotions less, and inadequately respond to emotions (see meta-emotion structure theory in family communication, Gottman, Katz, & Hooven, 1997); therefore, it is hypothesized that empathy will be lower in individuals coming from these families since empathy requires understanding others' emotions and responding to them.

The next developmental influence variable in the structural model, spiritual life, predicts all three of the emotional influence variables of empathy, shame, and guilt. With regard to predicting empathy from spiritual life, research has shown a positive association between these two variables across several different groups of individuals such as members of the clergy, moral exemplars, college students, and the general population (i.e., individuals from none of the previously mentioned groups; Oliner, 2005). Other research has also found spiritual growth to be associated with increased empathy and

compassion for oneself and others (Noble, 2000). Thus, it was hypothesized that higher levels of reported spirituality will be predictive of higher levels of reported empathy.

Next, spiritual life is hypothesized to predict shame. The link between spirituality and shame can be seen in therapy techniques as well as research. For instance, Richards, Hardman, and Berrett (2007) describe a variety of spiritual interventions for individual, group, and family therapy with patients who have eating disorders with one of the results being a decrease in the feelings of shame and unworthiness in the patients. This inverse relationship between spirituality and shame is also seen in research. Research has shown that spirituality can serve as a buffer against shame in female childhood sexual abuse survivors (Valentine & Feinauer, 1993). Additionally, research has shown that the subgroup of women who significantly emotionally suffer after an abortion, experiencing shame and post-traumatic stress disorder (PTSD) symptoms, are able to decrease both their shame and PTSD symptoms with a spiritually based grief intervention group, with 80% citing spirituality played a strong to very strong role in the group (Layer, Roberts, Wild, & Walters, 2004). Research has also shown an association for young male criminals to have higher levels of shame while also experiencing spiritual impoverishment (Kipnis, 1999). Thus, it was hypothesized that higher levels of reported spirituality will be predictive of lower levels of reported shame.

Lastly, spiritual life is hypothesized to predict the third emotional influence variable of guilt. Research has found that individuals who identified themselves as spiritual also report substantial levels of guilt (Albertsen, O'Connor, & Berry, 2006). The link between spiritual life and guilt has been touted as a valuable means to produce social repair through confessions, apologies, and undoing harm to the offended (Bennett, 2005).

In fact, from a Judeo-Christian perspective, the concept of sin in spirituality is a direct reason for experiencing guilt (Delaney & CiClemente, 2005). Thus, it was hypothesized that higher amounts of reported spirituality will be predictive of higher levels of reported guilt.

Similar to the spiritual life variable, the last developmental influence variable in the structural model, ascription to moral authority sources, also predicts all three of the emotional influence variables of empathy, shame, and guilt. The ascription to moral authority sources variable includes several sources such as family, friends, the idea of equality, governmental institutions, and teachers. Looking first at the predictive link between ascription to moral authority sources and empathy, there has been no known research on this specific topic to date. However, the socialization influences of family and peers has been shown to be related to empathic responding in adolescence (e.g., Eisenberg & Morris, 2004; Krevans & Gibbs, 1996). These socialization influences can be viewed as authority sources in development and therefore predictive of empathy. Furthermore, other researchers have expanded possible connections to empathy by developing theoretical ideas based off of empirical investigations of empathy. For instance, Hoffman (2000), theorized that when there is a clash between caring for others and considering the abstract ideas of rights, duty, and reciprocity, empathy is evoked. This consideration for justice could be framed as the moral authority source of equality, as well as that of societal welfare and governmental institutions. Thus, it was hypothesized that higher ascription to moral authority sources will be predictive of higher levels of reported empathy.

Similar to the link between ascription to moral authority sources and empathy,

there has been no known research to date investigating the specific links between ascription to moral authority and the last two emotional influences - shame and guilt. However, some researchers have defined successful moral education by teachers as the ability to elicit shame and guilt (Maxwell & Reichenbach, 2005). Since teachers are considered a moral authority source, the predicted links in the current model to shame and guilt are tentatively supported. Based on limited knowledge, it is hypothesized that ascription to moral authority sources will be predictive of higher levels of reported shame and higher levels of reported guilt.

Finally, all three moral emotions - empathy, shame, and guilt - are hypothesized to predict moral judgment competence. Since moral emotions are involved in practical, real-world situations, it is hypothesized that these emotional qualities will play a predictive role in solving cognitive, rational moral dilemmas as well. Marc D. Hauser's body of research with moral transgressions, reviewed in his book *Moral Minds: How nature designed our universal sense of right and wrong*, suggests just such a link. "...at least some of our moral judgments - perhaps only those handling norms against harm and disgust - may emerge *from* our emotions" (Hauser, 2006, pp. 240, emphasis not added). Hauser's research with moral transgressions is similar in design to the Moral Judgment Test's (Lind, 2005, 2006, in press; Lind & Wakenhut, 1985) cognitive dilemmas. Hence, it was thought that the Moral Judgment Test would be able to replicate Hauser's findings because the dilemmas represented transgressions of the norms of harm (*The Worker's Dilemma*) and of harm and disgust (*The Doctor's Dilemma*). Furthermore, additional research has shown a positive correlation between specifically empathy and moral behavior as well as guilt and moral behavior (DeHaan & Hanford, 1997). Thus, the current model

hypothesized that higher reported levels of all three moral emotions - empathy, shame, and guilt - will be predictive of higher levels of moral judgment competence.

In conclusion, the current structural equation model explores two types of influences in the prediction of moral judgment competence - developmental and emotional. These influences can be mapped onto the lifespan such that the developmental influences relate to early development and the emotional influences relate to later development in young adulthood. Furthermore, the emotional influences directly predict moral judgment competence which conceptually bridges the theoretical areas of social learning/social cognition and cognitive structuralism. Influence of both theoretical orientations can be seen in the current model's emphasis on the early portion of the lifespan. Unique contributions of the social learning/social cognition orientation can be seen through the model's contextual focus in the developmental influence variables and the emergence of the emotional influence variables. On the other hand, unique contributions of the cognitive structuralism orientation can be seen through the measurement of moral judgment competence. Moral judgment competence is measured via the Moral Judgment Test (Lind, 2005, 2006, in press; Lind & Wakenhut, 1985) which has dimensions of Kohlberg's six stage model represented and rational, cognitive dilemmas presented.

CHAPTER III

METHODOLOGY

“You only know what you know by how you know it.” - Author

Participants

Two-hundred eighty-seven college students participated in the current study, some as volunteers and others in exchange for course credit. After listwise deletion of missing data, the sample size was reduced to two-hundred fifty-eight participants. Listwise deletion involves the removal of the entire participant from the analysis if any item on measures are omitted. Listwise deletion was chosen over other methods of dealing with missing data because listwise deletion maintains a uniform number of participants across constructs (as opposed to possibly having different sample sizes for each construct). Maintaining a uniform number of participants across constructs is statistically important when conducting structural equation modeling. Unequal sample sizes can cause issues with error estimations, creating the inability to properly test the theoretical model. Alternative methods include the imputation of values into the missing cases, such as the mean, which can result in the misrepresentation of findings in smaller sample sizes (i.e., causing it to be more likely to find a false significant result). The present study has a smaller sample size, relatively speaking compared to other structural equation model studies, and would thus be susceptible to this problem. Hence, the loss of 29 participants from the current sample was considered acceptable when evaluating the alternatives. Although missing data is not considered random, no pattern distinct from the present

sample's demographic composition was noted in the participants who were dropped from the analysis (i.e., in age, gender, ethnicity, religious affiliation, and year in school) .

In terms of demographics in the remaining two-hundred fifty-eight participants, one-hundred sixty-two were female and ninety-six were male (Age $M = 20.93$; Median = 20; Mode = 19; Range 17 to 38 years). All participants were classified as being in early adulthood (approximately 18 to 39 years of age; Santrock, 2006) with a majority just starting to emerge into early adulthood. Furthermore, there was a fairly even distribution with respect to undergraduate year in school (Freshman $N = 77$; Sophomore $N = 44$; Junior $N = 66$; Senior $N = 70$; Graduate $N = 1$). Unfortunately, there was little diversity in the sample in terms of ethnicity, with a majority of the sample identifying themselves as Caucasian ($N = 204$), with the next largest group being Native Americans ($N = 13$) followed by Bi- or Multi-racial individuals ($N = 11$), Hispanics ($N = 7$), Others (ethnicity not represented; $N = 7$), and Asian-Pacific Islanders ($N = 5$). Similarly, a majority of the sample reported being affiliated with a Christian religious denomination with the two largest groups being Baptist ($N = 62$) and Non-denominational ($N = 52$), with the next largest group being Catholic ($N = 29$), Methodist ($N = 29$), None ($N = 26$), and Other (e.g., multi-denominational, Church of Christ, Pentecostal, Lutheran, Buddhist; $N = 25$) followed by Agnostic ($N = 16$), Presbyterian ($N = 10$), Muslim ($N = 4$), Jewish ($N = 3$), Mormon ($N = 1$), and Native American ($N = 1$).

Measures

Self-Report Family Inventory Version II (SFI; Beavers & Hampson, 1990; see *Appendix A*). The SFI is a 36-item questionnaire that is an index of family dysfunction. Participants rate each descriptive statement on a 5-point Likert-type scale ranging from “1

- *Yes: Fits our family very well*" to "5 - *No: Does not fit our family*". The SFI has five scales: *Health/Competence* (range 19-95), *Conflict* (range 12-60), *Cohesion* (range 5-25), *Leadership* (range 3-15), and *Expressiveness* (range 5-25), with higher scores indicating higher dysfunction. Directions and items of the SFI for the present study have been retrospectively worded as done by previous researchers (Hadley, Holloway, & Mallinckrodt, 1993). The SFI has been reported to have adequate psychometric properties such as internal consistency for each scale ranging from .84 to .88 (Cronbach's alpha) and test-retest reliability correlations over a 1- to 3-month period ranging from .44 to .85. Additionally, no significant correlations were found between the SFI scales and social desirability as measured by the Marlowe-Crowne Social Desirability Scale (Beavers & Hampson, 1990). The Cronbach's alphas in the current sample for each subscale were as follows: *Health/Competence* (.93), *Conflict* (.90), *Cohesion* (.78), *Leadership* (.32), and *Expressiveness* (.86). With the exception of *Leadership*, these reliability estimates mirror those found in the past.

Spiritual Involvement and Beliefs Scale-Revised (SIBS-R; Hatch, Burg, Naberhaus, & Hellmich, 1998; see *Appendix B*). The SIBS-R is a 22-item self-report questionnaire measuring spiritual involvement and beliefs via four scales: *Core Spirituality* (range 16-112), *Spiritual Perspective/Existential* (range 5-35), *Personal Application/Humility* (range 2-14), and *Acceptance/Insight* (range 1-7). The *Core Spirituality* scale addresses participants' spiritual connection, sense of meaning, faith, ritual involvement and spiritual experiences. The *Spiritual Perspective/Existential* scale addresses participants' meditation and reflection on the meaning of life. The *Personal Application/Humility* scale addresses participants' humility and the application of

spiritual beliefs to everyday living. The *Acceptance/Insight* scale addresses participants' insight into the futility of focusing attention on things which cannot be changed. On the SIBS-R, participants rate items on a 7-point Likert-type scale ranging from "7 - *Strongly Agree*" to "1 - *Strongly Disagree*", except for the last item which ask participants' to rank how spiritual they consider themselves to be on a 7-point scale with "7" being the most spiritual. The SIBS-R has adequate psychometric properties with a .92 reliability coefficient and a .93 test-retest correlation (R. L. Hatch, personal communication, January 8, 2007). The Cronbach's alphas in the current sample for each sub-scale were as follows: *Core Spirituality* (.94), *Spiritual Perspective/Existential* (.64), and *Personal Application/Humility* (.24). A Cronbach's alpha cannot be calculated for the *Acceptance/Insight* sub-scale since it consists of one item. With the exception of *Personal Application/Humility*, these reliability estimates mirror those found in the past.

Revised Moral Authority Scale (MAS-R; White, 1997; see *Appendix C*). The MAS-R assesses the influence of different moral authorities (e.g., family, teachers) on moral decisions. The MAS-R poses six moral questions where participants respond either "Yes / No / Can't decide" to each question and write open ended justifications behind each choice. Participants then rate on a 10-point Likert-type scale ranging from "0 - *No Influence*" to "10 - *A Powerful Influence*" the amount of impact different sources have had on the current decision. The seven sources of moral influence or sources of moral authority are as follows: (a) self-interest, (b) family, (c) teachers, friends, and the media, (d) society's welfare, (e) equality, (f) religious/church institutions, and (g)

governmental institutions³. A total score is calculated for each moral authority source with higher scores indicating stronger influence. Moral authority source scales can range from 0-70. The MAS-R has been reported to have Cronbach alpha split-half reliabilities for each scale ranging from .75 to .93 and test-retest reliability correlations for each scale ranging from .95 to .98 over a 4-week period. The MAS-R has also been reported to have convergent validity with the Defining Issues Test and discriminant validity with the Visions of Morality Scale (White, 1997). The Cronbach's alphas in the current sample for each sub-scale were as follows: (a) self-interest = .82, (b) family = .90, (c) teachers, friends, and the media = .89, (d) society's welfare = .74, (e) equality = .80, (f) religious/church institutions = .95, and (g) governmental institutions = .88. These reliability estimates mirror those found in the past.

Interpersonal Reactivity Index (IRI; Davis, 1983, 1996; see *Appendix D*). The IRI is a 28-item questionnaire that takes a multidimensional approach to the measurement of empathy by assessing participants' dispositional tendencies in four facet areas:

perspective taking, empathic concern, personal distress, and fantasy. Perspective taking involves the tendency to spontaneously adopt another's point of view. *Empathic concern* involves the tendency to experience feelings of compassion for unfortunate others.

Personal distress involves the tendency to experience distress and discomfort in response to others in extreme distress. *Fantasy* involves the tendency to imaginatively transpose oneself into fictional situations (Davis, 1983, 1996). Participants rate these 4

³ As noted earlier, the sources of religious/church and governmental institutions were added for the current study and were not a part of White's original scale. It was thought that these were salient sources of authority for moral development which needed to be represented.

dispositional tendencies on a 5-point Likert-type scale ranging from “0 - *does not describe me well*” to “4 - *describes me very well*). Each area or scale ranges from 0 - 28 since each scale contains seven items, with higher scores indicating greater empathy. Adequate internal consistency of the IRI scales have been shown ranging from .70 to .78 along with adequate test-retest reliabilities ranging from .61 to .81 over a two-month period (Davis, 1980, cited in Davis, 1996). The Cronbach’s alphas in the current sample for each sub-scale were as follows: *perspective taking* (.80), *empathic concern* (.77), *personal distress* (.78), and *fantasy* (.82). These reliability estimates mirror those found in the past.

Test of Self-Conscious Affect 3 - Short Version (TOSCA 3; Tangney & Dearing, 2002; see *Appendix E*). The TOSCA 3 - Short Version is a 44-item questionnaire that differentiates the emotional dispositions of *shame* and *guilt*, allowing participants’ scores on one scale to be independent of the other. Furthermore, the scale is based in behavioral terms rather than abstract language. Beyond *shame* and *guilt*, the TOSCA 3 - Short Version also measures *externalization* and *detachment* which will not be detailed in the current study. The TOSCA 3 - Short Version presents 11 different negatively orientated behavioral scenarios. Participants must rate the likelihood of how they would act and feel in the given situation on a 5-point Likert-type scale ranging from “1 - *not likely*” to “5 - *very likely*”. Each option represents a scale (i.e., *shame*, *guilt*, *externalization*, and *detachment*). For example, the scenario may be “While playing around, you throw a ball and it hits your friend in the face” with possible rating options of “You would feel inadequate that you could not even throw a ball” and “You would apologize and make sure your friend feels better”. The TOSCA - 3 Short Version *shame* and *guilt* scales have

been reported to correlate .94 and .93, respectively with the longer version of the TOSCA- 3 *shame* and *guilt* scales. Adequate internal consistency reliabilities for the *shame* (.77-.88) and *guilt* (.70-.83) scales of the TOSCA-3 have been reported (Tangney & Dearing, 2002). The Cronbach's alphas in the current sample for each sub-scale were as follows: *shame* (.74) and *guilt* (.71) which mirror reliability estimates found in the past.

Moral Judgment Test (MJT; Lind, 2005, 2006, in press; Lind & Wakenhut, 1985; see *Appendix F*). The MJT measures competence in moral judgment development. The MJT has some characteristics of Kohlbergian moral development but is theoretically based on Lind's dual-aspect model (Lind, 2005, in press; Lind & Wakenhut, 1985). Kohlberg's definition of moral judgment competence was used in the development of the MJT which states that moral judgment competence is "the capacity to make decisions and judgments which are moral (i.e., based on internal principles) and to act in accordance with such judgments" (Kohlberg, 1964, p.425). On the MJT, participants are presented with a total of two moral dilemmas and must judge, one at a time, whether they agree or disagree with a character's behavior in the dilemma on a 7-point Likert-type scale ranging from "-3: *I strongly disagree*" to "+3: *I strongly agree*". Afterwards, twelve different arguments (six pro and six con) are presented and participants must rate on a 9-point Likert-type scale ranging from "-4: *I strongly reject*" to "+4: *I strongly accept*" how acceptable they find the presented arguments. The arguments correspond to Kohlberg's six stages of moral development, with two arguments presented per stage (one pro and one con).

Scoring of the MJT involves calculating a C-score (or C-index or C) which uses

similar calculations as to those used in MANOVA (for further details see the section *Measuring Moral Development Empirically: The Moral Judgment Test* in Chapter II). The C-score ranges from 0 to 100 and indicates the percentage of an individual's total response variation in their judgments of the moral quality of the given arguments. In other words, the C-score reflects consistency in moral judgments. The C-score can be categorized as falling into one of six different ranges: (1-9) very low, (10-19) low, (20-29) medium, (30-39) high, (40-49) very high and (above 50) extraordinarily high (Lind, in press). The mean C-score for each sample collected should be within the range of 10 and 40 (Lind, 2006). The MJT has numerous cross-cultural validation work with more than 30 foreign language versions. Typical reliability statistics (e.g., internal consistency) for the measure, however, do not exist since variability (or judgment consistency) is the theoretical construct of interest rather than an attribute of the test (Lind, 2006). Even so, the test-retest correlation of the MJT over a one-month period has been reported at .90 (Lerkiatbunkit, Utaipan, Laohawiriyanon, & Teo, 2006). The mean C-score for the current sample was 19.01 (median = 15.61; $SD = 15.25$) with the lowest C-score being 0.09 and the highest C-score being 76.53.

Procedure

Participants were tested in small groups (varying between 1 to 30 individuals) within quiet rooms. Participants were explained their rights and asked to sign an informed consent. Participants then completed a demographics form (see *Appendix G*) followed by a randomized presentation of all six questionnaires. Upon completion of the questionnaires, participants were debriefed and thanked for their participation. Experimental sessions typically took no more than one hour.

CHAPTER IV

FINDINGS

“All truths are easy to understand once they are discovered; the point is to discover them.” -Galileo Galilei

Descriptive statistics for indicators in the measurement portion of the model are presented in *Table 2*. As can be seen, the sub-scales with the highest means for each latent variable were Cohesion ($M = 2.61$; $SD = .74$; *Dysfunctional Family Life*), Spiritual Perspective/Existential ($M = 5.59$; $SD = .81$; *Spiritual Life*), Equality ($M = 8.80$; $SD = 1.46$; *Ascription to Moral Authority Sources*), and Empathic Concern ($M = 2.98$; $SD = .59$; *Empathy*). The constructs of *Shame* and *Guilt* were based on individual items rather than average sub-scale calculations. In other words, the *Shame* and *Guilt* indicators were comprised of individual questionnaire items while the indicators of *Dysfunctional Family Life*, *Spiritual Life*, *Ascription to Moral Authority Source*, and *Empathy* were comprised of questionnaire sub-scales (i.e., the average of a select number of questionnaire items). The item with the highest mean for the shame scale was item 1 ($M = 3.98$; $SD = 1.11$): “You make plans to meet a friend for lunch. At 5 o’clock, you realize you stood your friend up. You would think: I’m inconsiderate”. The highest mean for the guilt scale was from item 5 ($M = 4.80$; $SD = .51$): “While playing around, you throw a ball and it hits your friend in the face. You would apologize and make sure your friend feels better”. The average C-score was 19.01 ($SD = 15.25$) with an observed range of 0.09 to 76.53.

Moving beyond basic descriptive statistics, the present study proposed a theoretical network of relationships between a variety of developmental, emotional, and cognitive variables (see *Figure 3*). Due to the nature of this theoretical flow system, the most appropriate method of analyses is Structural Equation Modeling (SEM). SEM is a hybrid of statistical techniques involving Confirmatory Factor Analysis (CFA), Path Analysis (PA), and Multiple Regression (MR). SEM involves the simultaneous estimating of two models - a measurement model and a structural model. The measurement portions of the model relate observed scores (i.e., item scores and sub-scale scores) to the latent variables using CFA. The structural portions of the model relate the latent variables to one another using PA. Finally, SEM is like multiple regression in its ability to test numerous predicted relationships resulting in a fully multivariate approach to model testing. Another unique benefit of SEM is its ability to account for measurement error in the various estimates of the model. Further benefits of SEM are described by Rigdon (1998).

One disadvantage of SEM is the requirement of large sample sizes. Generally, five cases per estimated parameter are recommend for power purposes (Rigdon, 1998). There were ninety-nine estimated parameters in the current model which, according to Rigdon, would require four-hundred ninety-five participants. The chi-square goodness-of-fit statistic that is routinely used to test the significance of SEM models, however, is notoriously sensitive to sample size. Specifically, with large samples the test will almost always be statistically significant, which would indicate poor model fit for the observed

data. Perhaps ironically, a statistically significant chi-square also indicates sufficient statistical power to detect population effects in the data. The relationship between power and sample size in SEM is obviously complex, as reviewed by Diamantopoulos and Siguaw (2006, pp.94). The sample size for the present analysis was 258 participants and the chi-square goodness-of-fit statistic for the SEM model was statistically significant ($p < .001$). Consequently, although the recommended sample size ($n = 495$) was not obtained, the sample was considered sufficient for detecting meaningful effects in the structural parameters in the model.

Another disadvantage of SEM is that a researcher's data can never confirm a theoretical model. As mentioned previously, SEM tests the fit of the collected data's covariance matrix to that of the matrix implied by the theoretical model. While fit indices can indicate magnitude of fit and significance levels (both having research value), strict confirmation of a particular model in SEM can never result. This disadvantage, however, is also seen in other behavioral science statistics. For further disadvantages of SEM, see Rigdon (1998).

SEM statistical analyses were initially conducted using LISREL software. Three unique methods for covariance matrix analysis using LISREL were attempted: PRELIS syntax generation of a SPSS FORTRAN data file, PRELIS syntax generation of a SPSS free-format text output file, and direct input of the covariance matrix into LISREL syntax. Each method resulted in the software reading some data entry points correctly and others

incorrectly. After numerous failed attempts to generate and analyze the proper covariance matrix, a more parsimonious set of analyses was chosen to test the model.

The new set of analyses involved a three-step process. First, an image factor analysis was conducted for each latent variable or portion of the SEM measurement model (dysfunctional family life, spiritual life, ascription to moral authority, empathy, shame, and guilt). An image analysis was not conducted for moral judgment competence since it had only one indicator. The observed scale or sub-scale scores were factored, and only one image factor was extracted. Determinate factor scores (see Grice, 2001) were then computed for each latent variable. These factor scores represented each participant's relative standing on each of the latent variables. Second, regression analyses were conducted on the factor scores to test the individual structural parameters in the model. In other words, path analyses were conducted on the latent variable scores to estimate the structural parameters. Third, the 7 X 7 covariance matrix of the 6 factor scores and the C-score were entered into LISREL to generate statistics of overall model fit.

Table 3 presents the summary of the image factor analyses with the percentage of variance explained by each extracted factor as well as the loadings for each indicator. By constraining each analysis to one factor, as hypothesized by a single latent variable, the largest variance explained by the extracted factors was observed for *Dysfunctional Family Life*, 62.03%. This is a relatively large amount of explained variance in the construct *Dysfunctional Family Life*. The next highest value was observed for *Ascription to Moral*

Authority Sources at 26.85%. Overall, the magnitudes of the loadings were relatively large (most above .30) which supports the one-factor model for each latent variable.

The correlations between the six factor scores from the image analyses and the C-score in the measurement model are presented in *Table 4*. As can be seen, many of these bi-variate correlations were statistically significant and consistent with the predictions shown in the model (see *Figure 4*). Specifically, *Dysfunctional Family Life* was negatively related to *Spiritual Life* and *Ascription to Moral Authority Sources*; and *Spiritual Life* and *Ascription to Moral Authority Sources* were positively correlated.

To explore possible gender differences on the seven constructs, independent samples t-tests were conducted on the six factors scores and the C-score. Factor scores are similar to z-scores in that they typically range from -2 to +2 and have a mean of zero. Four of the seven t-tests indicated significant gender differences (all p 's $\leq .01$). Specifically, females reported significantly higher levels of all three moral emotions (*Empathy* $\bar{x}_{Females} = .07, SD = .50$ vs. $\bar{x}_{Males} = -.12, SD = .54$; *Guilt* $\bar{x}_{Females} = .16, SD = .65$ vs. $\bar{x}_{Males} = -.27, SD = .82$; *Shame* $\bar{x}_{Females} = .16, SD = .81$ vs. $\bar{x}_{Males} = -.27, SD = .64$). Furthermore, females reported significantly higher *Ascription to Moral Authority Sources* than males ($\bar{x}_{Females} = .10, SD = .73$ vs. $\bar{x}_{Males} = -.17, SD = .92$). It is important to note that the current study had 63% females and only 37% males ($N = 162$ and $N = 96$, respectively).

The path analysis (i.e., multiple regression) results for the structural parameters of the model, which represent the central predictions of this study, are presented in *Table 5* and *Figure 4*. Results indicated that three of the four regression models were highly significant. The regression model predicting *Moral Judgment Competence* was non-significant. *Spiritual Life* ($\beta = .34, p < .001$) and *Ascription to Moral Authority Sources* ($\beta = .22, p < .001$) were strong predictors of *Empathy*, while the estimated parameter for *Dysfunctional Family Life* was not statistically significant ($\beta = .06, p = .29$). For *Shame*, all three building blocks of moral development (*Dysfunctional Family Life*, *Spiritual Life*, *Ascription to Moral Authority Sources*) were strong predictors (see *Table 5* and *Figure 4*) with standardized regression weights in excess of .18 in absolute value (all p 's $\leq .01$). Similarly, *Spiritual Life* and *Ascription to Moral Authority Sources* were also strong predictors of *Guilt* ($\beta = .26, p < .001$; $\beta = .24, p < .001$, respectively; see *Table 5* and *Figure 4*).

Despite these many positive findings regarding the specific structural parameters, the current model, overall, did not fit the data well as revealed by a significant minimum fit function chi-square, $X^2 (N = 258, 7) = 88.98, p < .001$. As noted above, a non-significant chi-square would indicate high agreement between the model and the observed data. The comparative fit index, or CFI, was .65 which indicated some positive structure to the model but still fell well below the recommended values of .90 or .95. A CFI of 1.0 would indicate perfect fit. Lastly, the root mean square error of approximation, or

RMSEA, also indicated poor fit. The observed RMSEA was .23, and values below .05 (0 indicating perfect fit), are considered to indicate adequate model fit.

CHAPTER V

CONCLUSION

“After climbing a great hill, one only finds that there are many more hills to climb.”

- Nelson Mandela

The purpose of the present study was to better understand the foundation and development of human morality. In the opening story, how did Karol know stealing the baseball cards was wrong and why did he return the cards to the store? Karol experienced a spiritual connection with God, seeing this as a personal relationship and a source of moral authority. It is possible Karol’s family environment was also a source of moral foundation for how he experienced his baseball card heist. Furthermore, Karol experienced the emotions of guilt and shame in association with his actions. Although not directly depicted, Karol may have felt empathy for the store owner since stealing the baseball cards might cause her or him unjust suffering. Karol’s story of morality involves a complex interaction of past experiences, emotions, present thoughts, and behaviors. Attaining understanding of this complex interaction will only be reached from a multi-construct research perspective of morality. While philosophers have debated about the state of the human moral condition for centuries, the present study sought to empirically gain knowledge about human morality utilizing the multi-construct statistical approach of structural equation modeling.

Although Karol’s story is set in late childhood, the current structural equation model was theoretically hypothesized to map onto the lifespan with foundational

constructs occurring in early life and predicted constructs occurring in young adulthood. In other words, the foundational constructs or building blocks of moral development (family functioning, spiritual life, and ascription to moral authority sources) were hypothesized to occur in early development and then were hypothesized to predict the moral emotions (empathy, shame, and guilt) in young adulthood. It was not thought that there was an absence of these emotions prior to young adulthood; rather, it was hypothesized that the building blocks of moral development would foster the moral emotions into young adulthood. Furthermore, it was hypothesized that these moral emotions would predict moral judgment competence or moral cognitive reasoning ability into young adulthood.

In order to truly test this sequential lifespan model, a developmental research design (e.g., longitudinal, cross-sectional, etc.) would need to be implemented with data collection points at the early portion of the lifespan as well as in adulthood. In the absence of such a design, a direct test of this theory is not possible. This is the case in the current study because only young adulthood was sampled. However, the casual implications implied in structural equation modeling allow insight into possible developmental trends. In other words, the statistical ability to predict one variable from another is a possible time series or cause-and-effect relationship. Hence, the statistical analyses used in the present study offers insight into these theorized lifespan variables. Future research efforts will involve the selection of current variables which have promising relationships but explore these variables in the context of a developmental design.

Turning to the results of the present study, the current structural equation model was found to be an overall poor fit for the observed data; however, there were some promising relationships among the variables. The results can be broken down into the measurement model and structural model. The measurement model fit well in terms of loadings and the structural model showed promising relationships among constructs. Specifically for the measurement model, a majority of the loadings were salient (.30 or above) which indicated a good fit (see *Table 3*). The few indicators which did not load well were the acceptance/insight ($b = .16$) and personal distress ($b = .05$) sub-scales for the *Spiritual Life* and *Empathy* constructs, respectively as well as items 4 ($b = .01$) and 3 ($b = .23$) of the *Shame* and *Guilt* constructs, respectively. For the structural model, fourteen different directional hypotheses were made which corresponded to the parameter estimate symbols “+” and “-” in *Figure 3*. Ten out of the fourteen directional hypotheses were supported, showing promise between these constructs. The four hypotheses not supported were *Dysfunctional Family Life* predicting *Empathy* and the three moral emotions (*Empathy*, *Shame*, and *Guilt*) predicting *Moral Judgment Competence*.

It is unclear why *Dysfunctional Family Life* was unproductive of *Empathy*. Perhaps empathy is something that cannot be negatively impacted by a maladaptive home environment. No significant correlation between *Dysfunctional Family Life* and *Empathy* was noted as well ($r = -.05, p = .38$; see *Table 4*). In other words, empathy may be fostered into young adulthood independently of familial functioning (i.e., possibly fostered on the playground or school setting). Further research is needed to explore this interesting finding.

The directional hypotheses between the three moral emotions and *Moral Judgment Competence* were also not significant. There are at least three possible explanations for non-significance. First, these hypotheses attempted to bridge the two theoretical areas of social learning/social cognition and cognitive structuralism. The non-significant parameters may represent the difficulty of bridging two distinct research areas. It is possible that these two theoretical approaches are diametrically opposed, emotion vs. cognition, and never the twain shall meet. Social learning/social cognition primarily focuses on contextual factors and emotionality while cognitive structuralism primarily focuses on mental phenomena and internal cognitive processing. Moreover, in research practice, the cognitive structuralism orientation is more focused on artificial vignettes while the social learning/social cognition orientation is more focused on real-life situations. It is probable that these research assessment practices are so different that comparison in a multi-construct fashion, such as structural equation modeling, is untenable. The artificial nature of vignettes and their lack of relation to real-life situations is likely one reason for the shift in the moral development field from the cognitive structuralism orientation to the social learning/social cognition orientation. It would seem that future multi-construct research efforts may best be served by exploring morality under a social learning/social cognition framework.

Second, the moral emotions may not have significantly predicted *Moral Judgment Competence* due to the measure of *Moral Judgement Competence*. The Moral Judgment Test (MJT; Lind, 2005, 2006, in press; Lind & Wakenhut, 1985) was used to measure *Moral Judgement Competence*. The Moral Judgment Test conceptually measures variance. As a result, the observed standard errors were fairly large which, in turn, makes

finding significant parameter estimates hard (*Empathy* $\beta = -0.02$, $se = 2.07$; *Shame* $\beta = 0.05$, $se = 1.31$; *Guilt* $\beta = 0.07$, $se = 1.47$; see *Table 5*). Even though the Moral Judgment Test produced fairly large standard errors, a large effect size would be able to counter act this property of the test. However, none were noted. In fact, the effect sizes were extremely small (all standardized betas $< .07$ in absolute magnitude; see *Table 5* and *Figure 4*).

Another potential problem with the Moral Judgment Test, in relation to the current model, is that no known predictive or correlational relationships have been explored between contextual / emotional constructs and scores on the Moral Judgment Test. Due to the lack of known relationships with real-life variables, the Moral Judgment Test does not appear to be the proper outcome variable for the current structural equation model. However, the three alternative instruments available for measuring Moral Judgment Competence are also problematic due to their theoretical foundations in cognitive structuralism (see Lind, 2004 for a review). A better outcome variable for the current structural equation model might be a variable aligned with the social learning/social cognition orientation. Specifically, a measure of aggression or antisocial behavior, with the inclusion of a cognitive reasoning ability aspect, might be better suited for the current model. By altering the outcome variable to a measure of aggression or antisocial behavior, the possible integration between the theoretical orientations of cognitive structuralism and social learning/social cognition would be lost. However, the building of a bridge between these two theoretical orientations may not be needed. By retaining a cognitive aspect within the outcome variable, the complexity of human

behavior is retained and the possibility for great advances can be seen. Future research efforts will be towards this aim.

Third, the moral emotions were unproductive of *Moral Judgment Competence* possibly because the moral emotions were the wrong constructs for the prediction or there may need to be intervening variables represented between the moral emotions and *Moral Judgment Competence*. In other words, the proposed structure of variables in the current model may be theoretically incorrect. One could argue that the developmental building blocks should directly predict *Moral Judgment Competence* rather than going through the moral emotions. However, the results of the present study indicated that the developmental building blocks had no significant correlations with *Moral Judgment Competence* (*Dysfunctional Family Life* $r = .04, p = .51$; *Spiritual Life* $r = .03, p = .63$; *Ascription to Moral Authority Sources* $r = < .01, p = .97$; see Table 4). The present study cannot account for possible missing variable(s) between the moral emotions and *Moral Judgment Competence*. However, given the preceding argument for the preference of the social learning/social cognition orientation and the promising relationships seen among the rest of the variables, the current model may be best modified by changing the outcome variable.

Three limitations in the present study can be noted. First, there was an uneven distribution between female and male participants. Approximately three-fifths the present study's participants were female ($N = 162$ female and $N = 96$ male). This uneven distribution is not unusual given the psychology courses and activities sampled.

Significant gender differences were found on four of the seven constructs such that females reported higher levels of all three moral emotions (*Empathy, Shame, and Guilt*) and higher *Ascription to Moral Authority Sources*. Hence, the present results need to be interpreted with this limitation. Future research efforts will aim for an even distribution of females and males and also explore gender specific moral development models.

Second, the current model theorized lifespan influences and utilized statistical modeling techniques to imply their development. However, only a developmental research design (e.g., longitudinal, cross-sectional, etc.) would provide a true test of sequential lifespan change. Similarly, the current model was referred to as a model of moral development based on the incorporation of a self-report moral development measure. This was to ensure consistency with the current literature base. However, it is important to note that measurement is no substitute for research design. Future efforts will therefore incorporate both longitudinal and cross-sectional designs as true indicators of moral development.

Third, the present study employed only self-report questionnaires within the design. Self-report instruments have well-known limitations compared to other methods of data collection such as video coding, interview, and physiological recordings. Some possible limitations include participants feigning different psychological states (knowingly or unknowingly), misreading or misinterpreting questionnaire items and directions, and omitting or confusing item numbers. In the present study, self-report questionnaires were utilized to provided a secure and private environment, helping participants feel more comfortable about revealing sensitive information on topics like euthanasia. Furthermore, questionnaires allowed for smaller set-up costs and fewer

restrictions on the testing environment as compared to other forms of data collection such as video coding and physiological recordings. Thus, the current study's use of self-report questionnaires has both positive and negative aspects. Future research will incorporate a multimethod approach to the study of developmental morality (see Morris, Robinson, & Eisenberg, 2006).

There are two noteworthy strengths of the present study. First, the statistical technique of structural equation modeling has the ability to account for complex relationships such as those involved in moral development. Infrequent use of this statistical technique may be partially due to the inability of some computer programs to properly analyze complex models. However, the present study presents a three-step process which simplifies the covariance matrix, creating a more parsimonious set of analyses (see Chapter IV). This new set of structural equation modeling procedures could be used in future research, allowing more researchers to explore morality from a multi-construct perspective. The present study represents a pioneering effort to shape the field of moral development towards the use of a multi-construct perspective.

Second, the current model represents the first known attempt to combine moral developmental building blocks, moral emotions, and moral judgment competence. Furthermore, the current model also represents a novel theory of lifespan development mapped onto a structural equation model. Future research will build on the significant relationships from the current model.

In conclusion, it is hoped that the current model will advance the field of moral development by (1) contributing a novel theory of lifespan development, (2) providing a structural equation framework of developmental and emotional variables for future multi-

construct research, (3) presenting knowledge about presently unexplored relationships such as ascription to moral authority sources and moral emotions, and (4) stimulating further theories which interrelate the lifespan and structural equation modeling techniques.

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Table 1
Seven Key Constructs, Definitions of Constructs, Measures, and Indicators

DEVELOPMENTAL INFLUENCES

I. Dysfunctional Family Life

- ▶ Dysfunction family life is defined as regular stereotyped relational patterns and consistent emerging themes across family life which are negative and unhealthy.
- A. *Self-Report Family Inventory Version II* (see *Appendix A*).
 - The measure has 5 scales: Health/Competence (poor problem solving, sadness, negativity), Conflict (fighting, arguing, overt unresolved conflict), Cohesion (disconnection, lack of togetherness, lack of satisfaction), Leadership (lack of strong, consistent adult leadership), and Expressiveness (little or no feelings of closeness, little or no physical and verbal expression of positive feelings, unease in expression of warmth and caring).

II. Spiritual Life

- ▶ Spiritual life is defined as an individual's personal relationship with a higher power and behaviors and thoughts associated with that relationship. Spiritual life is not rooted in any particular religion nor tied to any organized institution.
- B. *Spiritual Involvement and Beliefs Scale-Revised* (see *Appendix B*).
 - The measure has 4 scales: Core Spirituality (belief in a higher power, nature connection, ritual involvement, spiritual experiences, a sense of meaning, ability to have faith, involvement in a spiritual community), Spiritual Perspective/Existential (mediation, spiritual perspective, reflecting on the meaning of life), Personal Application/Humility (application of humility and applying spirituality in day-to-day living), and Acceptance/Insight (the ability to accept things which cannot be changed).

III. Ascription to Moral Authority Sources

- ▶ Ascription to moral authority sources is defined as the individual attributed level of influence to different sources of moral authority in moral decision making. In other words, ascription to moral authority sources is what persons and/or groups are having an impact on the individual's moral decision making.
- C. *Revised Moral Authority Scale* (see *Appendix C*).
 - The measure has 7 scales: (a) Self-Interest, (b) Family, (c) Teachers, Friends, and the Media, (d) Society's Welfare, (e) Equality, (f) Religious/Church Institutions, and (g) Governmental Institutions.

EMOTIONAL INFLUENCES

IV. Empathy

- ▶ Empathy is defined as a multidimensional emotion (i.e., dispositional tendencies) involving understanding other's point of views, experiencing compassion and distress for others, and having the ability to transpose into fictitious situations.
- D. *Interpersonal Reactivity Index*
 - The measure has 4 scales: Perspective Taking (tendency to spontaneously adopt another's point of view), Empathic Concern (tendency to experience feelings of compassion for unfortunate others), Personal Distress (tendency to experience distress and discomfort in response to others in extreme distress), and Fantasizing (tendency to imaginatively transpose oneself into fictional

Table 1 (cont.)

situations). A multidimensional approach to the measurement of the emotion empathy by assessing dispositional tendencies in 4 facet areas: Perspective Taking, Empathic Concern, Personal Distress, and Fantasy (see *Appendix D*).

V. **Shame**

- ▶ Shame is defined as a painful, negative global evaluation of the self with associated feelings of worthlessness and powerlessness. Shame motivates concealment, escape, or striking back. Shame is typically more devastating and painful than guilt.

E. *Test of Self-Conscious Affect 3-Short Version* (see *Appendix E*).

- A questionnaire that differentiates the emotional dispositions of shame and guilt with shame being more focused on negative self-evaluations. The shame scale has eleven items.

VI. **Guilt**

- ▶ Guilt is defined as generally less painful than shame because guilt is associated with a specific behavior rather than the self-concept. Feelings of guilt, however, can be painful and accompanied with nagging preoccupations with the specific transgression causing wishes about how the transgression hadn't occurred. Associated feelings with guilt are tension, remorse, and regret. Guilt motivates confession, apologies, and attempts to undo the harm done.

F. *Test of Self-Conscious Affect 3-Short Version* (see *Appendix E*).

- A questionnaire that differentiates the emotional dispositions of shame and guilt with guilt being more focused on the negative action rather than on the self. The guilt scale has eleven items.

OUTCOME

VII. **Moral Judgment Competence**

- ▶ Moral Judgment Competence is defined as the cognitive reasoning ability to be consistent in the application of moral principles across situations.

G. *Moral Judgment Test* (see *Appendix F*).

- An instrument that measures moral judgment competence which is making decisions in accordance with internal principles. The Moral Judgment Test has some characteristics of Kohlbergian stage moral development but is theoretically based on Lind's dual-aspect model. Scoring involves analyzing inter-item variance within participant and deriving a C-score from MANOVA formulas

Note. Constructs appear after Roman numerals, definitions of constructs appear after the “▶” symbols, measures appear after capital letters, and indicators appear after the “•” symbols.

Table 2
Descriptive Statistics for Indicators in Measurement Model

Indicators	<i>M</i>	<i>SD</i>	<i>Median</i>	<i>Possible Range</i>	<i>Observed Min</i>	<i>Observed Max</i>
<i>Dysfunctional Family Life</i>						
Health/Competence	2.18	.71	2.05	1-5	1.11	4.95
Conflict	2.00	.77	1.83	1-5	1.00	4.75
Cohesion	2.61	.74	2.60	1-5	1.20	5.00
Leadership	2.12	.73	2.00	1-5	1.00	5.00
Expressiveness	2.00	.88	1.80	1-5	1.00	4.80
<i>Spiritual Life</i>						
Core Spirituality	5.02	1.30	5.31	1-7	1.63	6.88
Spiritual Perspective/ Existential	5.59	.81	5.60	1-7	3.00	7.00
Personal Application/ Humility	5.30	1.03	5.50	1-7	2.50	7.00
Acceptance/Insight	4.66	1.45	5.00	1-7	1.00	7.00
<i>Ascription to Moral Authority Sources</i>						
Self-Interest	6.52	1.88	6.71	0-10	0.00	10.00
Family	6.07	2.17	6.21	0-10	0.00	10.00
Teachers, Friends, and the Media	5.05	1.87	5.29	0-10	0.00	9.14
Society's Welfare	7.26	1.46	7.43	0-10	2.14	10.00
Equality	8.08	1.46	8.14	0-10	1.00	10.00
Religious/Church	5.35	3.01	5.86	0-10	0.00	10.00
Government	5.08	2.04	5.14	0-10	0.00	10.00
<i>Empathy</i>						
Perspective Taking	2.61	.67	2.57	0-4	0.43	4.00

Table 2 (cont.)

Empathic Concern	2.98	.59	3.00	0-4	0.71	4.00
Personal Distress	1.59	.70	1.57	0-4	0.00	3.29
Fantasy	2.52	.81	2.57	0-4	0.43	4.00
<i>Shame</i>						
Item 1	3.98	1.11	4.00	1-5	1.00	5.00
Item 2	1.41	.71	1.00	1-5	1.00	5.00
Item 3	3.55	1.21	4.00	1-5	1.00	5.00
Item 4	1.83	.96	2.00	1-5	1.00	5.00
Item 5	1.94	1.15	2.00	1-5	1.00	5.00
Item 6	2.74	1.39	3.00	1-5	1.00	5.00
Item 7	3.16	1.30	3.00	1-5	1.00	5.00
Item 8	2.60	1.23	2.00	1-5	1.00	5.00
Item 9	3.42	1.22	4.00	1-5	1.00	5.00
Item 10	3.36	1.19	4.00	1-5	1.00	5.00
Item 11	2.99	1.39	3.00	1-5	1.00	5.00
<i>Guilt</i>						
Item 1	4.64	.61	5.00	1-5	2.00	5.00
Item 2	3.90	1.23	4.00	1-5	1.00	5.00
Item 3	3.21	1.19	3.00	1-5	1.00	5.00
Item 4	4.31	.85	4.50	1-5	1.00	5.00
Item 5	4.80	.51	5.00	1-5	1.00	5.00
Item 6	3.69	1.30	4.00	1-5	1.00	5.00
Item 7	4.51	.71	5.00	1-5	1.00	5.00
Item 8	3.74	1.14	4.00	1-5	1.00	5.00
Item 9	4.19	.87	4.00	1-5	1.00	5.00
Item 10	4.21	.89	4.00	1-5	1.00	5.00
Item 11	4.44	.85	5.00	1-5	1.00	5.00

Table 2 (cont.)

Moral Judgment Competence

C-score	19.01	15.25	15.62	0-100	0.09	76.53
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Note. Dysfunctional Family Life, Spiritual Life, Ascription to Moral Authority Sources, and Empathy are all based on average sub-scale calculations while Shame and Guilt are based on the individual items. Moral Judgment Competence is based on a C-score calculation.

Table 3

Summary of Image Factor Analysis with Percentage of Variance Explained By Each Extracted Factor and Loadings for Each Indicator

Constructs	Loadings	% of Variance Explained
<i>Dysfunctional Family Life</i>		62.03
Health/Competence	.95	
Conflict	.87	
Cohesion	.81	
Leadership	.37	
Expressiveness	.81	
<i>Spiritual Life</i>		9.63
Core Spirituality	.29	
Spiritual Perspective/Existential	.43	
Personal Application/Humility	.31	
Acceptance/Insight	.16	
<i>Ascription to Moral Authority Sources</i>		26.85
Self-Interest	.43	
Family	.55	
Teachers, Friends, and the Media	.53	
Society's Welfare	.60	
Equality	.61	
Religious/Church Institutions	.37	
Government Institutions	.50	
<i>Empathy</i>		11.40
Perspective Taking	.40	
Empathic Concern	.41	
Personal Distress	.05	
Fantasy	.35	
<i>Shame</i>		17.95
Item 1	.37	
Item 2	.30	
Item 3	.46	
Item 4	.01	
Item 5	.37	
Item 6	.44	
Item 7	.54	
Item 8	.31	

Table 3 (cont.)

Item 9	.58	
Item 10	.55	
Item 11	.44	
<i>Guilt</i>		15.66
Item 1	.44	
Item 2	.31	
Item 3	.23	
Item 4	.43	
Item 5	.39	
Item 6	.42	
Item 7	.31	
Item 8	.41	
Item 9	.44	
Item 10	.42	
Item 11	.49	

Note. One factor was extracted in each image factor analysis as theoretically hypothesized for each construct.

Table 4

Intercorrelations Between the Six Factor Scores and the C-score in the Measurement Model

Constructs	1	2	3	4	5	6	7
	—						
2. Spiritual Life	-.18**	—					
3. Ascription to Moral Authority Sources	-.26**	.16*	—				
4. Empathy	-.05	.36**	.25**	—			
5. Shame	.15*	-.17**	.17**	.28**	—		
6. Guilt	-.10	.30**	.28**	.46**	.33**	—	
7. Moral Judgment Competence	.04	.03	<.01	.03	.07	.08	—

Note. * $p \leq .05$, ** $p \leq .01$, two-tailed.

Table 5

Summary of Regression Analyses for Structural Model from the Six Factor Scores and the C-score

Constructs	<i>F</i>	<i>p</i>	<i>R</i> ²	<i>B</i>	<i>SE B</i>	β
Empathy	17.86	<.001**	.17			
Dysfunctional Family Life				.04	.03	.06
Spiritual Life				.36	.06	.34**
Ascription to Moral Authority Sources				.14	.04	.22**
Shame	9.40	<.001**	.10			
Dysfunctional Family Life				.14	.05	.18*
Spiritual Life				-.28	.10	-.18*
Ascription to Moral Authority Sources				.24	.06	.25**
Guilt	22.25	<.001**	.15			
Spiritual Life				.40	.09	.26**
Ascription to Moral Authority Sources				.22	.05	.24**
Moral Judgment Competence	.76	.52	.01			
Empathy				-.48	2.07	-.02
Shame				.95	1.31	.05
Guilt				1.50	1.47	.07

Note. All F-tests based on 3 and 254 degrees of freedom except for the model predicting guilt which is based on 2 and 255 degrees of freedom.

p* < .01; *p* < .001

Figure 1

Patterns of MJT Data from Two Fictitious Participants Rating One Dilemma

Person: Opinion on decision:	Person A "I agree with this decision"		Person B "I agree with this decision"	
	Contra	Pro	Contra	Pro
Probing: Acceptability of				
Stage 1	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 -3 -2 -1 0 +1 +2 + ✖ +4	✖4 -3 -2 -1 0 +1 +2 +3 +4	✖ -3 -2 -1 0 +1 +2 +3 +4
Stage 2	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 -3 -2 -1 0 +1 +2 + ✖ +4	-4 ✖ -2 -1 0 +1 +2 +3 +4	✖ -3 -2 -1 0 +1 +2 +3 +4
Stage 3	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 -3 -2 -1 0 +1 +2 +3 ✖	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 - ✖ 2 -1 0 +1 +2 +3 +4
Stage 4	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 -3 -2 -1 0 +1 +2 +3 ✖	-4 -3 - ✖ -1 0 +1 +2 +3 +4	-4 -3 -2 ✖ 0 +1 +2 +3 +4
Stage 5	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 -3 -2 -1 0 +1 +2 +3 ✖	-4 -3 -2 -1 ✖ +1 +2 +3 +4	-4 -3 -2 -1 0 ✖ +2 +3 +4
Stage 6	✖ -3 -2 -1 0 +1 +2 +3 +4	-4 -3 -2 -1 0 +1 +2 +3 ✖	-4 -3 -2 -1 0 +1 + ✖ +3 +4	-4 -3 -2 -1 0 +1 +2 +3 + ✖
	C-score: 0.4		C-score: 92.2	

Figure 2

Individual Item Response Pattern Comparison in MJT C-score Calculations

Nine Steps for Scoring of the MJT: C-index of Moral Judgment Competence and Six Indices of Moral Attitudes
(the numbers in the cells represent the item numbers)

Dilemma:		Workers' Dilemma				Doctor's Dilemma								
Opinion:		disagree (-3 to -1) agree (0 to +3)				disagree (-3 to -1) agree (0 to +3)								
		Pro*		Con*		Pro*		Con*		Sum up the arguments for each Stage	Square the sums in the left column			
Stage (X _i)		X _{i1}	(X _{i2}) ²	X _{i2}	(X _{i2}) ²	X _{i3}	(X _{i3}) ²	X _{i4}	(X _{i4}) ²	① $\sum_{j=1-4} x_j$	② $(\sum_{j=1-4} x_j)^2$			
1	1	-3	9	12	-4	16	3	-3	9	10	-3	9	-13	169
2	5	0	0	9	-4	16	4	-4	16	11	-4	16	-12	144
3	3	0	0	11	3	9	6	-4	16	7	-4	16	-5	25
4	2	3	9	7	0	0	5	-4	16	12	2	4	1	1
5	6	4	16	10	2	4	2	2	4	8	-4	16	4	16
6	4	-3	9	8	4	16	1	4	16	9	0	0	5	25
Sum up all columns and check total sums!		A		B		C		D		③ Total sum		④ Sum of column =		
				Optional				Optional		$\sum_1^6 x = -20$		$\sum_{j=1}^6 (\sum_{i=1}^4 x_{ij})^2 = 380$		
Sum of all pro items and of all con items (optional): *		$\sum_{i=1}^6 x_{i,pro} =$		A + C =		$\sum_{i=1}^6 x_{i,con} =$		B + D =		Use ③ and ⑦		⑧ C-index:		
SS _{Tot} = $\sum (X_i^2) \Rightarrow$ Square all data and add up the squares		⑤ 242		Use ④: $SS_{Stage} = \sum_{i=1}^6 (\sum_{j=1}^4 x_{ij})^2 / 4 - SS_M \Rightarrow$		⑥ 78.33		Optional*		$100 \cdot \frac{SS_{Stage}}{SS_{Dev}} \Rightarrow$		34.76		
SS _M = SS _{Mean} = $(\sum X_i)^2 / 24 \Rightarrow$ Use ③, square this sum and divide by 24		⑥ 16.67		$SS_{PC} = \sum_{j=Pro}^{Con} (\sum_{i=1}^{12} x_{ij})^2 / 12 - SS_M \Rightarrow$		Optional*		Optional*		$r_{PC}^2 = \frac{SS_{ProCon}}{SS_{Dev}} \Rightarrow$		Optional* PC-Index		
SS _{Dev} = SS _{Tot} - SS _{Mean} =>		⑦ 225.33		$SS_{Dil} = \sum_{j=Work}^{Doc} (\sum_{i=1}^{12} x_{ij})^2 / 12 - SS_M \Rightarrow$		Optional*		Optional*		$C^* = \frac{SS_S}{SS_{Dev} - SS_{Dil}} \Rightarrow$		Optional* C'-Index		

* This calculation is optional. If used, Pro and Con are to be scored according to the subject's opinion. Rule: If the subjects agrees in one case with the solution given in the story AND disagrees with the solution of the other story, then the columns must be added like this: A + D and B + C.

Figure 3

Theoretically Integrative Lifespan Model of Developmental and Emotional Influences Predicting Moral Judgment Competence

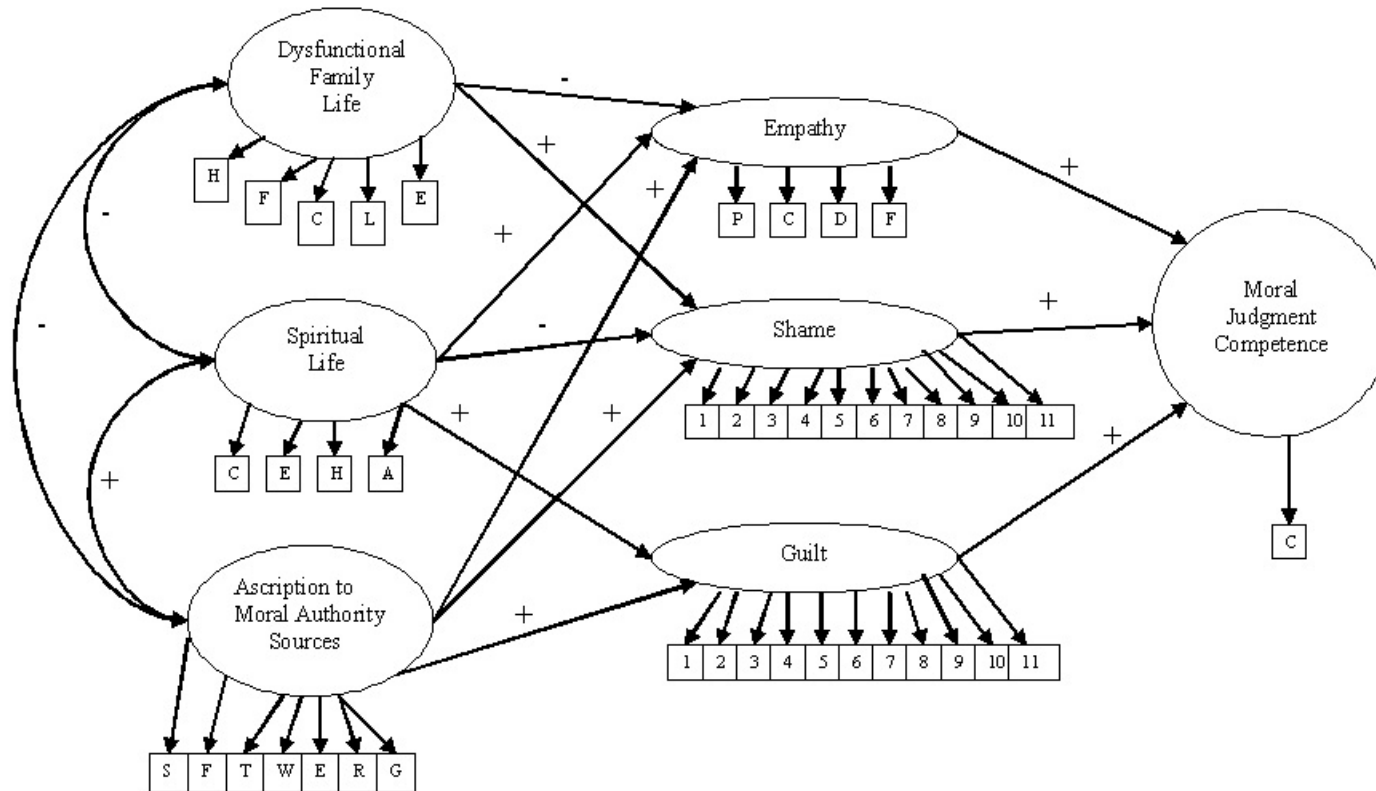
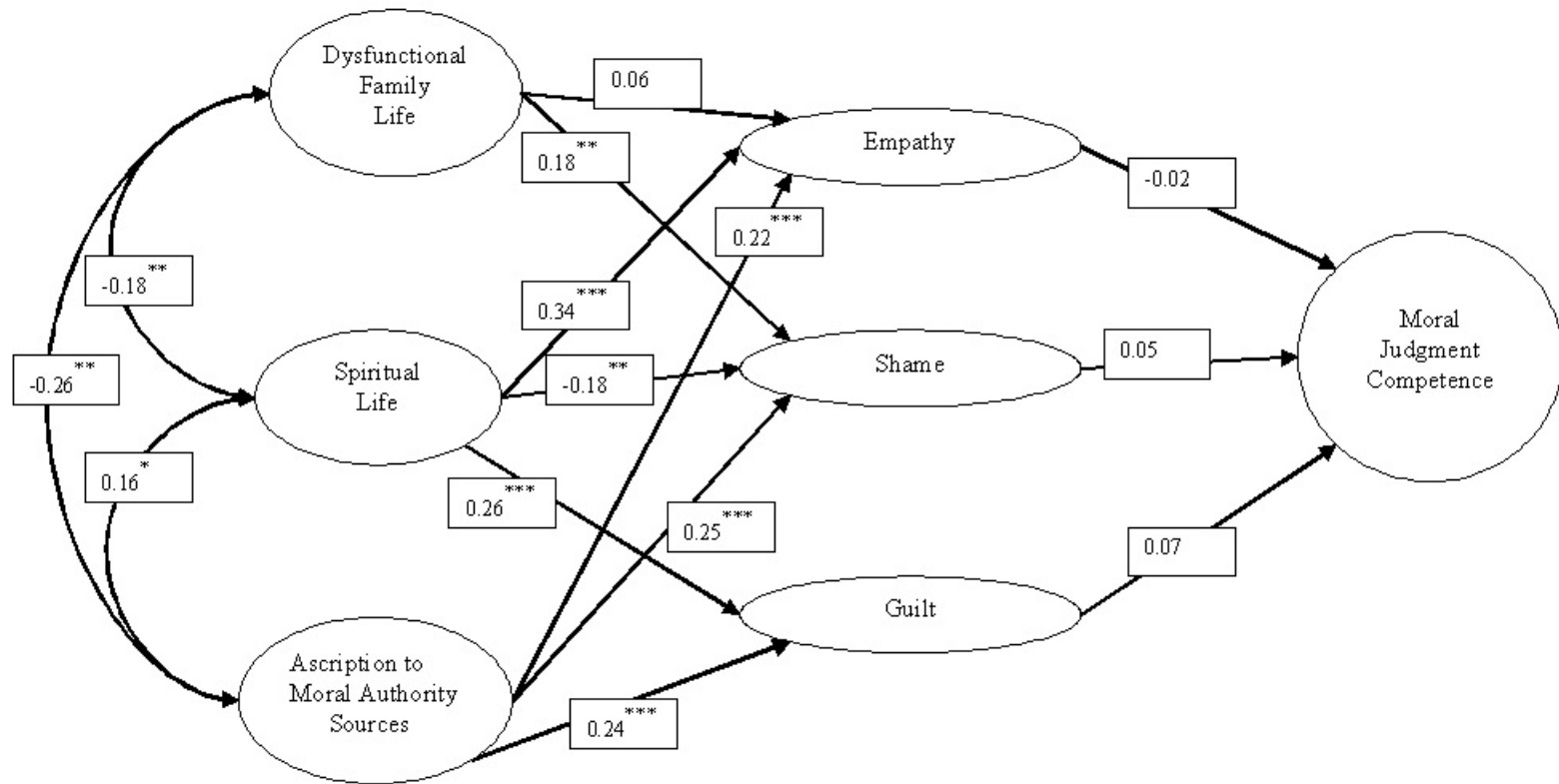


Figure 4

Path Analysis of Model Fit



Note. Correlations and standardized parameter estimates are presented.

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$; correlations two-tailed.

APPENDIX A

SELF-REPORT FAMILY INVENTORY VERSION II

For each question, mark the answer that best fits how you saw your family while you were growing-up. If you feel that your answer is between two of the labeled numbers (the odd numbers), then choose the even number that is between them.

	Yes: Fits our family very well		Some: Fits our family some		No: Does not fit our family
1. Family members paid attention to each other's feelings.	1	2	3	4	5
2. Our family would of rather do things together than with other people.	1	2	3	4	5
3. We all would have a say in family plans.	1	2	3	4	5
4. The grownups in the family understood and agreed on family decisions.	1	2	3	4	5
5. Grownups in the family competed and fought with each other.	1	2	3	4	5
6. There was closeness in my family but each person was allowed to be special and different.	1	2	3	4	5
7. We accepted each other's friends.	1	2	3	4	5
8. There was confusion in our family because there was no leader.	1	2	3	4	5
9. Our family members touched and hugged each other.	1	2	3	4	5
10. Family members put each other down.	1	2	3	4	5

	Yes: Fits our family very well		Some: Fits our family some		No: Does not fit our family
11. We spoke our minds, no matter what.	1	2	3	4	5
12. In our home, we felt loved.	1	2	3	4	5
13. Even when we felt close, our family was embarrassed to admit it.	1	2	3	4	5
14. We argued a lot and never solved problems.	1	2	3	4	5
15. Our happiest times were at home.	1	2	3	4	5
16. The grownups in the family were strong leaders.	1	2	3	4	5
17. The future looked good to our family.	1	2	3	4	5
18. We usually blamed one person in our family when things weren't going right.	1	2	3	4	5
19. Family members went their own way most of the time.	1	2	3	4	5
20. Our family was proud of being close.	1	2	3	4	5
21. Our family was good at solving problems together.	1	2	3	4	5
22. Family members easily expressed warmth and caring towards each other.	1	2	3	4	5
23. It's was okay to fight and yell in our family.	1	2	3	4	5
24. One of the adults in the family had a favorite child.	1	2	3	4	5
25. When things went wrong we blamed each other.	1	2	3	4	5

	Yes: Fits our family very well		Some: Fits our family some		No: Does not fit our family
26. We said what we thought and felt.	1	2	3	4	5
27. Our family members would of rather do things with other people than together.	1	2	3	4	5
28. Family members paid attention to each other and listened to what was said.	1	2	3	4	5
29. We worried about hurting each other's feelings.	1	2	3	4	5
30. The mood in my family was usually sad and blue.	1	2	3	4	5
31. We argued a lot.	1	2	3	4	5
32. One person controlled and lead our family.	1	2	3	4	5
33. My family was happy most of the time.	1	2	3	4	5
34. Each person took responsibility for his/her behavior.	1	2	3	4	5

35. On a scale of 1 to 5, I would rate my family as:

1	2	3	4	5
My family functioned very well together.				My family did not function well together at all. We really needed help.

36. On a scale of 1 to 5, I would rate the independence in my family as:

1	2	3	4	5
(No one was independent. There were no open arguments. Family members relied on each other for satisfaction rather than on outsiders).		(Sometimes independent. There were some disagreements. Family members found satisfaction both within and outside of the family.)		(Family members usually went their own way. Disagreements were open. Family members looked outside of the family for satisfaction.)

APPENDIX B

Spiritual Involvement and Beliefs Scale - Revised

How strongly do you agree with the following statements?

	Strongly Agree	Agree	Mildly Agree	Neutral	Mildly Disagree	Disagree	Strongly Disagree
1. I set aside time for meditation and/or self-reflection.	7	6	5	4	3	2	1
2. I can find meaning in times of hardship.	7	6	5	4	3	2	1
3. A person can be fulfilled without pursuing an active spiritual life.	7	6	5	4	3	2	1
4. I find serenity by accepting things as they are.	7	6	5	4	3	2	1
5. I have a relationship with someone I can turn to for spiritual guidance.	7	6	5	4	3	2	1
6. Prayers do not really change what happens	7	6	5	4	3	2	1
7. In times of despair, I can find little reason to hope.	7	6	5	4	3	2	1

	Strongly Agree	Agree	Mildly Agree	Neutral	Mildly Disagree	Disagree	Strongly Disagree
8. I have a personal relationship with a power greater than myself.	7	6	5	4	3	2	1
9. I have had a spiritual experience that greatly changed my life.	7	6	5	4	3	2	1
10. When I help others, I expect nothing in return.	7	6	5	4	3	2	1
11. I don't take time to appreciate nature.	7	6	5	4	3	2	1
12. I have joy in my life because of my spirituality.	7	6	5	4	3	2	1
13. My relationship with a higher power helps me love others more completely.	7	6	5	4	3	2	1
14. Spiritual writings enrich my life.	7	6	5	4	3	2	1
15. I have experienced healing after prayer.	7	6	5	4	3	2	1
16. My spiritual understanding continues to grow.	7	6	5	4	3	2	1
17. I focus on what needs to be changed in me, not on what needs to be changed in others.	7	6	5	4	3	2	1
18. In difficult times, I am still grateful.	7	6	5	4	3	2	1

	Strongly Agree	Agree	Mildly Agree	Neutral	Mildly Disagree	Disagree	Strongly Disagree
19. I have been through a time of suffering that led to spiritual growth.	7	6	5	4	3	2	1
20. I solve my problems without using spiritual resources.	7	6	5	4	3	2	1
21. I examine my actions to see if they reflect my values.	7	6	5	4	3	2	1

22. How spiritual a person do you consider yourself? (with "7" being the most spiritual)

7 6 5 4 3 2 1

APPENDIX C

Revised Moral Authority Scale

The following list of social issues are often discussed in today's society.
This questionnaire aims to see 'who' and/or 'what' influences your opinion about these social issues.

Instructions

For each issue you need to do four things:

- 1) Give your opinion on the issue.
- 2) Write down why you hold that opinion.
- 3) Rate the amount of influence of each of the five statements on your opinion.
Simply write your rating (0, 1, 2, 3,.....10) in the space provided for each statement.
Your rating will be on the following scale:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence	Little Influence		Moderate Influence		Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

- 4) If there is another factor which is not listed amongst the eight statements, but which has influenced your opinion, add it to the list and rate it on the same scale.

Note: There are no right or wrong answers! We are interested in your own opinions, and who and/or what has influenced them. So please answer as honestly as possible.

1. Should people who break the law (such as stealing, speeding etc) be punished?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

a) my family's beliefs and expectations about certain laws have _____ on my opinion

b) my religion/church's expectations and values have _____ on my opinion

c) the idea that everyone should try to make society a better place has _____ on my opinion

d) my friends', the media and/or teachers' beliefs about certain laws have _____ on my opinion

e) the idea that it satisfies my own interests has _____ my opinion

f) the idea that all people must be treated fairly has _____ on my opinion

g) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion

h)(other) _____ has _____ on my opinion

2. Should people of different race and color live in harmony with each other?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

- a) my friends', the media and/or teachers' beliefs about racial harmony have _____ on my opinion
- b) the idea that society as a whole will benefit from racial harmony has _____ on my opinion
- c) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion
- d) the idea that all people are born equal and should be respected has _____ on my opinion
- e) my family's beliefs on how different races should live has _____ on my opinion
- f) my religion/church's expectations and values have _____ on my opinion
- g) satisfying my own interests about racial harmony has _____ on my opinion
- h) (other) _____ has _____ on my opinion

3. Should all people respect the natural environment in which they live?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

a) the idea that respect for the environment benefits society has _____ on my opinion

b) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion

c) my religion/church's expectations and values have _____ on my opinion

d) the belief that all living things should be given some chance for survival has _____ on my opinion

e) my family's beliefs and expectations about the environment have _____ on my opinion

f) my friends', the media and/or teachers' beliefs about environmental issues have _____ on my opinion

g) satisfying my own environmental interests has _____ on my opinion

h) (other) _____ has _____ on my opinion

4. Should 'freedom of speech' (i.e., being able to say publicly what you believe) be allowed?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

- a) my religion/church's expectations and values have _____ on my opinion
- b) my family's beliefs and expectations about freedom of speech have _____ on my opinion
- c) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion
- d) my friends', the media and/or teachers' beliefs about freedom of speech have _____ on my opinion
- e) the idea that every person has an equal right to freedom of speech has _____ on my opinion
- f) the idea that freedom of speech makes society a better place to live has _____ on my opinion
- g) the belief that freedom of speech may satisfy my own interests has _____ on my opinion
- h) (other) _____ has _____ on my opinion

5. Should equal opportunities be given to people regardless of their race or gender?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

a) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion

b) the idea that society will benefit from addressing race and gender issues has _____ on my opinion

c) satisfying my own interests on race and gender issues has _____ on my opinion

d) my family's beliefs and expectations on race and gender issues have _____ on my opinion

e) the idea that all people are born equal and should be respected has _____ on my opinion

f) my friends', the media and/or teachers' ideas on race and gender issues have _____ on my opinion

g) my religion/church's expectations and values have _____ on my opinion

h)(other) _____ has _____ on my opinion

6. Should scientific research which harms people or the natural environment be allowed?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

a) the belief that scientific research may satisfy my own needs has _____ on my opinion

b) my family's beliefs and expectations about scientific research has _____ on my opinion

c) the idea that all living things are worthy of respect has _____ on my opinion

d) my religion/church's expectations and values have _____ on my opinion

e) the idea that scientific research should seek to make society a better place has _____ on my opinion

f) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion

g) my friends', the media and/or teachers' ideas about scientific research have _____ on my opinion

h) (other) _____ has _____ on my opinion

7. Should equal opportunities be given to people regardless of their sexual orientation?

Yes / No / Can't decide (Please circle one)

Why? _____

Rate the amount of influence of each statement on your opinion:

0	1	2	3	4	5	6	7	8	9	10
No Influence	Almost No Influence		Little Influence		Moderate Influence	Quite a Strong Influence		A Very Strong Influence		A Powerful Influence

Rating

a) the idea that all people are born equal and should be respected has _____ on my opinion

b) satisfying my own interests on sexual orientation has _____ on my opinion

c) my religion/church's expectations and values have _____ on my opinion

d) the idea that society will benefit from addressing sexual orientation has _____ on my opinion

e) my family's beliefs and expectations on sexual orientation have _____ on my opinion

f) the government, its laws, and its agencies such as the police force and the courts have _____ on my opinion

g) my friends', the media and/or teachers' ideas on sexual orientation have _____ on my opinion

h) (other) _____ has _____ on my opinion

APPENDIX D

Interpersonal Reactivity Index

Please indicate the degree to which the items describe you by choosing the appropriate point on the five-point scale.

		Does not describe me well			Describes me very well
1. I daydream and fantasize, with some regularity, about things that might happen to me.	0	1	2	3	4
2. I often have tender, concerned feelings for people less fortunate than me.	0	1	2	3	4
3. I sometimes find it difficult to see things from the“other guy’s” point of view.	0	1	2	3	4
4. Sometimes I don’t feel very sorry for other people when they are having problems.	0	1	2	3	4
5. I really get involved with the feelings of the characters in a novel.	0	1	2	3	4
6. In emergency situations, I feel apprehensive and ill-at-ease.	0	1	2	3	4
7. I am usually objective when I watch a movie or play, and I don’t often get completely caught up in it.	0	1	2	3	4
8. I try to look at everybody’s side of a disagreement before I make a decision.	0	1	2	3	4
9. When I see someone being taken advantage of, I feel kind of protective towards them.	0	1	2	3	4

	Does not describe me well			Describes me very well	
	0	1	2	3	4
10. I sometimes feel helpless when I am in the middle of a very emotional situation.	0	1	2	3	4
11. I sometimes try to understand my friends better by imagining how things look from their perspective.	0	1	2	3	4
12. Becoming extremely involved in a good book or movie is somewhat rare for me.	0	1	2	3	4
13. When I see someone get hurt, I tend to remain calm.	0	1	2	3	4
14. Other people's misfortunes do not usually disturb me a great deal.	0	1	2	3	4
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	0	1	2	3	4
16. After seeing a play or movie, I have felt as though I were one of the characters.	0	1	2	3	4
17. Being in a tense emotional situation scares me.	0	1	2	3	4
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	0	1	2	3	4
19. I am usually pretty effective in dealing with emergencies.	0	1	2	3	4
20. I am often quite touched by things that I see happen.	0	1	2	3	4
21. I believe that there are two sides to every question and try to look at them both.	0	1	2	3	4
22. I would describe myself as a pretty soft-hearted person.	0	1	2	3	4

	Does not describe me well				Describes me very well
23. When I watch a good movie, I can very easily put myself in the place of a leading character.	0	1	2	3	4
24. I tend to lose control during emergencies.	0	1	2	3	4
25. When I'm upset at someone, I usually try to "put myself in his/her shoes" for a while.	0	1	2	3	4
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	0	1	2	3	4
27. When I see someone who badly needs help in an emergency, I go to pieces.	0	1	2	3	4
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	0	1	2	3	4

APPENDIX E

Test of Self-Conscious Affect 3

Below are situations that people are likely to encounter in day-to-day life, followed by several common reactions to those situations.

As you read each scenario, try to imagine yourself in that situation. Then indicate how likely you would be to react in each of the ways described. We ask you to rate all responses because people may feel or react more than one way to the same situation, or they may react different ways at different times.

For example:

A. You wake up early one Saturday morning. It is cold and rainy outside.

- a) You would telephone a friend to catch up on news. ①---2---3---4---5
not likely very likely
- b) You would take the extra time to read the paper. 1---2---3---4---⑤
not likely very likely
- c) You would feel disappointed that it's raining. 1---2---③---4---5
not likely very likely
- d) You would wonder why you woke up so early. 1---2---3---④---5
not likely very likely

In the above example, I've rated ALL of the answers by circling a number. I circled a "1" for answer (a) because I wouldn't want to wake up a friend very early on a Saturday morning -- so it's not at all likely that I would do that. I circled a "5" for answer (b) because I almost always read the paper if I have time in the morning (very likely). I circled a "3" for answer (c) because for me it's about half and half. Sometimes I would be disappointed about the rain and sometimes I wouldn't -- it would depend on what I had planned. And I circled a "4" for answer (d) because I would probably wonder why I had awakened so early.

Please do not skip any items -- rate all responses.

1. You make plans to meet a friend for lunch. At 5 o'clock, you realize you stood him up.

- a) You would think: "I'm inconsiderate." 1---2---3---4---5
not likely very likely
- b) You would think: "Well, they'll understand." 1---2---3---4---5
not likely very likely
- c) You'd think you should make it up to him as soon as possible. 1---2---3---4---5
not likely very likely
- d) You would think: "My boss distracted me just before lunch." 1---2---3---4---5
not likely very likely

2. You break something at work and then hide it.

- a) You would think: "This is making me anxious. I need to either fix it or get someone else to." 1---2---3---4---5
not likely very likely
- b) You would think about quitting. 1---2---3---4---5
not likely very likely
- c) You would think: "A lot of things aren't made very well these days." 1---2---3---4---5
not likely very likely
- d) You would think: "It was only an accident." 1---2---3---4---5
not likely very likely

3. At work, you wait until the last minute to plan a project, and it turns out badly.

- a) You would feel incompetent. 1---2---3---4---5
not likely very likely
- b) You would think: "There are never enough hours in the day." 1---2---3---4---5
not likely very likely
- c) You would feel: "I deserve to be reprimanded for mismanaging the project." 1---2---3---4---5
not likely very likely
- d) You would think: "What's done is done." 1---2---3---4---5
not likely very likely

4. You make a mistake at work and find out a co-worker is blamed for the error.

- | | |
|---|--|
| a) You would think the company did not like the co-worker. | 1---2---3---4---5
not likely very likely |
| b) You would think: "Life is not fair." | 1---2---3---4---5
not likely very likely |
| c) You would keep quiet and avoid the co-worker. | 1---2---3---4---5
not likely very likely |
| d) You would feel unhappy and eager to correct the situation. | 1---2---3---4---5
not likely very likely |

5. While playing around, you throw a ball and it hits your friend in the face.

- | | |
|---|--|
| a) You would feel inadequate that you can't even throw a ball. | 1---2---3---4---5
not likely very likely |
| b) You would think maybe your friend needs more practice at catching. | 1---2---3---4---5
not likely very likely |
| c) You would think: "It was just an accident." | 1---2---3---4---5
not likely very likely |
| d) You would apologize and make sure your friend feels better. | 1---2---3---4---5
not likely very likely |

6. You are driving down the road, and you hit a small animal.

- | | |
|---|--|
| a) You would think the animal shouldn't have been on the road. | 1---2---3---4---5
not likely very likely |
| b) You would think: "I'm terrible." | 1---2---3---4---5
not likely very likely |
| c) You would feel: "Well, it was an accident." | 1---2---3---4---5
not likely very likely |
| d) You'd feel bad you hadn't been more alert driving down the road. | 1---2---3---4---5
not likely very likely |

7. You walk out of an exam thinking you did extremely well. Then you find out you did poorly.

- a) You would think: "Well, it's just a test." 1---2---3---4---5
not likely very likely
- b) You would think: "The instructor doesn't like me." 1---2---3---4---5
not likely very likely
- c) You would think: "I should have studied harder." 1---2---3---4---5
not likely very likely
- d) You would feel stupid. 1---2---3---4---5
not likely very likely

8. While out with a group of friends, you make fun of a friend who's not there.

- a) You would think: "It was all in fun; it's harmless." 1---2---3---4---5
not likely very likely
- b) You would feel small...like a rat. 1---2---3---4---5
not likely very likely
- c) You would think that perhaps that friend should have been there to defend himself/herself. 1---2---3---4---5
not likely very likely
- d) You would apologize and talk about that person's good points. 1---2---3---4---5
not likely very likely

9. You make a big mistake on an important project at work. People were depending on you, and your boss criticizes you.

- a) You would think your boss should have been more clear about what was expected of you. 1---2---3---4---5
not likely very likely
- b) You would feel like you wanted to hide. 1---2---3---4---5
not likely very likely
- c) You would think: "I should have recognized the problem and done a better job." 1---2---3---4---5
not likely very likely
- d) You would think: "Well, nobody's perfect." 1---2---3---4---5
not likely very likely

10. You are taking care of your friend's dog while they are on vacation and the dog runs away.

- | | |
|--|--|
| a) You would think, "I am irresponsible and incompetent." | 1---2---3---4---5
not likely very likely |
| b) You would think your friend must not take very good care of their dog or it wouldn't have run away. | 1---2---3---4---5
not likely very likely |
| c) You would vow to be more careful next time. | 1---2---3---4---5
not likely very likely |
| d) You would think your friend could just get a new dog. | 1---2---3---4---5
not likely very likely |

11. You attend your co-worker's housewarming party and you spill red wine on their new cream-colored carpet, but you think no one notices.

- | | |
|---|--|
| a) You think your co-worker should have expected some accidents at such a big party. | 1---2---3---4---5
not likely very likely |
| b) You would stay late to help clean up the stain after the party. | 1---2---3---4---5
not likely very likely |
| c) You would wish you were anywhere but at the party. | 1---2---3---4---5
not likely very likely |
| d) You would wonder why your co-worker chose to serve red wine with the new light carpet. | 1---2---3---4---5
not likely very likely |
-

APPENDIX F

The *Moral Judgment Test* (MJT)

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by Georg Lind 1977 - 2002

(Last revision of this text: Jan. 5th, 2004)

The holder of the copyright for all versions of the *Moral Judgment Test* (MJT) is the author, Dr. Georg Lind. The authors of translated versions hold a co-copyright. The joint copyright for translated and certified versions of the MJT is with the author of the translated version. When used in research and evaluation studies, each copy of the test must bear this copyright note: “(c) 1977-2002 by Georg Lind, <http://www.uni-konstanz.de/agmoral/>” plus the name of the author of the translated version. A list of validated and certified versions of the MJT is to be found on the web: <http://www.uni-konstanz.de/ag-moral/>.

The use of the MJT for research and education in public institutions is free. All other usage (for example, by *private* institutions and *commercial* projects for program evaluation and alike or by privately financed projects) require written permission of the author. The standard version of the MJT must not be altered without consent by the author. Each copy page of the MJT must bear the copyright note(c) 1977-2002 Lind. If a non-certified version of the MJT is used, this must be made recognizable for the reader.

The MJT is designed for research and for the evaluation of programs and policies only. It is **not** designed as an instrument for evaluating people, groups of people or individual institutions, or for the use as a high-stakes test. Such use represents a case of *misuse*. The MJT can be applied with participants with average schooling from age of 11 years upward. Disadvantaged subjects may require some adaption of the administration of the MJT.

The MJT has been constructed on the basis of Lind's *Dual Aspect Theory* of moral judgment and development to assess subjects' moral judgment competence. Though it uses Lawrence Kohlberg's (e.g., 1964, p.425) definitions, the MJT employs a different psychological and psychometric theory. For more details on Lind's theory, the MJT and guidelines to establish cross-cultural validity of translated versions as well as for the administration of the MJT for non-standard groups of participants, please visit this web-site: <http://www.uni-konstanz.de/ag-moral/>.

In pretest-posttest-studies, test weariness may be a problem, resulting in an unusual lowering of the C-score on the retest. This or a similar instruction helps to avoid this problem: “Some of the questions will be the same as you have been given the first time. We want to know whether your thoughts have changed. Please fill them out as sincerely as you did the first time.”

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2. Doctor's Dilemma

A woman had cancer and she had no hope being saved. She was in terrible pain and so weakened that a large dose of a painkiller such as morphine would have caused her death. During a temporary period of improvement, she begged the doctor to give her enough morphine to kill her. She said she could no longer endure the pain and would be dead in a few weeks anyway. The doctor complied with her wish.

	I strongly disagree	I strongly agree
14. Do you disagree or agree with the doctor's behavior?	-3 -2 -1 0 +1 +2 +3	

How acceptable do you find the following arguments *in favor* of the doctor? Suppose someone said he acted *rightly* . . .

	I strongly reject	I strongly accept
15. because the doctor had to act according to his conscience. The woman's condition justified an exception to the moral obligation to preserve life.	-4 -3 -2 -1 0 +1 +2 +3 +4	
16. because the doctor was the only one who could fulfill the woman's wish; respect for her wish made him act as he did. . .	-4 -3 -2 -1 0 +1 +2 +3 +4	
17. because the doctor only did what the woman talked him into doing. He need not worry about unpleasant consequences	-4 -3 -2 -1 0 +1 +2 +3 +4	

How acceptable do you find the following arguments *against* the doctor? Suppose someone said that he acted *wrongly* . . .

	I strongly reject	I strongly accept
21. because he acted contrary to his colleagues' convictions. If they are against mercy-killing the doctor shouldn't do it. . .	-4 -3 -2 -1 0 +1 +2 +3 +4	
22. because one should be able to have complete faith in a doctor's devotion to preserving life even if someone with great pain would rather die.	-4 -3 -2 -1 0 +1 +2 +3 +4	
23. because the protection of life is everyone's highest moral obligation. We have no clear moral criteria for distinguishing between mercy killing and murder	-4 -3 -2 -1 0 +1 +2 +3 +4	

MJT-engl. © 1977-2001 by Georg Lind (rev. 12-2002)

** For the full version of the *Moral Judgment Test* (both the Worker's Dilemma and Doctor's Dilemma with 12 arguments per dilemma), contact Prof. Dr. Georg Lind at Georg.Lind@uni-konstanz.de.

APPENDIX G
DEMOGRAPHICS FORM

Age: _____

Gender:

_____ Female _____ Male

Academic Year in School:

_____ Freshman _____ Sophomore _____ Junior _____ Senior

Ethnicity:

_____ African American _____ Asian-Pacific Islander _____ Caucasian _____ Hispanic

_____ Native American _____ Bi- or multi-racial _____ Other

Religious Affiliation:

_____ Agnostic

_____ Baptist _____ Catholic _____ Jewish _____ Methodist _____ Mormon

_____ Muslim _____ Native American _____ Non-denominational _____ Presbyterian

_____ None

_____ Other; please specify: _____

Participant ID Number : _____ (completed by experimenter)

Oklahoma State University Institutional Review Board

Date: Tuesday, February 27, 2007
IRB Application No AS0710
Proposal Title: Predicting Moral Judgment Competence from Developmental Building Blocks and Individual Dispositions: A Structural Equation Model

Reviewed and Processed as: Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 2/26/2008

Principal Investigator(s)

Brenda McDaniel	James Grice
212 North Murray	215 N. Murray
Stillwater, OK 74078	Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.


The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Sue C. Jacobs, Chair
Institutional Review Board

VITA

Brenda Lee McDaniel, M.S.

Candidate for the Degree of

Doctor of Philosophy

Thesis: PREDICTING MORAL JUDGMENT COMPETENCE FROM
DEVELOPMENTAL BUILDING BLOCKS AND MORAL EMOTIONS: A
STRUCTURAL EQUATION MODEL

Major Field: Psychology

Biographical:

Personal Data: Born in Omaha, Nebraska, on July 21, 1978, the daughter of Marilyn Jean and Vernon Henry McDaniel. Married Evan 'Allen' Eason, son of Melissa Ann and Rev. William Alfred Eason, on August 12, 2006 in Eureka Springs, Arkansas.

Education: Graduated from Bentonville High School, Bentonville, Arkansas in May 1996; received Bachelor of Arts degree in Psychology from the University of Arkansas, Fayetteville, Arkansas in December 2000; received Mater of Science degree in Psychology from Oklahoma State University, Stillwater, Oklahoma, December 2004. Completed the requirements for the Doctor of Philosophy degree with a major in Psychology at Oklahoma State University in July, 2007.

Experience: Research laboratory manager, graduate research laboratory supervisor, graduate data analyst/database manager and report preparation specialist, graduate preparing future faculty in psychology fellow, graduate families and schools for health database manager and analyst, NSF research experience for undergraduates graduate student coordinator, submitted National Institutes of Health National Research Service Award (F32) Individual Post-doctoral Fellowship.

Professional Memberships: Sigma Xi's Scientific Research Society, American Psychological Society, American Psychological Association, Oklahoma Psychological Association.

Name: Brenda Lee McDaniel

Date of Degree: July, 2007

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: PREDICTING MORAL JUDGMENT COMPETENCE FROM
DEVELOPMENTAL BUILDING BLOCKS AND MORAL
EMOTIONS: A STRUCTURAL EQUATION MODEL

Pages in Study: 113

Candidate for the Degree of Doctor of Philosophy

Major Field: Psychology

Scope and Method of Study: The purpose of the study was to explore the variables that impact moral judgment competence. Moral judgment competence was defined as the cognitive reasoning ability to be consistent in the application of moral principles across situations. It was hypothesized that the building blocks of moral development included one's family interactions (e.g., dysfunctional patterns), spiritual life, and ascription to different sources of moral authority (e.g., teachers and peers, religious institutions, and one's concern for society's welfare and human equality, etc.). These early developmental building blocks were hypothesized to foster individual moral emotional development in young adulthood, particularly empathy, shame, and guilt. These moral emotions were hypothesized to predict moral judgment competence in young adulthood. These hypothesized relationships were tested in a structural equation model that represents the first known attempt to combine moral developmental building blocks, moral emotions, and moral judgment competence. The current model also represents an attempt to bridge the two theoretical orientations of social learning/social cognition and cognitive structuralism. Lastly, the current model theorized a developmental trend such that as progression towards the prediction of the outcome variable of moral judgment competence occurs, the corresponding constructs occur at later points in the lifespan.

Findings and Conclusions: A parsimonious set of analyses involving a three step process was chosen to test the model: (1) image factor analysis, (2) regression, and (3) LISREL fit statistics. The current structural equation model was found to be a poor overall fit for the observed data. However, the measurement model fit well in terms of factor loadings and the structural model showed promising relationships among constructs. There was no support found for the integration of the theoretical orientations of social learning/social cognition and cognitive structuralism. However, the present study creates novel theoretical contributions, generates a structural equation framework for future multi-construct research, and provides knowledge about presently unexplored relationships such as ascription to moral authority sources and moral emotions.

ADVISER'S APPROVAL: _____ James W. Grice, Ph.D. _____