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JUDGING FAILURES IN MORAL DEVELOPMENT: THE CLASSIFICATION OF  
ANTISOCIAL BEHAVIOR

by

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ABSTRACT OF THE DISSERTATION

JUDGING FAILURES IN MORAL DEVELOPMENT: THE CLASSIFICATION OF

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By HEATHER F. HARCOURT

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This study examines the influence of moral development and course of antisocial behavior on mental disorder judgments of social work clinicians and social work students presented with clinically realistic vignettes meeting criteria for conduct disorder according to the fourth edition, text revision, of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)*; American Psychiatric Association, 2000). Clinical vignettes were designed to examine whether low moral development and life-course persistent antisocial behavior were interpreted as internal dysfunction, which is required by *DSM-IV-TR* to make a judgment of mental disorder. In a 3x3 design, vignettes were manipulated to include information about moral development and course of antisocial behavior as evidence of internal dysfunction, compared to a neutral condition. Vignette packets were mailed to experienced social workers and distributed to students in first-year MSW classes. Respondents ( $N= 241$ ) answered the question “this youth has a mental disorder” for 3 different vignettes. Vignettes were separated into three independent samples for logistic regression analyses, in which neutral vignettes were used as reference categories. Low moral development did not affect mental disorder

judgments. The presence of life-course persistent antisocial behavior significantly increased the odds of a mental disorder judgment across three samples ( $OR=5.351$ ,  $p<.001$ ;  $OR=7.180$ ,  $p<.001$ ;  $OR=4.085$ ,  $p<.001$ ). The presence of adolescence-limited antisocial behavior significantly decreased the odds of a mental disorder judgment, ( $OR=.250$ ,  $p=.006$ ;  $OR=.345$ ,  $p=.012$ ;  $OR=.226$ ,  $p=.001$ ). Prior training in the use of *DSM* was significantly associated with disorder judgments ( $OR=3.145$ ,  $p=.028$ ). There were no interaction effects between level of moral development and the course of antisocial behavior. These findings indicate that social work clinicians and social work students may view life-course persistent antisocial behavior as evidence of internal dysfunction when making disorder judgments. Further, clinical disorder judgments may be influenced by training clinicians and students to use the *DSM* appropriately. Professional training in the identification of internal dysfunctions in making mental disorder judgments could improve diagnostic accuracy among social workers.

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The greatest debt of appreciation goes to my husband Michael and to my daughters Lily and Faith. For every time you heard "...as soon as I'm done with this..." and gave me the space to work, I dedicate this work to you.

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## **Chapter One**

### **Introduction**

Adolescent antisocial behavior is a serious public health issue that is closely tied to mental health system use and rates of crime in the United States. The mental disorder that is most often used to describe youthful antisocial behavior is conduct disorder (CD).

Conservatively, the prevalence estimate for CD among all adolescents in the U.S. is estimated to be 2.1% in the general population (Merikangas, 2010). CD in adolescence is predictive of a wide range of negative outcomes in adulthood including poor physical health, mental health problems and an increased likelihood of violent behavior (Fergusson, Horwood & Ridder, 2005). In 2007 alone, law enforcement officers arrested 2.2 million male and female offenders under the age of 18 for a wide variety of crimes (Puzzanchera, 2009) which may or may not have been driven by mental disorder. With adolescent antisocial behavior so prevalent in the general population, interpreting the causes and meaning of the behavior becomes a complex task. Social workers who identify whether an antisocial adolescent has a mental disorder depend upon their training and inferences about the basis of mental disorder to do so. Increased understanding of how social workers weight variables, like moral development and course-persistence of antisocial behavior will inform future practice.

### **Conduct Disorder and the *DSM***

Social workers most often use the behavioral criteria from the fourth edition, text revision, of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR*; American Psychiatric Association, 2000) to identify those adolescents whose antisocial behavior is the result of a mental disorder. Conduct disorder is a mental illness which is defined by persistent

antisocial behavior that is characterized by covert or overt aggression and hostility. These behaviors often put youth in opposition to societal expectations in problematic ways (Loeber, 1991). To diagnose CD, a youth under the age of 18 must have displayed at least three of the following behaviors in the past twelve months with at least one criterion present in the past six months: he or she has bullied others, fought, used a weapon, has been physically cruel to other people or to animals, has stolen while confronting a victim, has forced someone into sexual activity, engaged in fire-setting, destroyed property, has broken into a house, building or car, has lied to obtain goods, favors or to avoid obligations, has stolen without confronting a victim, has stayed out at night without permission, has run away at least twice, or has been truant from school. Further, the disturbance must have caused a significant impairment in role functioning (APA, 2000).

To reduce the need for clinicians to make inferences about causation, *DSM-IV-TR* provides a list of behavioral symptoms that cluster together in CD. However, this list also removes the symptoms from the context in which they occur. Because the symptoms checklist which is used to identify CD is behavioral and there is no qualification in the list that the diagnosis should be ruled out in the presence of a negative environment, it is possible to diagnose CD even when the young person's behaviors are rooted in environmental causes (Wakefield, Pottick & Kirk, 2002). This incongruity between how *DSM-IV-TR* intends a diagnosis of CD to be made (according to the text description and the list) and the way in which clinicians may actually assess CD (by applying the diagnostic criterion to a set of symptoms) opens the door to speculation about what clinicians actually attend to when assessing an antisocial adolescent.

**Conduct disorder and treatment.** Symptoms associated with conduct disorder are the

most common reason children are referred to psychiatric treatment in the United States (Kazdin, 1995) but it is not certain that all those treated for conduct disorder have been diagnosed according to a valid diagnostic standard (Hsieh & Kirk, 2003). It is estimated that 1 in 10 American children have a diagnosable mental illness (Satcher, 2001). Adolescents may gain access to mental health services in many different settings and can enter treatment via multiple pathways but it is likely that only 1 in 5 mentally ill children receive treatment (Satcher, 2001). Treatment options include inpatient, outpatient partial care, and residential care or outpatient therapeutic visits. These services may be provided by state and county facilities, private psychiatric hospitals or general hospitals as well as a variety of smaller community agencies. The failure to adequately serve seriously emotionally disturbed children, despite the array of treatment options, is often attributed to poor coordination between service systems and a disparity in access across racial, socioeconomic and ethnic groups (Satcher, 2001).

Mental health systems in several states are moving toward a “no wrong door” orientation where improved coordination of child-serving agencies results in easier access to services from any point of contact. The impact of these initiatives is not yet established but shows promise in reducing some service barriers (Dausey, 2007). An unintended outcome of this improved access to treatment may be that adolescents with non-pathological antisocial behavior will be treated the same as those who have a mental illness. This inadvertent “false positive diagnosis” may be viewed in the treatment community as benign since intervention is seen as helpful, regardless of the cause of the behavioral problem. Nonetheless, it is inaccurate labeling of mental illness (Wakefield, 2010). Clarifying the mechanisms of the diagnosis of conduct disorder will enable clinicians to more accurately identify antisocial behavior that is a sign of disorder and make appropriate referrals for treatment.

**Disorder and dysfunction.** The *DSM-IV-TR* specifies in the text that antisocial behavior without the presence of an underlying dysfunction should not be identified as conduct disorder. However, there is no further discussion in the *DSM-IV-TR* text about what constitutes an underlying dysfunction that indicates a mental disorder is present. This qualification, that dysfunction must be present, is an attempt to tie the diagnosis of CD to the definition of mental disorder used by the *DSM-IV-TR*. Disorder is defined as unexpected distress or disability that is likely to result in significant losses to the individual (APA, 2000). The presenting symptoms must be considered “symptomatic of an underlying *dysfunction* [emphasis added] within the individual and not simply a reaction to the immediate social context” (APA, 2000, pg. 96). Further confusing the diagnosis of CD is the lack of a definition of “dysfunction” in the *DSM-IV-TR*. The use of the behavioral criterion alone to identify disorder is, therefore, not sufficient to make a disorder judgment. The text of the *DSM-IV-TR* acknowledges that despite the utility of the behavioral list, clinicians must infer the presence of disorder from the presenting symptoms, the adolescent’s unique life circumstances and evidence of internal dysfunction. With no specific guidance around how these inferences should be made, clinicians must depend upon training and intuition (Kirk, Wakefield, Hsieh & Pottick, 1999). Clinicians must go beyond the list of symptoms provided by the *DSM-IV-TR* and attend to social context and dysfunction or risk inaccurate diagnosis.

**Proposed revision of the DSM.** *DSM-5* is scheduled to be released in 2013 with some changes to the diagnostic criteria for conduct disorder. The APA has made proposed changes available for public comment (APA, 2010). Among proposed changes are new diagnostic criteria that would allow for a “callous and unemotional” specifier to be added to the diagnosis. Discussion about distinguishing mental illness from behavior that is common in the population

but may also be found in mental illness is central to this discussion (Spiegel, 2010). False positive diagnosis resulting from the use of the *DSM* has historically been of concern (Wakefield, et al., 2002) and although the APA workgroup for the revisions propose conditions under which the specifier is appropriate, it does not clarify the distinction between antisocial behavior that indicates mental disorder and antisocial behavior that is non-pathological (APA, 2010).

### **Moral Development, Antisocial Behavior and Mental Disorder**

Low moral development in adolescents presents as a developmental failure that manifests as an inability to make moral judgments at the expected level of maturity for the age group (Gibbs, Basinger & Fuller, 1992) and a higher number of specific antisocial behaviors from the criterion required to diagnose CD (Chudzik, 2007). A moral judgment is a decision about behavior based upon awareness of a moral issue and the intention to act morally (Kohlberg, 1981). In situations where there is a high degree of social agreement about what constitutes right and wrong, the individual can depend on what is considered normative behavior to make a moral judgment. Social consensus reduces the need for individual moral judgments when there are external referents for what constitutes an appropriate action (Reynolds & Ceranic, 2007). The adolescent with low moral development either does not recognize the social consensus or is not motivated to conform to the expected moral judgment and is identifiable by deviance from expected moral behavior (Greene & Haidt, 2002).

Antisocial behavior is highly associated with lower than expected moral development in populations identified as “psychopathic” (having a mental illness) (Cicchetti & Richters, 1993). Adolescents that scored high on a self-report index of Conduct Disorder Intensity tested lower than expected for their age group on the Sociomoral Reflection Measure (Chudzik, 2007). The

connection between moral thought, moral action and non-normative behavior has long been the focus of investigation and it is unlikely that moral reasoning ability is the sole determining factor in judging between pathological and non-pathological antisocial behavior (Palmer, 2005).

Factors ranging from a propensity for risk-taking behavior (Romer, 2003); early or chronic substance abuse (Shader, 2003) to susceptibility to peer influence (Steinberg, 2008) may play a role, independently or in conjunction with deficits of moral development in adolescent antisocial behavior. Cognitive neuroscientists have identified areas of the brain that are associated with specific tasks in moral cognition (Greene & Haidt, 2002; Greene, Sommerville, Nystrom, Darley & Cohen, 2001) and a link between underdevelopment or damage to specific brain regions and conduct disorder has been established (Burke, Loeber & Birmaher, 2004). It is evident that the sources of adolescent antisocial behavior are varied and linked to low moral development and adolescent mental illness by common roots that are developmental in nature (Reynolds & Ceranic, 2007).

### **Theoretical Perspectives on Antisocial Behavior**

**Life course.** The broadly identified group of antisocially behaving adolescents is comprised of at least two distinct groups: those who have a pre-adolescent history of antisocial behavior and will continue to offend in adulthood, and those who offend only during the relatively brief adolescent period and are likely to desist in early adulthood (Moffitt, 1997). Further, these two qualitatively different groups may warrant two distinct theoretical explanations for the etiology of their antisocial behavior. The following section will give an overview of the work of Terrie Moffitt who proposed a typology of antisocial behavior based on the history or life-course of the behavior. For an exhaustive review of the typology and etiological theory, refer to Moffitt, (1997) and Moffitt, Caspi, Harrington & Milne, (2002).



Moffitt (1993a) identifies two types of adolescents who engage in antisocial behavior during the adolescent period: life-course persistent offenders and adolescence-limited type offenders. This typology forms a basis for discriminating between those adolescents that have a disorder that produces antisocial behavior and those that exhibit antisocial behavior for other reasons. In later work, Moffitt extended the theory to explore a third cohort of males who refrained from engaging in antisocial behavior. These so-called “abstainers” were relatively rare in their age group and tended to become more successful than their peers in early adulthood (Moffitt et al., 2002).

***Life-course persistent antisocial behavior.*** Longitudinal data suggest that the 4 to 9 percent of elementary school boys (under the age of 12) diagnosed with conduct disorder, the 3 to 6 percent of adolescent males convicted of a violent offense and the 4 percent of young adult males that self-report a sustained history of serious violence are likely the same group sampled at different developmental stages (Nock, et al., 2006). In Moffitt’s taxonomy, these are life-course persistent offenders (Moffitt, 1993a). The risk of life-course persistent offending may begin with a fragile infant who is difficult to manage and irritable. Such infants produce more negative responses from parents, which in turn produces a string of negative parent-child transactions. There may be a neuropsychological variance in such infants that determines their level of activity, ability to self-regulate, attentional and learning abilities. In turn, infants with neuropsychological deficits are more likely to be found in settings where their needs are least likely to be met. The parents of such children may themselves be struggling with the correlates of neural maldevelopment such as low occupational success and poverty and be raising their at-risk children in criminogenic settings. Antisocial behavior is generationally transmitted and parents of at-risk children may lack the psychological resources needed to cope with a difficult

child (Moffitt, 1993b). The pattern of life-course persistent antisocial behavior is statistically unusual at about 5 percent of the male population; it is maladaptive, has a theoretical biological basis and is associated with other mental disorders. Moffitt argues that life-course persistent offending is therefore a form of individual psychopathology that appears to have multiple determinants (Moffitt, 1997).

***Adolescence-limited antisocial behavior.*** Adolescence-limited type offenders by contrast, are a larger group of young men who temporarily and sporadically engage in antisocial conduct. These offenders are inconsistent across situations. A teen may assault peers in school or use drugs with friends, but keep curfew at home. There may even be crime-free stretches interspersed with spurts of offending. Causal factors may be specific to the adolescent development period and be influenced more strongly by situational factors (Moffitt, 1997). Understanding the tasks of adolescence becomes critical in understanding the course of adolescence-limited antisocial behavior under this taxonomy. The new behavior may be “helping” the teen to achieve some of his critical milestones, albeit by deviant means. The motivation for the behavior is found in the maturity gap that occurs during modern adolescence. Teens currently reach their physical and sexual maturity far earlier than in previous generations due to good health care and superior nutrition. They are also afforded far fewer adult privileges and responsibilities until they have reached an age of socially-defined maturity. This may be as late as age 21 when formal education has ended. Thus, for anywhere from five to 10 years, young people are biologically ready for adulthood before society expects them to fully participate in the workforce or establish intimate relationships. They are hormonally driven toward independence; yet remain dependent on the care of parents. This maturity gap may motivate adolescents to mimic the antisocial behavior of life-course persistent peers. When the

average adolescent notices that his deviant peers are free of the constraints under which he himself suffers, the potential perceived benefits of antisocial behavior outweigh the consequences (Moffitt, 1997).

Adolescence-limited offenders use their life-course persistent peers as models for antisocial behavior, even if they do not outwardly like or approve of these peers. This process of social mimicry accomplishes several things. Some developmental drives may be met, since the adolescent is acting independently and can obtain a certain amount of social status and power in his peer group. He is free of prohibitions and restrictions on his behavior imposed from outside of the peer group. The symbolic meaning of the delinquent act reinforces antisocial behavior. These behaviors are evidence of independent thought, and offer “proof” of maturity. The need for autonomy is satisfied and antisocial behavior is reinforced (Moffitt & Caspi, 2001). Thus, antisocial behavior in the adolescence-limited offender is a functional adaptation and not evidence of individual psychopathology. What is most striking about this type of adolescent is that when the maturity gap lessens or the situation changes and the behaviors are no longer functional, the adolescence-limited youth desists. They are able to change their behavior when the autonomy that they are legitimately achieving is threatened by the antisocial behavior. In their perception, the consequences of their actions would now have a negative impact on their ability to achieve their goals (Moffitt, 1997).

The appearance of antisocial behavior in adolescence is so common that it seems to warrant a non-pathological explanation. Consistent with the view that adolescence-limited offenders are not displaying pathology is the notion that antisocial behavior can be an adaptive, problem-solving effort in response to the strain of this developmental stage (Brezina, 2000). This approach attributes meaning to what would otherwise seem random, non-utilitarian behavior.

Antisocial behavior may seem to the adolescent to be a short-term strategy that increases their control over life-circumstances, enhances self-esteem and reduces negative affect. When adolescents display low-severity antisocial behavior it can be seen as a normal developmental variant. However, the problem-solving model has limited explanatory power when pathology is more strongly indicated, as when the adolescent exhibits high-severity or life-course persistent behavior, (Brezina, 2000; Moffitt, 1997; Moffitt, 1993a).

***Abstainers.*** Those who abstain from antisocial behavior in adolescence represent a special case that requires consideration (Moffitt, et al., 2002). Since adolescent antisocial behavior is so common that it is normative (Moffitt, 1997), those who refrain from it constitute a rare subgroup of adolescents. They may lack opportunity to mimic life-course persistent peers or, conversely, may belong to a subgroup that offers legitimate adult privileges. In the latter case, this group may not experience the maturity gap and its attendant frustrations and motivation for antisocial behavior (Moffitt, 1993b). In the former case, it has been supposed that this group of abstainers is made up of the “late bloomers” who are delayed in reaching puberty and who are excluded from their peer group due to personal characteristics (Moffitt, et al., 2002). Moffitt et al. found that by age 26, the personal characteristics that made these adolescents resistant to antisocial behavior made them successful in their personal and professional lives.

***Harmful dysfunction.*** A final step in linking disorder to a developmental context is needed. Psychopathology is more than merely a developmental deviation where an internal dysfunction can be identified. Wakefield (1997) puts forth the argument that a disorder is a dysfunction caused by the failure of an internal mechanism to perform its natural function and that the resultant condition causes the individual harm. Life-course persistent offenders have been found to have certain neuropsychological dysfunctions (Moffitt, 1993b). Incarcerated male

delinquents were correctly identified from control subjects by tests that indicated cognitive dysfunctions; abnormal development of complex cognitive processes associated with the prefrontal cortices and limbic inputs (Chretien & Persinger, 2000). Chretien & Persinger used the Conditioned Spatial Association Test (CSAT), the Paragraph Completion Test and the Watson-Glaser Critical Thinking Appraisal test. Additionally, they identified three variables -- number of errors, conceptual inflexibility and critical thinking -- that could be used to correctly classify 89% of the 55 male subjects as delinquent or non-delinquent. All findings supported the hypothesis that antisocial behavior could be predicted from delayed or abnormal cortical development which represented both developmental deviations and dysfunctions. These findings support the notion that the failure of an internal mechanism (i.e. a dysfunction) that should govern behavior underlies conduct disorder, and the harmful outcomes of chronic antisocial behavior are legion.

To make an accurate disorder attribution, the person making the judgment must be able to differentiate between true failure of a natural mechanism and normal variants of its function. The concept of harmful dysfunction (Wakefield, 1992) clarifies that a disordered youth is one exhibiting a pattern of antisocial behavior that results in a negative consequence and has an identifiable dysfunction. The Moffitt taxonomy proposes that the disordered adolescent is the one with a life-long pattern of antisocial behavior that persists even when it no longer serves the purpose for which it originally emerged. Self-protective aggression, for example, is no longer functional when the circumstances change and the threat is removed. Thus, the taxonomy proposing two types of antisocial offenders and the theory of harmful dysfunction (Wakefield, 1992) do not seem to conflict with each other. Taken together, these approaches to understanding aberrant behavior in adolescents may help sort disordered from nondisordered

problems in living.

### **Gender and Adolescent Antisocial Behavior**

Much of the work done in the study of conduct disorder focuses on boys, specifically. This may be attributable to the guidance and research cited in *DSM-IV-TR*, noting that prevalence of conduct disorder is significantly higher among boys (APA, 2000; Nock et al., 2006), to the availability for study of antisocial boys in secure confinement (Hawkins, et al., 2000) or to a recognition that antisocial males and females may have different disorder trajectories, and therefore may not be comparable (Wiesner, Kim & Capaldi, 2005). It is important to note that girls also exhibit antisocial behavior. With a prevalence rate for conduct disorder in the United States among girls at approximately 7.1%, they are significantly less likely than boys to have CD (Nock, et al., 2006). Due to these population differences, males and females with CD are often studied separately.

### **Study Purpose**

To date, there are no studies in the extant literature that examine the effect of the client's moral development and life-course on the social workers and social work student's attribution of mental disorder. The determination of underlying disorder relies on the clinician's judgments about the facts of the case. Antisocial behavior is a determinant for a conduct disorder diagnosis and is associated with both lower than expected moral development and a life-course persistent history of problems. This study examined whether information about the moral development of antisocial adolescents influences social work clinicians' and social work students' judgment that the adolescent has a mental disorder. Further, it explored whether information about the course of adolescent antisocial behavior influences social work clinicians' and social work students' judgment that mental disorder is present. Primary data was collected from professional social

work clinicians and social work students to test four specific hypotheses based on these questions. Finally, the potential role of social work clinicians' and social work students' own characteristics on their mental disorder judgments was assessed. Deeper understanding of how the diagnostic criteria provided to professionals are actually applied in practice and which qualities in the history of the adolescent influence the clinician's judgment, may provide important insight into the utility of these guidelines as a tool to support clear clinical distinctions between those adolescents that have a mental disorder and those that are merely exhibiting a normal developmental variant in behavior.

## **Chapter Two**

### **Literature Review**

This chapter includes a review of relevant theoretical and empirical literature and the research hypotheses derived from this literature. The examination of previous work encompasses several intersecting areas: (1) clinical decision making (2) discrimination between disorder and non-disorder (3) moral judgments (4) course of antisocial behavior and (5) clinicians' characteristics and clinical decision making. First, the developmental theories that have most influenced the way modern clinicians look at moral development are reviewed. Then, an overview of clinical judgment research drawn largely from the field of social psychology is presented. This is followed by an exploration of the ways in which disorder and non-disorder judgments are made. Then the conceptual and empirical literatures on moral development and the course of adolescent antisocial behavior are reviewed, concluding with an examination of how these two bodies of work may lead to new understandings of the process of clinical judgments and labeling of mental disorder. Finally, because clinical judgment may be influenced by factors that are outside of the diagnostic process, literature that investigates those factors is also reviewed. This chapter highlights the current state of knowledge, gaps in current research and provides conceptual support to the proposed hypotheses.

#### **Theoretical Perspectives on Moral Development**

Jean Piaget and Lawrence Kohlberg offer a way of thinking about levels of moral development that could have clinical significance. Piaget (1969) proposed stages



of development during which the mind structures information and actively attempts to fit new perceptions into mental structures called schemas. Piaget divided development into four stages: sensorimotor (infancy to 2 years), preoperational (ages 2-7), concrete operations (7-11) and formal operations (11 to adolescence). It is in the preoperational stage that children learn to tolerate their own affect and manage aggressive feelings without behavior that is socially unacceptable. The emergence of moral understanding occurs in this early developmental stage.

In *The Moral Judgment of the Child* (1932), Piaget addresses how children make moral decisions according to their stage of development and identifies negative behaviors that are common for normally developing children. Piaget theorized that children go through two stages of moral development: heteronomous morality and autonomous morality. Piaget's (1971) stages framed the development of morality as a sense and understanding of morality, and did not reflect the appearance of moral behavior. He identified the stage of moral realism (heteronomous morality), during which children believe that all rules should be obeyed, that they are real and "true". In the moral relativism stage (autonomous morality), children realize that rules are agreements among people and can change as appropriate to the needs of the people.

Piaget focused on the preadolescent developmental stages ending at about 11 or 12 years of age. However, his work documented that during adolescence, formal operational thought and the process of adaptation lead to cognitive changes. It is a time during development when the adolescent is preoccupied with internal processes, thinks about and analyzes thinking, evaluates and conjectures about the effect of one thing upon another and is generally occupied with the self. Insight, as well as self-centeredness, may

be the result of these processes. Adolescents also begin to anticipate the reactions of others to them and their developing abilities and lump others into large categories while viewing themselves as unique. However, as egocentrism declines, adolescents may become better at accurately seeing themselves from the point of view of others and use this information in constructing their own self-image (Piaget, 1969). Adolescents, as they progress through the formal operational stage, are constantly changing.

Building on Piaget's work, Lawrence Kohlberg (1969) expanded upon these stages to describe the development of moral judgments. Piaget's work was critical in providing a foundation for Kohlberg's assertion that moral development in children follows a somewhat predictable path that occurs during clearly identifiable stages. Piaget (1932) and Kohlberg (1981) held in common the belief that cognitive development underlies all moral growth in childhood and that moral development is progressive, hierarchical, and moves through clear stages without variance. Moral development occurs as a result of interaction with the environment and not merely as a result of maturation.

Kohlberg's stages are summarized in Figure 1 in the appendix and as follows: Level 1- Preconventional thinking (also referred to as pre-moral), stage one, heteronomous morality. During this stage the child is oriented toward obedience and obeys rules to avoid punishment. Stage two is called individualism or instrumental purpose. The child obeys rules to gain rewards or get favors and believes that what is right is what an equal exchange is. The perspective is concrete but the child is aware that others may have other conflicting interests. Level 2- Conventional thinking, stage three, mutual interpersonal expectations and group conformity. The child is oriented toward

approval, maintains good relations and thus sees himself as a good person. He conforms to avoid disapproval. Stage four, authority maintaining and conscience. Conformity helps the child to avoid punishment and guilt. He also understands the interdependence of the social system and the need for rules that everyone follows. Level 3-

Postconventional (also called autonomous) thinking, stage five, social contract. The child believes in individual rights, works to maintain the respect of others and believes that democracy and community are important. Stage six, individual principles. The child avoids self-condemnation by following a set of ethical principles that he has chosen for himself. The principles reflect human rights, a respect for human dignity and the intrinsic value of human life. Laws are valued because they generally agree with these principles (Kohlberg, 1981).

Kohlberg's work in this area of study conceptualized moral development as a continuum. He and subsequent investigators frequently found a relationship between antisocial behavior and immature moral reasoning ability (Kohlberg, 1978). Studies using Kohlberg's model for moral development to evaluate subjects' judgments, looked for evidence of postconventional or principled morality (Kohlberg's level 3) but expected to at least find subjects reasoning at a conventional level (Kohlberg's level 2), in stage three or four. Generally, this body of work established that adolescents who ranked higher on antisocial behavior were less able to perform moral reasoning tasks at the mixed stage 2/3, which is typical and expected in adolescence (Kohlberg, 1978).

Although Kohlberg labeled three levels of moral development, each containing two stages, he argues that not everyone will reach the highest moral level (Kohlberg, 2008). Kohlberg's theory qualifies as a developmental theory by meeting the following

criterion: (a) The stages are in an invariant order (b) The higher stages include the lower ones creating a hierarchical structure (c) Each level requires a new set of cognitive abilities. Thus reaching the next level means the individual has developed a more complex system of thought and will perform consistently at one level of moral judgment. In Kohlberg's model, behavior progresses from conforming due to the threat of censure to internally motivated and highly moral behavior. Progress from one stage to the next is spurred by cognitive disequilibrium, often caused by peer interactions. As the individual seeks to re-establish balance, cognitive growth occurs (Kohlberg, 1981).

The beginnings of formal operations precede the attainment of moral stage three. Moral stage three enables the individual to participate successfully in society. Subjects displaying antisocial behavior often operate below stage three of moral reasoning and mentally ill children with antisocial behavior are demonstrably lower on all moral dimensions. When adolescents demonstrate low moral development, pragmatically, it can be interpreted as lack of conscience and a failure in perspective-taking ability. Since this is a developmental deviation, it may be said that an internal mechanism (i.e. moral reasoning ability) has failed to function as it was naturally intended to function. The internal dysfunction criterion is a central tenet in the classification of mental disorder. This idea was tested in this study by examining the extent to which social work clinicians and social work students react to lower than expected levels of moral development in an adolescent subject when they assess for the presence of disorder.

### **Clinical Decision Making**

A common nomenclature is required to have meaningful communications around dysfunctional behavior and aberrant thinking. From this need came the development of

official diagnostic systems such as the *DSM* and *ICD-10* which specifically address the classification of psychopathology. Formalized definitions of psychopathology that are carefully conceptualized, scientifically researched and empirically tested give professionals who deal with psychopathology a common language. Although these systems may be flawed, they provide a common conceptual foundation upon which conversations and research can be based (Widiger, 2008).

Validity is a crucial component of clinical decision making. Clinicians routinely need to assess clients and make clinical judgments about the nature of the presenting problem. They formulate some predictions about how the problem will evolve and what types of interventions will be most effective based upon those judgments. Causal and clinical judgments are based on simple rules that impact our judgments (e.g. heuristics) and on cognitive differences among clinicians that contribute to common errors in judgments (Garb, 2005). Accurate judgments of mental disorder may depend upon the clinician identifying and overcoming their personal heuristics and implicit models about behavior and personality that influence clinical judgment (Garb, 2005). A clinical judgment is the result of an informal process wherein the clinician gathers information, combines it from diverse sources and makes a prediction based upon training, intuition and experience. This is the most common way in which psychological assessment is done and clinical labels are assigned. However, the method is often subjective, imprecise and varies from clinician to clinician (Garb, Lilienfield & Fowler, 2008).

An alternative approach to clinical decision making uses mechanical means. A clinician enters data about the client into a mathematical formula which produces an actuarial prediction model or a computerized algorithm that approximates a human judge.

The resulting mechanical prediction is replicable and, theoretically, requires little clinical training and experience of the person who enters the information (Grove, Zald, Lebow, Snitz, & Nelson, 2000). Clinical (subjective) and mathematical methods for making clinical judgments are on opposite ends of the spectrum, and yet each has its own sources of error.

Many studies comparing the accuracy of clinical and mechanical predictions and accuracy exist in the literature. Grove et al. (2000) conducted the first large scale meta-analysis of studies that compares human to mechanical judgments. It included 136 studies dating back as far as 1945 in the health and mental health arena that compared human and mechanical predictions about traits, states, human behavior, psychological or medical diagnosis or prognosis. By finding one effect size (ES) for each study and making a transformation, they identified a range of transformed ES's between  $-.03$ , where clinical prediction is superior, to  $.74$  where mechanical prediction is markedly superior. Only eight studies (6%) identified clinical prediction as superior to mechanical prediction using this method, with about half of all studies ( $N= 63$ ) favoring mechanical prediction. Where the differences between clinical and mechanical prediction were not as large, clinical prediction was equal to mechanical prediction ( $N= 65$ ). They concluded that mechanical prediction was superior in many settings and across many domains. The effect was not influenced by how much information was used as input, by the setting (medical versus psychological), the date of the study and the training or experience of the clinician. Mechanical prediction was better in many settings but by a small margin. This means, conversely, that clinical judgment is *nearly* as good as mechanical prediction. Despite this support for the superiority of mechanical prediction, current clinical

diagnostic practice is guided predominantly by subjective decision-making. The evidence that subjective decision-making approaches the accuracy levels of mechanical prediction is encouraging, yet underscores the importance of understanding clinical judgment making, and the need to improve its accuracy.

A recent meta-analysis of 67 studies covering 56 years of clinical research concluded that clinicians can improve their diagnostic accuracy up to 13% by using statistical prediction models (Aegisdottir et al., 2006) to counter the impact of individual clinician differences on judgments. It isolated 92 effect sizes that directly compared the accuracy of clinical judgments to statistical predictions. The researchers found a small but consistent and reliable mean weighted effect size confirming that statistical prediction models were more accurate than clinical judgments on eleven prediction tasks. Clinical decisions were accurate 47% of the time,  $(.50 - r/2) \times 100$ , but statistical decisions had 53% accuracy  $(.50 + r/2) \times 100$ . Although the improvement in accuracy using the statistical method is modest, it replicates findings in earlier studies (Grove et al., 2000), and raises concerns about the routine way in which clinical judgments are made.

Accuracy in judgments is often critical to providing the most effective intervention. Consider the prediction of suicidality. A 13% improvement in accurate prediction and intervention could save many lives. To improve diagnostic accuracy, there is support in the literature for the use of statistical models to support clinical predictions, participating in ongoing diagnostic training, and being aware of potential sources of error. In mechanical assessment, the low validity of some commonly used assessment instruments has been identified as one source of judgment error. Some researchers have suggested that where an instrument is not wholly valid, clinical

experience may improve the accuracy of clinical judgments (Aegisdottir et al. 2006; Grove et al., 2000). However, in the assessment of personality and psychopathology, the idea that experience improves accurate clinical judgment has not been supported by the research (Garb, 2005). This will be explored further in the next section.

To improve diagnostic accuracy, the meta-analytic literature supports the use of statistical models to improve clinical predictions as well as recommending that clinicians participate in ongoing diagnostic training to develop awareness of potential sources of error. The uncertainty over whether clinical judgment or statistical prediction is more accurate in predicting the likelihood of a clinical event dates back to the work of Paul Meehl (1954). According to Westen and Weinberger (2004), “Fifty years of research suggests that when formulas are available, statistical aggregation outperforms informal, subjective aggregation much of the time. However, these data have little bearing on the question of whether, or under what conditions, clinicians can make reliable and valid observations and inferences at a level of generality relevant to practice or useful as data to be aggregated statistically. An emerging body of research suggests that clinical observations, just like lay observations, can be quantified using standard psychometric procedures, so that clinical description becomes statistical prediction” (pg. 595). Given what is known about the accuracy of mechanical predictions and the necessity and utility of clinical predictions, current practices incorporate the strengths of both approaches. Research finds, however, that in action, statistical models and clinical models are not always complete, and may correspond with clinical failures in validity.

To evaluate clinical accuracy, one method is to examine inter-rater reliability comparing different clinicians on the evaluation of the same subjects. In this research,



the degree to which multiple raters adhere to diagnostic criteria can be compared and the variability in informal assessment can be compared. There is some evidence that inter-rater reliability in describing psychiatric symptoms is quite good, while results varied widely in the assessment of personality traits (Garb, 2005). *DSM-III* (1980) field trials demonstrated high-rates of inter-rater reliability, for example, but it has been argued that this result is tied to the high degree of awareness on the part of participants that their adherence to criteria was under scrutiny. Drawing from a sample of 200 psychiatric patients, Basco et al. (2000) found that researchers could identify 96 comorbid disorders using a semi-structured interview. Clinicians using traditional diagnostic methods identified only 35 in the same population. This supports previous work that found mechanical or guided assessment to be more accurate than clinical assessment alone.

Although there is some evidence that statistical models may result in more accurate labeling of disorder, there are also weaknesses inherent in dependence on labeling algorithms. First, prescriptive interviewing, computer assisted assessments, and aggregate symptom data may not be readily available in the settings in which clinicians are routinely asked to make clinical judgments. Second, even when using an atheoretical assessment process, which should by its nature, be objective, the human judge brings subjectivity into the process. What data is attended to and included in any assessment model is integral to the clinical orientation of the judge (Westen & Weinberger, 2004).

Research has shown that clinicians also tend to attribute causation according to their internal theories about disorder, even when the information they use for assessment is an atheoretical list of features (Kim & Ahn, 2005). These causal inferences influence their diagnostic judgments and case formulations. In a study of psychologists and

psychology graduate students, Kim and Ahn (2005) presented a list of diagnostic criteria and associated symptoms for a phobia and asked respondents to draw arrows between symptoms that they believed were causally related. Respondents were also asked to state the strength of these relationships and provide an explanation for the connections. From this information a mean for diagnostic importance was assigned to each symptom or criterion. The authors found that respondents made causal attributions; in addition, when a symptom was omitted from perceived causal relationships, its mean diagnostic importance was lower than when it was perceived as causal. This is significant since each diagnostic criterion is intended to have equal weight in the diagnostic process. Further, there was a marked trend toward identifying those symptoms that were causally central to the clinicians' theory of the disorder. Clinicians tended to pick out the symptoms that supported their theory and place greater weight on them in their disorder judgments. In sum, it appears that clinicians make causal attributions that influence their clinical judgment, making it critical to identify (1) what in the client's presenting symptoms may trigger the development of clinician's judgment of disorder, and (2) what weight the clinician may be giving to the presumed causal relationship between symptoms. When this dynamic occurs in the assessment of conduct disorder, clinicians might be expected to give weight to those aspects of the clinical picture which fulfill their expectations about a conduct disordered client. This should cause speculation about what those aspects are and whether or not they are pieces of the clinical picture which could indicate internal dysfunction. In the literature, however, there is very little exploration of what clinicians see as internal dysfunctions or how evidence of an internal dysfunction influences judgments.

These studies shed light on the way that clinicians use factual data to make predictions and assign labels. Based on this body of research, it might be expected that clinicians will pick out those *indicators* of disorder that are central to their *conceptual framework* for disorder as they make judgments. When interpreted using the structure of *DSM-IV-TR* criterion for conduct disorder, this should result in disorder judgments. It is known that clinicians can make errors in causal attribution but it is not known what in the client's symptomology causes errors in identifying mental disorder. This study will explore how clinicians react to and incorporate clinical information that may be part of their concept of disorder but is not necessarily part of the diagnostic criteria for disorder.

### **Discrimination Between Disorder and Non-disorder**

The next section describes the extant research on the way that clinicians make clinical judgments of mental disorder and non-disorder. *DSM* criteria provide concrete guidelines that should reveal what information about a client the clinician attends to when labeling a client with a mental disorder. The difficulty of accurately diagnosing conduct disorder rests principally on the apparent conflict in the *DSM* between the syndromal diagnostic criteria and the discussion in the supporting text which specifies that the antisocial behavior must be the result of a dysfunction in the individual (APA, 2000; Wakefield, et al., 2002). The clinician must determine during the diagnostic interview not only that the diagnostic criteria for CD are met, but that they are met due to an internal dysfunction.

There is a potential for false positives in the diagnosis of all disorders and this is true for conduct disorder as well. Clinicians must be able to infer that a developmental

system is not functioning as expected with antisocial behavior as the result. However, once a conduct disorder label has been assigned, there is no specific designation identifying the precise source of the dysfunction upon which the diagnosis is based. It is entirely possible that a great many diagnostic judgments of conduct disorder are in fact based solely on the diagnostic criterion without reference to underlying dysfunction. In evaluating the body of work that studies the determination of disordered antisocial behavior, it may be pertinent whether the study accepts diagnosis of conduct disorder based on syndromal evidence alone. Recent empirical studies have focused on the concept of dysfunction and its connection to disorder judgments, and investigated the idea that the context in which the behavior occurs may have a significant impact on disorder judgments. The correct distinction between disorder and no disorder may depend on the clinician attending to information about context and using it to infer whether an internal dysfunction exists in order to make a judgment about mental disorder status.

Kirk, Wakefield, Hsieh and Pottick (1999) constructed nine case vignettes, using *DSM-IV* criteria for conduct disorder. They created three case histories that met diagnostic criteria then manipulated the social context. The context conditions were called “neutral”, “environmental reaction” and “internal dysfunction” resulting in a total of nine vignettes. Data were collected from 250 first and second-year MSW students at two university sites. Students had a mean age of 32 and 82 percent were female. The sample was 62 percent Caucasian, 11 percent African-American, 11 percent Hispanic, and 10 percent Asian. Respondents were asked to read vignettes and respond to statements indicating clinical judgments on a Likert-type survey instrument. The

literature based upon these vignettes will receive particular attention here, as it looks at how clinicians make disorder judgments about conduct disordered adolescents when other factors are varied in the clinical picture. To date, no work has been done that combines moral development as an independent variable and clinical disorder judgments as a dependent variable.

Generally, social work students were able to distinguish mental disorder from no disorder in antisocially behaving adolescents. As expected, respondents agreed that the internal dysfunction vignettes described disorder and did not report disorder in the environmental reaction vignettes. For each of the three vignettes, there was a statistically significant difference between mean disorder judgments for both the internal dysfunction and the environmental reaction conditions. When disorder judgments were dichotomized into agree/disagree response categories and responses were aggregated across vignettes, 68 percent agreed that disorder was present in the internal dysfunction condition. In the case of the environmental reaction condition, only 10.8 percent agreed that disorder was present. Respondents considered the antisocial behavior exhibited in the environmental reaction condition to indicate a normal reaction to difficult circumstances. They were more likely to judge that a disorder was present in the internal dysfunction condition where the pattern of behavior and symptoms were not rational, goal-directed and demonstrated a lack of empathy.

In an effort to explore attribution error among respondents, Kirk et al. (1999) reasoned that respondents who responded with the same judgment despite contextual information qualified as biased. One-third of respondents showed such a bias, with 82 percent of that group biased in the direction of no disorder. These findings are limited by

several factors. Social work students were making assessments of hypothetical cases and the study did not actually test what they do in practice. Students may not make decisions in the same way as experienced practitioners or those with more specific training in the use of *DSM-IV*. The findings highlight that a tendency to depend on *DSM-IV* criteria for diagnosing conduct disorder may result in over-diagnosis if the context of the behavior is not taken into account and that clinician's theories about dysfunction and the role of context may be the critical factor that determines accuracy.

In a study based upon the same sample described above Wakefield, Kirk, Pottick, & Hsieh (1999) found that the attribution of disorder in the internal dysfunction context was associated with more negative prognosis, with greater need for professional mental health treatment and with greater need for medication. Overall, respondents rejected the appropriateness of medication. Respondents who judged the adolescents as disordered also judged the behavior as likely to continue, and felt the youth would require both mental health help and medication. This relationship remained even with context held constant. Disorder attribution was positively related to other clinical judgments even when context manipulations were removed. Interestingly, 44.3 percent of respondents who found no disorder agreed to a negative prognosis. This finding may reflect the social workers' knowledge that hostile environmental contexts may not get better and tend to have an enduring impact on social adjustment. Youthful populations tend to have little control over or ability to improve circumstances on their own. They may therefore be seen as likely to continue in the same circumstances, using the same behavior, and suffering the same consequences. The results also indicated a bias against medications. Only 33.7 percent saw medication as appropriate even when they judged disorder to be

present.

Vignettes that reflected symptoms for conduct disorder were used to test whether social work and psychology students make the disorder attribution using their own internal concept of dysfunction and whether they are influenced by the context in which the behavior occurs (Wakefield, Pottick and Kirk, 2002). Vignettes were manipulated so that the antisocial behaviors of adolescents who meet the criteria for conduct disorder were attributable to an internal dysfunction or a reaction to a negative environment (non-dysfunction). This work addressed the issue of false-positives in the diagnosis of conduct disorder which occurs when conduct disorder is diagnosed and the behavioral criteria for conduct disorder are met, but there is no evidence of an internal dysfunction. The sample of 117 experienced graduate psychology and social work students supported the hypothesis that judgments of disorder are appropriate only when symptoms are due to an internal dysfunction. This finding also affirmed that clinical judgments are more in keeping with *DSM-IV*'s text, which requires an internal dysfunction be present in order to diagnose conduct disorder than with the diagnostic criteria, which are strictly behavioral. Recommendation for professional help was not, however, dependent upon the presence of an internal dysfunction. Even when respondents judged no disorder was present, treatment was recommended. Symptoms were not viewed as transient merely because they were the result of a negative environment (Wakefield et al., 2002).

In a study that expanded the findings above, Hsieh and Kirk (2003) sampled 483 experienced psychiatrists, 40% identifying themselves as child and adolescent specialists. The researchers used one vignette altered to reflect three environmental contexts and three race/ethnic backgrounds, producing nine vignettes total. Social context had a

significant effect on the psychiatrists' determination that disorder was present, with fully 96.1% agreeing that disorder was present in the internal dysfunction context. The results supported the hypothesis that a youth meeting criteria for the diagnosis of conduct disorder may be judged not to have a disorder, depending on the context in which the behavior occurs. The dysfunction requirement again was found to influence disorder judgments (Hsieh & Kirk, 2003). This result supported earlier findings but also highlighted that a classification system that depends on behavioral indicators and does not account for context may have inherent weaknesses.

In a test of diagnostic consistency, Kirk and Hsieh (2004) conducted an additional study that involved mailing a vignette from the previous work and a Likert scale asking for clinical judgments to 1,540 mental health professionals (Kirk & Hsieh, 2004). The professional fields represented included social work ( $N=454$ ), psychologists ( $N=603$ ) and psychiatrists ( $N=483$ ) for a representative sample of each group. Here the findings indicated that social context had an effect on diagnostic judgments but professional affiliation also appeared to have an effect. Social workers were less likely to diagnose conduct disorder in each social context than were psychologists and psychiatrists and were more likely to indicate no disorder. Further, diagnostic consistency (meaning those who reached a diagnosis of conduct disorder when behavioral criteria for conduct disorder were met) was not as strong as one might expect as only about half (45.5%) of the respondents used conduct disorder as a primary diagnosis. While the internal dysfunction context did produce judgments of disorder, they did not consistently produce diagnosis of conduct disorder but included various impulse control disorders or mood disorders.



Factors within the clinicians' perceptions about internal dysfunction and normal reactions to a difficult environment may have a mediating effect on their determinations about the presence of mental disorder (Kirk & Hsieh, 2009). If a clinician is strictly guided by the DSM, we should consistently see a mediating effect as the social context of the behavior is taken into consideration. Using the sample of professional respondents described elsewhere (Kirk & Hsieh, 2004), Kirk performed a bivariate analysis that confirmed that perceptions of internal dysfunction were associated with disorder judgments and that perceptions of normality were not. Interestingly, the researchers found that 32% of respondents did judge a mental disorder to be present even though they did not identify there to be an internal dysfunction. This conflicts directly with the DSM requirement that in the absence of internal dysfunction, no disorder judgment can be made. When logistic regressions were performed to further explore the significant relationships, perception of internal dysfunction did partially mediate the statistically significant effect of context on disorder judgments (log ratios went from 7.06 to 5.13 in the internal dysfunction vignette).

There is evidence that clinicians can identify disorder when it is present and do not diagnose it when the behavior is clearly linked to environmental context. They may even specify that this judgment is related to evidence of internal dysfunction. However, it is not known which specific behaviors, verbalizations or historical facts express *dysfunction* to clinicians interviewing clients exhibiting antisocial behavior. The body of work described above suggests that clinicians make distinctions between normal and non-normal antisocial behavior based on whether they believe that a youth is reacting to problematic environments or that the youth's internal, biological mechanisms are not

functioning properly. Likewise, if moral development or the course of antisocial behavior is implicated in clinician's identification of mental disorder, it may lend empirical support to the argument that low moral development and/or severe course are perceived as evidence of internal dysfunction. Moreover, it may further clarify a type of internal dysfunction the clinician should be looking for, per *DSM-IV-TR* specification, to accurately diagnose conduct disorder.

The above literature begins to address the judgment of mental disorder status for adolescents. What is unclear and unstudied in the literature is whether clinicians use information about moral development and the course of the antisocial behavior in their assessment of mental disorder in the same way that they have consistently taken into account the context of the behavior. Therefore, this dissertation sought to explore whether moral development and severity of antisocial behavior affect clinician's judgments of mental disorder. Research in this area may clarify the link between moral development, course of antisocial behavior, and judgment of mental disorder and further expand the concept of internal dysfunction as it applies to the classification of disorder in antisocial adolescents. The next two sections describe research on moral development and course of antisocial behavior, and propose specific hypotheses regarding the relationship between each variable and clinicians' judgment of mental disorder.

### **Moral Development**

While anecdotally clinicians have long regarded the level of moral development of a youthful client as information that may clarify mental disorder status, empirical study of the relationship between moral development in antisocial youth and the professional judgment of mental disorder does not exist. Low moral development is an established

correlate of antisocial behavior ( Chudzik, 2007; Gibbs, 2003; Killen & Smetana, 2008; Kohlberg, 2008; Schonfeld, Mattson, & Riley, 2005). Further, antisocial behavior is a primary indicator of conduct disorder but as yet there is no information about how the presence of low moral development may influence the assessment of mental disorder.

Level of moral development is generally assessed using one of the well-established inventories based upon Kohlberg's work (Basinger & Gibbs, 1987; Gibbs, Widaman, & Colby, 1982; Gibbs, Basinger, & Fuller, 1992). Dependent variables are chosen from the array of concerns that have a clear theoretical link with low moral development, such as aggression, criminal conduct, cognitive distortion and social participation (Palmer, 2005). The most notable aspect of this body of literature is the rarity of studies in which level of moral development has been conceptualized as a *dependent* variable, although several risk factors are associated with antisocial behavior and could be seen as affecting a youth's moral development. Studies where the level of a subject's moral development is the predicted dependent variable are scarce. Rather, much of the work in this area is conceptual in nature. Authors use key moral concepts to discuss relationships among socially important behaviors and cognitive processes that may act as mediators of behavior. The result of this type of work is typically a proposal for changes in the developmental framework by which moral development is understood. Often, suggestions for interventions to change antisocial behavior based on this new conceptualization follow. The conceptual and philosophical approach to deconstructing and then integrating moral development into a cognitive developmental framework is evidence in itself that operationalizing and testing the concept of moral development is inherently complicated.

A frequent criticism of the empirical study of moral development in youth is that subjects displaying low moral development tend to be drawn from an incarcerated population that is then compared to a “normal” group in the public school system. This method overlooks the fact that within the public school system there is a group of unidentified adolescents involved in delinquent behavior, who are mixed into the “normal” sample but could be just as antisocial as the delinquent group. A potential error is thus introduced into such studies. There is one study that looked at the relationship between low moral development and conduct disorder, while addressing this methodological weakness (Chudzik, 2007). The researcher used a public school sample and administered a self-report inventory of conduct disorder symptoms. Four positive symptoms included the subject in the frame and placed them in a high conduct disorder ( $N=28$ ) or low conduct disorder group ( $N=32$ ). The mean age for both groups was 15.8; placing subjects well within the developmental period where moral judgment should be well- established. The Sociomoral Reflections Measure-short form (Basinger & Gibbs, 1987), an instrument based upon Kohlberg’s work, was used to assess the youth’s level of moral development. As expected, Basinger and Gibbs (1987) found that youth in the high conduct disorder group exhibited lower moral development than those subjects in the low conduct disorder group. However, the low conduct disorder group also demonstrated lower than average moral development for their age. This study confirmed that low moral development is associated with conduct disorder, even when eliminating a source of sampling bias found in previous work.

There is ample evidence that moral development as conceptualized by Kohlberg is lower among youth with severe antisocial behavior than in those youth with relatively

minor antisocial behavior (Kohlberg, 1978). Likewise conduct-disordered youth have lower levels of moral development and they tend to hold more antisocial beliefs than average adolescents (Loeber, 1991; Loeber, Burke, Lahey, Winters & Zera, 2009; Shader, 2003). In the delinquency field, youth displaying high levels of delinquency have a lower level of moral judgment, not only relative to normal subjects, but even relative to subjects displaying lower levels of delinquency (Chudzik, 2007b). In effect, as measures of delinquency increase, competency in moral judgments decreases. Further, characteristics of clients can impact the diagnostic decisions of clinicians (Garb, Lilienfeld, & Fowler, 2008). Nor is there specific research examining how the moral development level of the client impacts disorder judgments of the clinician. Thus, a clinician discriminating between antisocial youth who have a mental disorder and those who do not, must rely upon *DSM-IV-TR* criteria for conduct disorder. This in turn hinges upon the insufficiently defined concept of disorder found therein.

### **Life-Course Persistent vs. Adolescence-limited Antisocial Behavior**

The notion that those arrested before the age of 12 can be identified as life-course persistent, are substantively different than those who offend after age 12, and potentially have a more difficult and enduring problem is salient to professionals and begs substantiation. Research exploring these assumptions is represented by the work of Terrie Moffitt (1993a, 1993b, 2003) and a number of other researchers and scholars. This work is reviewed here.

Life-course persistent antisocial behavior is characterized by neurological deficits that place youth at risk for greater impulsivity and low verbal intelligence (Moffitt, 1993a, 1993b). These risk factors interact with criminogenic factors in the environment

to produce a pathological personality. In contrast, there is a group of youth who offend only during adolescence, tend to have a later onset to antisocial behavior and have fewer negative adult outcomes. In this group, antisocial behavior is a strategy used to help youth adjust to maturity gaps in adolescence. It is a social process and because it is so common, it is nearly normative (Moffitt, Caspi, Harrington, & Milne, 2002).

In a direct test of Moffitt's taxonomy, 826 male delinquents were evaluated and of this group a population of early onset offenders ( $N=191$ ) and late onset offenders ( $N=151$ ) were identified for comparison (Parker & Morton, 2009). Subjects age ranged from 11 to 17 with a mean of 14.89 ( $SC=1.2$ ). 46% were white ( $N=446$ ) and 54% were black ( $N=446$ ). Family income, verbal intelligence and impulsivity were measured by the WISC-III and the MMPI-A. Univariate ANOVA indicated that black and white delinquents differed significantly in their family income ( $F(1,824)=55.6$ ,  $p<.001$ ), verbal intelligence ( $F(1,824)=215.0$ ,  $p<.001$ ), and in their disinhibition scores ( $F(1,824)=4.2$ ,  $p=.04$ ). Among black youth, verbal intelligence was lower for the early onset offenders and in white offenders was nearly in the average range. Low family income was a consistent predictor of early onset delinquency for both black and white youth. Impulsivity was more important to early onset for white adolescents and was not significant for black adolescents. Black adolescents were at greater risk for early onset offending even when all three variables were controlled. The exception to this finding was the instance where the risk factors low family income and verbal intelligence were absent. In the absence of both, black and white youth had similar risk of early onset delinquency. The study lends modest support to Moffitt's hypotheses regarding specific risk factors for life-course persistent antisocial behavior and previous work identifying

neurological correlates to antisocial behavior (Moffitt & Caspi, 2001). It contributes to the body of work exploring the possibility that black adolescents are exposed to family, environmental and other criminogenic risk factors that place them at higher risk for antisocial behavior (Piquero, Moffitt, & Lawton, 2005).

The Virginia Twin Study of Adolescent Behavioral Development (VTSABD) conducted a longitudinal study on a large population of male twins ( $n = 1037$ ) (Silberg, Rutter, Tracy, Maes, & Eaves, 2007). Genetic and prospective data from 10- to 17-year-old twins were used to examine developmental differences in the etiology of antisocial behavior. Both mothers and children completed self-report instruments tracking symptoms of conduct disorder. The researchers identified a single genetic factor influencing antisocial behavior beginning at age 10 through young adulthood (life-course persistent) and a shared-environmental effect beginning in adolescence (adolescent-onset). Their findings are consistent with Moffitt's developmental theory of antisocial behavior and specific hypotheses regarding biological influences in the development of life-course persistent antisocial behavior. These results also confirm and expand a twin-study conducted earlier from a national data set and using data from the Environmental Risk Longitudinal Study. That work concluded that the cumulative risk factors in multi-problem families reduce the likelihood that youth will be resilient to maltreatment and the development of antisocial behavior (Jaffee, Caspi, Moffitt, PoloTomas, & Taylor, 2007).

The evidence supporting Moffitt's taxonomy of life-course persistent and adolescence-limited adolescent antisocial behavior is accumulating in the literature. Life-course persistent youth are substantively different from adolescence-limited youth on neurological measures, genetic markers, impulsivity, verbal intelligence, exposure to risk

factors, and adult pathology. There is great promise that this knowledge will evolve into better diagnosis, improved interventions and ultimately greater behavioral improvement for youth wherever they come in contact with the mental health care system.

Several longitudinal studies have established a strong relationship between a history of behavioral problems in childhood and subsequent difficulties in functioning effectively in adulthood (Broidy et al., 2003; Colman et al., 2009; Fergusson, Horwood, & Ridder, 2005; Kim-Cohen et al., 2003; Moffitt et al., 2002; Moffitt, 2003; Sourander et al., 2005; Wiesner, Kim, & Capaldi, 2005). Chronic high-level offenders and chronic low-level offenders on different trajectories tend to have mental health issues that follow them into adulthood. Those studies that target problem behavior beginning before adolescence can be viewed as studies pertaining to life-course persistent adolescents. Since this body of work takes as its beginning point a sample of subjects with known adult pathology, it is not generally possible to identify a subgroup of subjects that could be viewed as adolescence-limited in their antisocial behavior.

The Christchurch Health and Development study, a 25-year longitudinal study, found a clear relationship between early reports of conduct problems in 1,265 children ages 7 - 9 and their levels of adult impairment in social functioning at ages 21-25. Conduct problems were measured taking reports from the parent and teacher inventories of the Rutter Scale and the Conners Behavior Checklist. Adult functioning was assessed using several inventories that measure antisocial behavior and interviews. Those with early onset problem behavior were significantly more likely to have adult mental health issues, substance abuse, criminal involvement and disrupted relationships (Fergusson et al., 2005).



In sum, there is no existing research on the direct influence that moral development and course of antisocial behavior have on labeling of mental disorder. Specifically, at present there is no one study that examines the ability of clinicians to distinguish between disordered and non-disordered antisocial behavior where the course of the antisocial behavioral information *and* moral development have been manipulated as independent variables. This dissertation will make a contribution to the literature by examining these variables.

### **Clinicians' Characteristics and Clinical Decision-making**

Accurate and consistent application of diagnostic standards is essential in routing clients to appropriate services. However, many factors have the potential to influence a clinician during the assessment process. Some factors in the clinicians' makeup may bias judgment, some demographic or environmental issues may influence the clinician and at times, the combination of the clients and the clinician's characteristics may impact the judgment of disorder (Aegisdottir et al., 2006; Lichtenberg, 2009; Ridley & Shaw-Ridley, 2009). Situational factors may interact with the judge's personality or qualities in the subject to sway outcomes. The research examines many factors that influence clinical judgment. Clinical decisions are influenced not only by the structured guidance of DSM but on the personality of the client and the clinician's unconscious theories about mental disorder (Garb & Boyle, 2003; Garb, 2005). Diagnostic bias has been found relative to race, gender bias in diagnosis of antisocial personality disorders, race and gender bias in the prediction of violence, and social class bias in the referral of clients to therapy (for a full review see Garb, 1997). In some works, clinical judgment errors occur regardless of the clinician's race, gender, age or professional training (Garb, 2006).

Disorder judgments about youthful mental illness *have* been found to vary according to clinician characteristics (Pottick, Wakefield, Kirk, & Tian, 2003). In a departure from much of the previous work which focused on client-clinician matching on certain characteristics (most often gender, race or ethnicity), Pottick et al. looked at whether there were differences in disorder judgments associated with the clinician's individual characteristics under varying contextual conditions. In-depth examination of data gathered from 250 MSW students using three vignette conditions of internal dysfunction, environmental reaction and *DSM* symptom only showed that women and minorities were less likely to judge that a disorder is present than men and non-minorities, even when evidence suggests the antisocial behavior is a result of an internal dysfunction and not a normal response to a difficult environment. The researchers hypothesized that this may be due to a greater sensitivity by women and minorities to the negative consequences of labeling a youth with a mental disorder. *DSM* untrained clinicians were less likely to label a mental disorder when it existed, and experience was positively associated with the correct judgment of disorder. *DSM* training eliminated differences between minorities and non-minorities, suggesting that training in *DSM* criteria could improve diagnostic accuracy (Pottick et al., 2003). That study provides some evidence that professional characteristics may interact in complex ways to influence the way professionals make disorder judgments.

In a related study using the same vignettes but sampling professionals ( $N=1,540$  psychologists, psychiatrists and social workers who responded to surveys between January and April 2000), client race-ethnicity and clinician characteristics were examined vis-à-vis their relationship to judgment of mental disorder (Pottick, Kirk, Hsieh, & Tian,

2007). When client and contextual variables were controlled for, clinicians' occupation, theoretical orientation and age were associated with disorder judgments. Psychiatrists were more likely to label disorder and social workers were least likely to make mental disorder judgments. This finding was consistent with earlier studies (Kirk & Hsieh, 2004), and may suggest that social workers are less familiar with *DSM* diagnostic criteria or are less likely to work in settings where they are regularly required to make such judgments. Clinicians' race, experience and gender did not appear to have an association with disorder judgments. However, younger clinicians did tend to make disorder judgments with more regularity than older clinicians. The researchers postulate this may be due to greater familiarity with the *DSM* guidelines and more comfort with the behavioral nature of the diagnostic criteria. The literature from the above studies suggests that clinician characteristics may have some influence on their judgments of mental disorder, especially with regard to age, training and professional identity.

This study explored whether moral development and the course of the antisocial behavior affect clinical decision-making about mental disorder status. Additionally, the study tested multivariate models that investigated the effects of level of moral development, course of antisocial behavior and clinician characteristics on mental disorder judgments. Based on the literature on moral development, the first hypothesis is this: that in the presence of evidence of conduct disorder; adolescents displaying low moral development are more likely to be labeled mentally disordered than adolescents displaying average levels of moral development. Based on the above literature on course of antisocial behavior, the second hypothesis is this: adolescents displaying life-course persistent antisocial behavior are more likely to be labeled mentally disordered than

adolescents displaying adolescent-limited antisocial behavior. The third hypothesis tests the interaction between moral development and life-course persistent antisocial behavior. It is: adolescents displaying low moral development and life-course persistent antisocial behavior will be more likely to be labeled mentally disordered. Finally, the fourth and final hypothesis is: level of moral development and course of antisocial behavior will have more impact on the judgment of mental disorder than the clinician's characteristics.

## **Chapter Three**

### **Method**

The purpose of this study is to examine the ability of clinicians to distinguish between disordered and non-disordered antisocial behavior where the level of moral development and the course of antisocial behavior have been manipulated as independent variables. This chapter presents the study's methodology. First, it specifies the four hypotheses being tested. Next, it describes the design and sampling frame. It then details how the vignette cases were constructed to include experimental manipulations of the study's two independent variables (i.e., level of moral development and course of antisocial behavior). The chapter then describes the measurement validation procedures, the data collection procedures, the socio-demographic and clinical characteristics of the sample, and the key measures (including the dependent measure of judgment of mental disorder). The final section presents the analysis strategy, including relevant units of analysis and regression techniques.

### **Hypotheses**

The study tests four specific hypotheses.

#### **Hypothesis 1 (H1): Main Effect of Level of Moral Development**

Adolescents displaying low moral development are more likely to be labeled mentally disordered than adolescents displaying average levels of moral development.

#### **Hypothesis 2 (H2): Main Effect of Course of Antisocial Behavior**

Adolescents displaying life-course persistent antisocial behavior are more likely to be labeled mentally disordered than adolescents displaying adolescence-limited antisocial behavior.

**Hypothesis 3 (H3): Interactive Effect of Level of Moral Development and Course of Antisocial Behavior**

Adolescents displaying low moral development and life-course persistent antisocial behavior will be more likely to be labeled mentally disordered than those representing other combinations of moral development and life-course persistence.

**Hypothesis 4 (H4): Relative Predictive Power of Experimental Conditions and Clinician Characteristics.**

Taken together, level of moral development and course of antisocial behavior are expected to have more impact on the judgment of mental disorder than clinicians' characteristics. Level of moral development and course of antisocial behavior should thus jointly be stronger predictors of judgments of mental disorder than the key clinician characteristics.

**Design and Sampling Frame**

This study used experimentally manipulated case vignettes to examine whether the level of moral development in antisocial adolescents affects clinical judgments about mental disorder. Further, the relationship between the course of the antisocial behavior and judgments was examined. Professional social work clinicians and social work students were presented three case descriptions depicting adolescents exhibiting antisocial behavior. Each respondent was asked to read and evaluate three different vignettes. The study used nine vignettes in a 3x3 design (3 levels of moral development;

3 youth course conditions). For each vignette, respondents were asked to make a set of 10 judgments regarding the presence of disorder, appropriate interventions and prognosis.

Two sampling frames were developed. One was from the roster of the National Association of Social Workers (NASW) New Jersey chapter and a second was Master's level social work (MSW) students enrolled in Rutgers University practice classes in the spring semester 2008. NASW respondents were chosen randomly from the NASW database by computer generating a random number scheme and selecting the corresponding record number from the database. Three waves of mail surveys were sent to 230 professional social work clinicians, resulting in only 30 usable surveys from LCSW's. To supplement the professional sample, surveys were distributed to 211 MSW students in-person during classes. These methods resulted in a final sample of 241, including 30 LCSW's and 211 social work students.

### **Vignette Construction**

Three base vignettes were designed that describe adolescent antisocial behavior that satisfies the diagnostic requirements for behavior indicative of mental disorder (APA, 2000). Kohlberg's (1978) work in moral development was used to identify behaviors, motivations and situations that indicate average or low moral development. Moffitt's (1993a) "life-course" approach to the origins of antisocial behavior provided guidelines used in vignette design for framing the context in which the behavior occurs and the duration of the behavior in the life of the teen described by the vignette. In these vignettes, "antisocial behaviors" are specific behaviors that qualify the youth in the vignette for a mental disorder judgment when compared to the diagnostic criteria for conduct disorder in *DSM-IV-TR*.

All nine vignettes provide sufficient evidence of antisocial behavior to meet the requirements for a diagnosis of conduct disorder per *DSM-IV-TR* criteria. All vignettes include evidence of conduct disorder, which can be summarized as follows. The subject must have displayed at least three of the following in the past twelve months with at least one criterion present in the past six months: bullies others, fights, uses a weapon, physically cruel to other people, physically cruel to animals, stolen while confronting a victim, forced someone into sexual activity, engaged in fire-setting, destroyed property, broken into house, building or car, lies to obtain goods, favors or avoid obligations, stolen without confronting a victim, stays out at night without permission, has run away at least twice, or is truant from school. The disturbance causes significant impairment in role functioning. Vignette subjects were made male to control the influence of gender in diagnostic decision making.

Kohlberg's original moral dilemma vignettes about adolescents and young adults were used as patterns for situations that depict low and average levels of moral development. Moffitt's life course typology was used to describe situations that depict life-course persistent and adolescent-limited course of antisocial behavior. One vignette contains no moral development information and one vignette does not include information about the course of the antisocial behavior. The scheme by which the variables were assigned to the vignettes is described in detail in a section entitled "Combinations of Vignette Versions". All of the vignettes were edited to clarify the level of adolescent moral development and the life course of antisocial behavior, with review and feedback from professional subject area experts, including dissertation committee members.



**Life-course neutral vignette.** This vignette describes a 12-year-old boy who lives with his mother and sister. The course and duration of his behavioral issues are unclear. This is the neutral course vignette and provides a “symptoms only” condition, where a diagnosis of conduct disorder would be made based on behavioral indicators only. Conceptually, the neutral vignette provides a baseline against which the other vignettes can be compared. This vignette subject has a one-year history of bullying his sister, a history of initiating physical fights, stealing without confrontation, and truancy. The pattern of behavior clearly disrupts his academic functioning as he has failed to be promoted in school. The moral development neutral version of the life-course neutral vignette is in effect, the baseline vignette. It reads as follows:

John is a 12-year-old boy who resides in a single-parent household with his mother and one older sister, Louise. His mother is seeking an evaluation for John due to a year of escalating misbehavior and his self-reported internal conflict over his own actions. John’s behavioral problems include frequently beating his sister up, a history of aggression to peers, truancy and poor academic performance. John was just notified by the school that he will be left back this year. Family tension reached a peak two weeks ago when a family reunion conflicted with a rock concert that his mother promised John he could attend. When she learned that the two events were scheduled for the same day, his mother told John he must attend the family event. John had promised to attend the family function before learning it was planned for the same night as the concert. In private, John admits that he decided to go to the concert anyway. He bought a ticket with money stolen from his mother’s purse and told his mother he was sick the night of the concert. His

family attended the reunion without him. John went to the performance and spent the evening smoking marijuana with a friend. To date his mother is unaware of his actions. He states that he has been preoccupied with whether or not to tell his mother about the deceit.

To indicate average moral development, the following text is added:

John decided not to tell his mother about his behavior because to do so would cause her to mistrust him in the future and further damage their relationship.

When the vignette is modified to indicate normal moral development, his reasoning becomes slightly more sophisticated. When the subject decides not to tell his mother about his actions, he reasons that he is doing it because she would mistrust him in the future if she found out and this would damage their ongoing relationship. To add evidence of low moral development, the following text is added:

John decided not to tell his mother because she had promised he could go to the concert. Changing her mind constituted lying and he was therefore justified in going without permission.

The subject gives evidence of low moral development when he concretely views lying as “bad” and decides that his mom’s breach of contract justifies his withholding information and going to the concert without permission.

**Adolescent-limited vignette.** This vignette describes a 16-year-old boy who has been experiencing behavior problems for about three years. This vignette describes an adolescent-limited course of antisocial behavior. The youth described has a three-year history of truancy, at least a one-year history of initiating physical fights, stealing without confrontation, breaking into someone else’s home, going out at night without permission,

and running away overnight once. The pattern of behavior clearly disrupts his social, familial and academic functioning. The moral development neutral version of the vignette is as follows:

Joe is a 16-year-old boy who resides with his father and one brother. His father brought him in for evaluation after Joe stayed out overnight drinking with his friends. Joe admits to frequent marijuana and alcohol use with peers and he has a recent history of fighting and stealing from neighbors' homes. Joe's academic performance is average and he works at grade level but has frequently been truant for the past three years and is becoming increasingly disruptive in the classroom. Joe's father reported that Joe's behavior has been getting worse for about a year and that Joe frequently goes out at night without permission but has always returned home. Joe's staying out all night worried him more than the other behavior problems. Joe reported that he stayed out due to an argument with his father over money. Joe and his father had agreed that Joe could go on a weekend camping trip with friends if he saved up the money for it himself. So Joe saved up the \$100 it cost to go camping and a little more besides. But just before Joe was to leave, his father changed his mind. Some of the father's friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost to go with them. So he told Joe to give him the money Joe had saved to go camping. Joe didn't want to give up going to camp and an argument ensued.

To indicate average moral development, the following text is added:

Joe refused to give his father the money, feeling that it was his money; he deserved it and had been promised he would be allowed to go on the trip. Since

Joe believes his father was wrong, he did not feel obligated to follow the house rules and chose to stay out rather than return home.

To give this youth the appearance of average moral development, I added text describing a different version of his reasoning process when he refuses to give his father money. He still sees the conflict in terms of a breached contract but also sees the money as his personal property to which he has exclusive rights. Because of the contract breach, the youth no longer sees himself as bound by any family contract and therefore feels free to stay out without permission. To add evidence of low moral development, the following text is added:

Joe refused to give his father the money. He feels that his father is a liar for going back on the deal they had made. Since Joe believed his father was wrong, he stayed out to punish his father.

To classify him as having low moral development, text was added describing his refusal to give money to his father based upon the belief that his father is a liar and has broken their contract. This breach justifies the youth's actions. To an adolescent with low moral development, lying is bad and if you do it or break a contract, you get punished. Using this reasoning, the youth punishes his father by staying out without permission

**Life-course persistent vignette.** In this vignette, two brothers are described. The older youth has a life-course persistent history of antisocial behavior. He has stolen without confrontation, with confrontation, has a history of violence, breaking and entering and reliance on coercion to get what he wants. This history began at age five and has persisted since childhood. There are problems in excess of those necessary to make a conduct disorder diagnosis and the behavior causes significant harm to others.

This is the “life-course persistent” vignette and the vignette representing “internal dysfunction” as the source of the antisocial behavior. The moral development neutral version reads as follows:

The police picked up two brothers as they left a stop-n-shop carrying stolen goods. Karl, age 16, was brought in for assessment due to the extreme violence of his reaction to being arrested. He was combative when apprehended by police, began shouting homicidal threats at Bob, his 14-year-old brother, and repeatedly banged his head on the pavement, shouting that the officers would have to take him to the hospital instead of jail. This incident is only the last in a long history of difficult to manage behavior for Karl. Although both boys were adopted as preschoolers by the same couple, by approximately age five Karl’s failure to follow rules in the home was of some concern to his parents. By age 10, his over-activity had escalated into aggression at home and in the community, petty theft, and a consistent pattern of relying on coercive or illegal behavior to obtain his ends. He was subsequently removed from the adoptive home and placed in a series of foster care placements. The boys were attempting to amass enough funds to run away together. Karl had broken into a store and stolen \$1,000 and goods, which he intended to sell. Later, Karl went to their biological grandfather, a retiree on a fixed income, and convinced him to “loan” them \$1,000. During the interview Karl admitted that he never intended to repay the debt.

To indicate average moral development, the following text is added:

Of all his recent problems, Karl states that cheating his grandfather was the worst, since it would probably hurt his grandfather’s feelings and make it hard for him to

support himself.

To indicate average moral development, the youth states that cheating his grandfather is worse than stealing because it involved breaking a promise and hurting the old man's feelings.

To add evidence of low moral development, the following text is added:

Of all his recent problems, Karl states that promising to pay his grandfather back was the worst because it was a lie.

To indicate low moral development the vignette was modified to show him identifying his worst behavior as lying. For a youth with low moral development, lying breaches a social contract and is always wrong but no other explanation for why it is wrong is offered.

Kohlberg's stages are well defined in terms of their content and the orientation of the subject (Colby, 1987) . The most important goal in constructing the modified vignettes was to create a picture of an antisocial youth demonstrating clear evidence of either preconventional (low) or conventional (normal) moral judgment. To achieve this, indicators from the Standard Issue Scoring Manual (Colby, 1987) were incorporated into each vignette to serve as models for behaviors that would indicate a particular level of development. To modify the vignettes to indicate "normal moral development" for adolescents, behaviors, attitudes or expressions were added that would place the subject of the vignette in the conventional, moral level two, stage three arena of moral development. At this level, a youth makes moral judgments based upon gaining the approval of others, perceived stereotypical role behaviors, expectations of others and occasionally obedience to gain rewards. Vignette versions that indicate "low moral

development” for an adolescent have behaviors, attitudes or expressions that are consistent with preconventional, moral level one, stage one or two. At this developmental stage obedience and punishment are directly linked, negative consequences are highly salient in decision making, and obedience to gain rewards is common.

These vignettes are intended to present a sample of clinical information in the abbreviated format that a clinician might see on a psychiatric screening document or an intake form. In such instances, appropriateness for services might be determined as soon as the presenting complaint is identified and diagnostic criteria are met. It is not the intention of this work to indicate that the moral reasoning is the cause for conduct-disordered behavior described in the vignettes. Rather, evidence regarding moral development is intended to provide a fuller picture of the youth and his approach to the dilemma in which he finds himself and the decisions he has made.

### **Combinations of Vignette Versions**

To implement the experimental manipulation of the two independent variables (course of antisocial behavior [three levels] and moral development [three levels]), each respondent's instrument contained three distinct vignettes. For the first independent variable, each distinct vignette represented one of the three levels of course of antisocial behavior: life-course neutral, adolescent-limited, and life-course persistent. For the second independent variable, each distinct vignette also had three versions, corresponding to the three levels of moral development (low, neutral and average). The three distinct vignettes therefore generated nine possible versions of vignettes.

The experimental design was a nonstandard version of a 3 X 3 within-subjects

factorial (randomized) design (i.e., three levels of life-course by three levels of moral development). The nonstandard feature was that each respondent provided disorder ratings for three cells (or vignette versions) in the design rather than all nine. These three cells (or vignette versions) were chosen under the constraint that there had to be one rating for each of the three levels of each of the two independent variables. Each of the three cells selected for any respondent contained a disorder rating for a version of one of the three distinct vignettes.

Because the three distinct vignettes tapped the three levels of life course, the design produced one rating for each life course level. Each of the three selected cells also had to contain one level of moral development. There were three possible levels of moral development from which to choose for the first vignette (i.e., three versions of the first vignette). This left two possible levels for the second vignette and one possible level for the third. There were, therefore,  $3 \times 2 \times 1 = 6$  combinations of cells (i.e., vignette versions) in the study's design, where each combination ensured that each instrument had one vignette of each life-course script and one vignette representing each level of moral development. Each of these six combinations was assigned randomly to approximately one sixth of the instruments distributed to respondents. As a result, each of the six combinations was used equally frequently to collect study data.

To avoid order effects among the six sets of vignette versions that respondents rated, the three vignettes (or nine vignette versions) were systematically varied so that each was presented first, second or third about an equal number of times. The vignette versions are numbered one through nine and can be found in the appendix. To summarize, because each respondent provided data for all three vignettes (i.e., three



records), each contributed data to three of the nine cells (or nine vignette versions) in the experimental design.

### **Validation of the Instrument**

To confirm that the instrument presented information in a clear and consistent manner and that clinicians responded in expected ways, a highly experienced child and adolescent clinician was engaged to take the survey and participate in a debriefing session. The packet she received contained: (a) the adolescent-limited vignette with normal moral development and adolescent-limited course (b) the neutral vignette, neutral on both moral development and course and (c) the life-course persistent vignette, with low moral development. These vignettes were not randomly selected but instead were chosen to lend insight into the vignette conditions where the manipulation of the variables should have strong influence on the judgments made by the reader. The clinician was instructed to read each vignette and give her best response to each of the 10 (four-point) Likert items. Additionally, she was aware that a discussion of her decision making process would follow the completion of the survey.

Generally, the clinician made judgments about the vignettes that were consistent with the hypothesized relationships between variables. She agreed with disorder only in the Life-course Persistent/Low moral development condition and only agreed with delinquency when she identified disorder. She did not recommend medication as an intervention, but was less firm about it when a disorder was identified. She recommended further evaluation by an MD only when she was uncertain of the cause of the behavior and wanted a second opinion or was certain there was dysfunction present. In the condition where she was certain the behavior was a normative response to a

difficult family environment, she did not recommend structured interventions but did recommend supportive psychotherapy. When she was sure there was a disorder present, she recommended interventions that both addressed the behavior and ensured public protection. Her recommendations and judgments about prognosis were predicated on her judgment about whether a disorder was present and were consistent over the three vignettes. In short, she reacted to the vignettes much as clinicians were expected to react.

### **Data Collection**

The first survey administration efforts were made by mail. The mail survey packet contained an introductory letter and consent form (Appendix B), a demographic questionnaire, three vignettes, and a Likert-type evaluation asking the clinician to evaluate the vignette's subject on 10 scales. A return envelope, postage paid was provided for each mailed questionnaire. The cover letter explained that the research is confidential and voluntary and is intended to better understand how clinicians perceive troubled adolescents. We asked that respondents use their best judgment and explained that since there is no right answer a "don't know" category was not provided. A copy of the survey instrument is included in the appendix.

The survey packet was piloted using a sample size of thirty respondents. Fifteen were drawn randomly from the main data set and fifteen were from a convenience sample, chosen because the respondents had prior professional contact with the researcher and it seemed likely they would return the packet promptly. Seven (23%) of the pilot questionnaires were returned without follow-up. A postcard reminder mailed at two weeks did not result in any further returns. The results of the pilot guided editing of the final survey packet as items that were unsuccessful in the pilot (i.e. respondents

overwhelmingly responded in the same way or chose not to answer at all) were removed. An exemption from IRB review was granted this study by the Office of Research and Sponsored Programs (ORSP), Rutgers University, based on the survey packet and research summary submitted with the application (See Appendix A).

Following the pilot study and IRB approval, questionnaires were mailed to a cross-sectional sample of licensed clinical social workers taken from the roles of the New Jersey State licensing board ( $N=7,505$ ). Each questionnaire contained one version of each of the three vignettes, and a Likert-type evaluation asking the clinician to evaluate the vignette's subject. A return envelope, postage paid was provided for each questionnaire. A cover letter explained that the research is confidential and voluntary and is intended to better understand how people perceive troubled adolescents. They were asked to use their best judgment and it was explained that since there was no right answer a "don't know" category was not provided. Two additional waves of mailings were sent out with a postcard follow-up after 10 days. Thus, wave one included 100 mailed surveys,  $N=11$  were returned, for a return rate of 11%. Wave two included 100 mailed surveys,  $N=13$  were returned, for a return rate of 13%. The overall return rate of usable questionnaires ( $N=30$ ) was 13% using this strategy.

Response rates were very low using mailed surveys. To attain a greater number of usable surveys, subsequent data collection was undertaken in person. To create a sufficient sample size, the samples were then combined. Combining samples in this way was not ideal but is sound, as social work students have demonstrated the ability to make appropriate disorder judgments using contextual clues in vignettes (Pottick, et al., 2003). Both samples were analyzed and determined to be similar both in respondent

characteristic and response patterns. Recent work indicates that an initial mail survey, followed by an internet request for non-responders resulted in higher response rates than other methods of follow up (Beebe et.al., 2007). This possibility was explored, however, email addresses for mail survey recipients were not available.

Since the return rate of the mailed questionnaires was low, IRB approval to distribute questionnaires during classes to social work students in Masters level courses was obtained. Thirteen sections of Advanced Direct Practice II and Social Work Practice II classes were sampled ( $N=211$ ). The students participated willingly with only one potential respondent declining to complete a survey instrument. This wave brought the total sample size to 241 usable questionnaires. This sample size is above the goal of 200 cases, set at the beginning of the research and determined using Cohen's (1992) power analysis (See Appendix E).

Each professor allowed 20 minutes at the beginning of each class section. The principal investigator read a brief neutral statement describing the instrument and requesting participation, then distributed the questionnaires. The principal investigator left the room while the students completed the questionnaire. When all were done, the surveys were gathered and the respondents were thanked. In two class sections, the professor read the statement and followed the same collection procedure with the addition that a volunteer student or the professor dropped the surveys in a pre-arranged mailbox at the end of class. When all instruments were collected and entered for analysis, a frequency distribution confirmed that approximately equal numbers of responses for each of the nine vignettes had been obtained with slightly fewer of the low moral development condition. The unequal number of usable surveys for each of the nine vignettes is due to

the method of sampling the classroom participants. The number of surveys distributed to each class was based on class enrollment. In classes where the actual number of students in attendance and completing the survey was lower than the number of enrolled students, there were un-completed surveys returned to the principal investigator. This disturbed the randomization scheme to a small degree as surveys were distributed out of their randomized order in one class section.

### **Characteristics of the Sample**

The distribution of respondents' characteristics is presented in Table 1. All demographic variables are presented as percentages of the sample for this table except age which is presented as a mean. The sample is described in terms of the demographic information asked for on the survey instrument: age, gender, marital status, race, types of work experience and training. Our sample reflects the national characteristics of the social work profession. The state of New Jersey requires a license for direct practice, so it was expected that the demographics of LCSW's in New Jersey and students studying to obtain the MSW degree would be similar to the national statistics on licensed clinical social workers. The representativeness of the sample is comparable to the known characteristics of the profession, according to the most current NASW statistics (Gibelman, 1997). Respondent characteristics are comparable across vignette conditions, ensuring that the randomization of respondents into experimental conditions was successful.

The sample of 241 respondents had a mean age of 34.3 years; 87.3% were female and 69.9% were married. The ethnic composition was 68.1% Caucasian, 14% Black/African American, 7.7% Hispanic, 5.1% Asian, 1.3% Native American, and 3.8%

gave another response or declined to answer this item. Almost half (47.1%) worked primarily with children and adolescents; 74.9% were trained in the use of the *DSM* for the diagnosis of mental disorder; and 63.4% had received some training specializing in the *DSM* diagnosis of child and adolescent problems.

Table 1

*Demographic Characteristics of Sample*

Characteristic	% (N=241)
Age (mean years)	34.3
Gender ( male)	12.7
Marital Status	
Married	71.5
Race and Ethnicity	
Caucasian	68.1
Black/African	14.0
Latin/Hispanic	7.7
Asian	5.1
Native American	1.3
Other	3.8
Primary work with:	
Child/Adolescents	47.1
Adults	43.9
Other	9.0
Received <i>DSM</i> Training	74.9
<i>DSM</i> Childhood Disorder Training	63.4

## **Dependent Measures**

Respondents were provided a series of 10 statements about the vignettes, including an item asking about the extent to which they agreed with the statement “This youth has a mental disorder.” They rated the statements on a Likert scale with four levels: “strongly agree” (coded 1), “agree” (coded 2), “disagree” (coded 3) and “strongly disagree” (coded 4). Responses concerning mental disorder were converted from the four-point Likert scale to a dichotomous variable indicating agreement or disagreement with the presence of disorder. The new variable was recoded so that strongly agree and agree are combined into agree=1 and strongly disagree and disagree are combined into disagree=0. This was done so that the mean scores obtained could be interpreted as “percent agree.” The variable was dichotomized because the distance between the levels is unknown, and it makes sense that there either is or is not a disorder present. Further, this is exactly the kind of decision a clinician must make during the assessment process.

## **Primary Independent Variables**

**Level of moral development.** Vignette descriptions have been manipulated to provide evidence for either average adolescent moral development or low adolescent moral development guided by Kohlberg’s work. One vignette provides no information on moral development and is considered the neutral condition. There is no high level of moral development included in the manipulation because it seems implausible that any significant number of adolescents capable of well above the norm moral reasoning ability would present for clinical assessment due to antisocial behavior.

Variables representing the three levels of moral development were created by combining all three versions of the neutral vignette as “neutral moral development.”



Similarly, the three versions of the low moral development vignette are combined into “low moral development” and the three versions of the average moral development vignette are combined into “average moral development.” This variable has been treated in the analyses as a categorical variable with three levels: average, low and neutral moral conditions.

**Course of antisocial behavior.** Vignette descriptions have been manipulated to provide evidence for either life-course persistent or adolescent-limited antisocial behavior as guided by Moffitt’s work. To do this, the length of time and the stage of life in which the antisocial behavior originated were described. One vignette provides no information on course of antisocial behavior and is considered the neutral condition. Parallel to level of moral development, this variable has been treated as a categorical variable in the analyses with three levels: adolescent-limited, life-course persistent or neutral course of antisocial behavior.

**Clinicians’ individual and professional characteristics.** Clinicians’ individual and professional characteristics were surveyed for the study. Where specified, the variable “Age” is collapsed into three categories where 1=low through 25, 2=26-40, and 3=41 and up. “Gender” indicates the respondent is male (0) or female (1). “Marital Status” includes categories for married, single, divorced, separated or widowed. In the regressions, marital status has been collapsed into two groups where “Married” represents responses indicating married and “Nonmarried” represents responses indicating single, divorced, separated or widowed. “Race and Ethnicity” represent responses indicating Latin/Hispanic, Asian, Black/African, Native American/Indian and Caucasian. For the regression analyses, race has been collapsed into a dichotomy indicating Caucasian

versus Minority. “Primary work population” indicates that the respondent works with primarily children and adolescents, adults or other. This is recoded where 1=children and adolescents and 2=adults and other for logistic regression. “*DSM-trained*” indicates that the respondent has or has not received training in the *DSM* where 1=trained and 2=not trained. “*DSM childhood disorder trained*” indicates that the respondent has or has not received specialized training in the use of the *DSM* for the diagnosis of childhood disorder where 1=trained and 2=not trained.

### **Analysis Strategy**

**Units of analysis.** Individual survey packets containing 723 individual vignettes were obtained for 241 respondents. When precision in making estimates was required, it was useful to treat each of the three vignette versions that a respondent rated as an independent record, thereby creating three records per respondent. This produces a sample size of 723 records. In 13 vignette records, data were missing on the item measuring the dependent variable, *disorder judgment*, resulting in a final sample of 710 vignettes. Employing the individual record as the unit of analysis maximizes the use of data available for hypothesis testing and provides the most complete estimate of mean scores. Nevertheless, the inclusion of non-independent records (i.e., multiple records for each respondent) elevates Type 1 errors in significance testing beyond the nominal rate. In essence, such statistical tests generate too many significant effects because the 710 records are treated as independent cases (i.e., the degrees of freedom used in such tests exceed the real degrees of freedom) when they are not. Therefore, since the mean scores in the descriptive bivariate tables were calculated using the larger data set, no significance testing was done for those analyses.

To control for the excessive rate of Type I errors, the three vignette “slots” (i.e., records one, two and three) were also subjected to separate analyses (i.e., one record per respondent). This procedure helped to validate the significance of any effects obtained using the sample of 710 records. Analyzing the data separately for each of the three vignette slots generates three smaller analysis samples, each with 241 cases. The use of two different units of analyses (i.e., records [large sample] and respondents [small samples]) generated four datasets (i.e., three for records; one for respondents).

**Regression analysis for hypotheses 1, 2, and 3.** Regression analyses were conducted on the three small data sets. These analyses, therefore, used the small samples, which included one record per respondent. Due to missing data on the dependent variable, sample one (n=237), sample two (n=233) and sample three (n=237) differ slightly in number of respondents. As noted, the primary dependent variable in this study is the respondent’s judgment about the presence or absence of a mental disorder in the subject of each vignette. The independent variables, level of moral development and course of antisocial behavior, were each categorical variables with three levels. Each of these two independent variables was represented in the regression analysis by two dummy variables, using the neutral condition as the reference category in each instance.

Logistic regression was the primary regression technique used, with presence of mental disorder regressed on the four dummy variable predictor terms representing the two independent variables. The Wald test is used to determine if a given odds ratio is significantly different from one. This tests whether a given predictor has a significant relationship to a judgment of disorder while controlling for other predictor variables in the model. The results from the logistic regressions are presented in table form.

Additionally, as a check on the use of the recoded dichotomous dependent variable, OLS regression, a more powerful (i.e., parametric) analytic tool, was used in a supplementary role, with the unrecoded Likert scale (where judgments are at four levels), is deemed a continuous variable, replacing the dichotomous recode.

Hypotheses 1 and 2, which posit main effects of the first and second independent variables, respectively, were tested with logistic and, similarly, OLS regressions containing four predictor terms (i.e., two dummy variables per independent variable).

Hypothesis 3, which posits interaction between the independent variables, was tested by adding the four available multiplicative terms as predictors, resulting in a total of eight predictors.

**Regression analysis for hypothesis 4.** For the regression analysis used to test Hypothesis 4, however, all variables are considered to be respondent characteristics (e.g., demographic factors), and all therefore treat the respondent as the unit of analysis. This regression analysis was therefore confined to the small sample with 241 cases. This regression includes only one record of vignette rating data for each respondent, and these data are obtained from the first sample for vignette versions in each respondent's instrument. More specifically, the various measures of clinicians' characteristics were included as predictors in logistic regression. Due to listwise deletion used in SPSS, any case missing data on any variable is removed from the analysis. This resulted in a final sample size of 255 cases included in this analysis. To compute the probability of the occurrence of a disorder judgment, categorical measures of clinician characteristics were created where each variable has two levels, coded as 0 or 1, except for age, which has three levels and is converted into dummy variables. Multicollinearity was ruled out by

running regressions with and without highly associated variables *DSM* training and *DSM* training in child and adolescent disorders.

## **Chapter Four Results**

### **Impact of Moral Development and Course on Disorder Judgments**

The study focused on the impact of the level of moral development and the course of an adolescent's antisocial behavior on clinical judgments about the presence of disorder. As an additional consideration, the clinician's characteristics were examined vis-a-vis their identification of disorder. This chapter presents tables which summarize the findings for each of the four main hypotheses. The questions were derived from the central problem under study: when vignettes containing evidence of conduct disorder are presented to clinicians, what other factors influence their judgments? Or conversely, if a conduct disorder judgment is warranted, under what conditions do clinicians decline to identify disorder? The analysis was conducted in two steps. First, the bivariate relationships between each independent variable (i.e., level of moral development and course of antisocial behavior) and response patterns to the question "In my view, this youth has a disorder" were examined. Second, the likelihood of making a disorder attribution given a certain level of moral development, the course of antisocial behavior, or clinician characteristics was examined by conducting logistic regression analyses.

**Moral development and judgments of mental disorder.** Six of the nine vignettes contained behavioral or cognitive cues to indicate the subject's level of moral development. Findings for the youth vignettes are grouped by low, average or neutral moral development to explore the rate of clinician agreement that the youth has a mental disorder at each level of moral development. Table 2 shows the bivariate relationship between mental disorder judgment and level of moral development. The means are

expressed as percentages of respondents agreeing that the youth has a mental disorder at each of the three levels of moral development.

Table 2

*Agreement with Mental Disorder Judgment by Level of Moral Development*

Moral Development	% Agree	<i>n</i>
Average	29	236
Neutral	41	237
Low	38	237

*Note.* N=710. Due to the dependence of the data in the large sample, no significance testing was done to avoid Type I errors. The dependent variable “has a mental disorder” is recoded so that 1=strongly agree or agree and 0=strongly disagree or disagree. This dichotomous measure results in mean scores that can be interpreted (and are reported here) as “percent agree”.



In the neutral moral development condition, fewer than half of the respondents agree that the youth has a mental disorder (41%). In the low moral development condition, fewer agree that the youth has a mental disorder (38 %) and with average moral development the rate of agreement drops even lower (29 %) as expected. Adolescents with low moral development were more frequently labeled disordered than adolescents with average moral development, but both low and average moral development conditions resulted in fewer disorder judgments than the neutral condition.

**Course and judgments of mental disorder.** Three vignettes were written so that one gave a life-course persistent history, one gave an adolescence-limited history and one contained no information about the history of the antisocial behavior. When findings for the three youth vignettes are grouped by the course of the antisocial behavior, the impact that course has on a clinician's agreement that the youth has a mental disorder can be explored. Table 3 shows the bivariate relationship between mental disorder judgment and level of antisocial behavior. The means are expressed as percentages of respondents agreeing that the youth has a mental disorder at each of the three levels of course; neutral, adolescence-limited and life-course persistent.

Table 3

*Agreement with Mental Disorder Judgment by Course of Behavior*

Course of behavior	% Agree	<i>n</i>
Adolescence-limited	10	235
Neutral	29	237
Life-course Persistent	67	238

*Note.* N=710. Due to the dependence of the data in the large sample, no significance testing was done to avoid Type I errors. The dependent variable “has a mental disorder” is recoded so that 1=strongly agree or agree and 0=strongly disagree or disagree. This dichotomous measure results in mean scores that can be interpreted (and are reported here) as “percent agree”.

In the neutral condition less than one-third of the respondents agree that the youth has a mental disorder (29 %). In the life-course persistent condition, two-thirds agree that the youth has a mental disorder (67 %) and with adolescence-limited course the rate of agreement is a very low 10 %. When information indicates that the course of the behavior is enduring and persistent, respondents are more inclined to agree that a mental disorder is present.

**Moral development, course of behavior and mental disorder judgments.**

Three levels of moral development and three levels of course when combined produced nine vignettes. Table 4 shows the percentage of respondents agreeing that the youth has a mental disorder in the nine possible combinations of the moral development and course of behavior variables. The table cells correspond to the nine vignette conditions.

Table 4

*Agreement with Mental Disorder Judgment by Level of Moral Development and Course of Behavior*

	Low moral development	Neutral moral development	Average moral development
Course of behavior	% Agree	% Agree	% Agree
Adolescence-limited	9	16	5
Neutral	38	29	21
Life-course persistent	66	76	59

*Note.* N=710. The dependent variable “has a mental disorder” is recoded so that 1=strongly agree or agree and 0=strongly disagree or disagree. Due to the dependence of the data in the large sample, no significance testing was done to avoid Type I errors.

When the course of behavior is neutral and moral development is neutral, the percent of clinicians in agreement with the presence of disorder (29 %) falls between disorder judgments when moral development is low (38 %) and average (21 %). When the course of behavior is life-course persistent, the percent of clinicians in agreement with the presence of disorder when moral development is neutral goes up (76 %) but drops when moral development is either low (66 %) or average (59 percent). When course of behavior is adolescence-limited, the percent of clinicians in agreement with the presence of disorder drops down to 16% when moral development is neutral, even lower when moral development is low (9 %) and a miniscule 5% when moral development is normal. Based on the mean Likert ratings, respondents generally agreed that the subject of the life-course persistent vignette had a disorder, and the subject of the adolescence-limited vignette did not have a disorder. When both course and moral development indicate low levels of functioning, (i.e. life-course persistent and low moral development) two-thirds of the clinicians agree with the presence of disorder. When all signs of development are typical for adolescent development, clinicians are least likely to agree that a mental disorder is present.

**Hypothesis testing.** To move beyond mean disorder ratings and expand the bivariate analyses, logistic regression analyses examined which variables act as predictors of mental disorder judgments. Table 5 presents the odds-ratio estimates for the logistic regression models for three levels of moral development and three levels of course. This analysis was repeated on the three small samples and all data are reported in the table for comparison. The odds-ratio represents the likelihood of agreeing with disorder versus disagreeing with disorder given the presence of one predictor, controlling

for the rest of the predictors. When the odds-ratio is greater than one, the predictor increases the likelihood of agreeing with the mental disorder judgment. When the odds-ratio is less than one, the predictor decreases the likelihood of agreeing with mental disorder. The amount of variance accounted for in the three models was 35%, 36% and 31% respectively.

Table 5

*Logistic Regressions of Mental Disorder Judgments on Level of Moral Development and Course of Behavior: Three Small Independent Samples*

	Sample1	Sample2	Sample3
Variable	Odds ratio (SE)	Odds ratio (SE)	Odds ratio (SE)
Low moral	.658 (.393)	.532 (.390)	1.466 (.373)
Avg moral	.356 (.402) **	.371 (.412) *	.826 (.380)
LCP course	5.351 (.359) ***	7.180 (.370) ***	4.085 (.340) ***
AL course	.250 (.506) **	.345 (.425)*	.226 (.446) **
Nagelkerke $R^2$	.345	.361	.310

*Note.* Sample one  $N=237$ , sample two  $N=233$ , sample three  $N=237$ . Moral development and Course each have a neutral category which was used as the reference category for logistic regression. AL= Adolescent-limited LCP= Life-course Persistent.

\* $p < .05$ . \*\* $p < .01$ . \*\*\*  $p < .001$ .

**Does level of moral development influence judgments of mental disorder?** It

was hypothesized that adolescents displaying low moral development are more likely to be labeled mentally disordered than adolescents displaying average levels of moral development. This hypothesis was not supported. Table 5 displays the results from the logistic regressions of mental disorder, level of moral development and course of behavior across three small samples. Compared to the neutral condition, results show that low moral development has no significant impact on mental disorder judgments across three samples ( $OR=.658, p=.288$ ;  $OR=.532, p=.105$ ;  $OR=1.466, p=.305$ ). Average moral development was associated with decreased likelihood of agreeing with a mental disorder judgment in small samples one and two ( $OR=.356, p=.010$ ;  $OR=.371, p=.016$ ) but not three ( $OR=.826, p=.614$ ) when compared to the neutral moral development condition. When the neutral vignettes are removed from the analysis and low and average moral development are compared directly, there is no statistically significant difference in judgment of mental disorder across the three samples.

**Does the course of antisocial behavior influence judgments of mental**

**disorder?** It was hypothesized that adolescents displaying life-course persistent antisocial behavior are more likely to be labeled mentally disordered than adolescents displaying adolescent-limited antisocial behavior. This hypothesis was supported. Table 5 shows that when compared to the neutral condition, life-course persistent antisocial behavior was significantly associated with increased likelihood of a mental disorder judgment across three samples ( $OR=5.351, p<.001$ ;  $OR=7.180, p<.001$ ;  $OR=4.085, p<.001$ ). At its most conservative estimate, the life-course persistent condition was



associated with more than a four-fold increase in the odds of making a disorder judgment. Where course of antisocial behavior is life-course persistent, social work clinicians and social work students were more likely to identify disorder. Where course is depicted as adolescence-limited, social work clinicians and social work students were less likely to identify disorder and it was statistically significant in all three small samples ( $OR=.250$ ,  $p=.006$ ;  $OR=.345$ ,  $p=.012$ ;  $OR=.226$ ,  $p=.001$ ). These results are consistent with the expected relationships between variables. When the neutral vignettes are removed from the analysis and life-course persistent and adolescence-limited course are compared directly, the relationship to judgment of mental disorder is validated across the three samples ( $p<.001$ ). Social work clinicians and social work students appear to respond to information about course when making disorder judgments.

**Do the level of moral development and the course of antisocial behavior have an interactive impact on judgments of mental disorder?** It was hypothesized that adolescents displaying low moral development and life-course persistent antisocial behavior would be more likely to be labeled mentally disordered than those representing other combinations of moral development and life course. This hypothesis was not supported. Tests for interactions between level of moral development and course of behavior found no significant interaction effects across three samples. Mental disorder judgments did not differ for adolescence-limited youth at either average (Sample one,  $OR=.384$ ,  $p=.470$ ; Sample two,  $OR=.469$ ,  $p=.565$ ; Sample three,  $OR=.367$ ,  $p=.376$ ) or low moral development (Sample one,  $OR=.000$ ,  $p=.998$ ; Sample two,  $OR=1.237$ ,  $p=.821$ ; Sample three,  $OR=.111$ ,  $p=.480$ ). Nor did mental disorder judgments differ for life-course persistent youth at either average or low moral development (Sample one,

OR=1.100,  $p=.914$ ; Sample two, OR=.412,  $p=.403$ ; Sample three, OR=.394,  $p=.291$ ).

The relationship between course and mental disorder judgments does not depend on level of moral development.

**Do the characteristics of social workers affect the judgment of disorder?** It was hypothesized that level of moral development and course of antisocial behavior would have more impact on judgments of disorder than clinician characteristics. This hypothesis was supported. Table 6 displays the bivariate table, including percent of social work clinicians and social work students agreeing with a mental disorder judgment across seven independent variables representing clinician characteristics: age, gender, marital status, race, primary population as focus of work, *DSM* training and *DSM* training in childhood disorders. Across seven individual clinician characteristics, no individual characteristic produces a mean score that indicates high levels of disorder judgments. Agreement with the presence of disorder is never higher than the forty percent (40%) reported for clinicians age 41 or over, even though a disorder judgment based on behavioral criterion is justified in all cases. Logistic regression of clinician characteristics and mental disorder judgments tests the hypothesis directly. Results are displayed in Table 7.

Table 6

*Mental Disorder Judgments by Clinician Characteristics*

Predictor	% Agree	<i>n</i>
Age		
< 25	31	80
25-40	26	85
41+	40	67
Gender		
Male	26	27
Female	33	210
Marital Status		
Married	39	77
Non-married	27	158
Race and Ethnicity		
Caucasian	33	165
Minority	30	71
Primarily work with		
Children	28	107
Adults	36	119
DSM Trained		
Yes	36	176
No	19	59
DSM Childhood Disorder Trained		
Yes	34	146
No	27	83

*Note.* Sample one  $N=237$ . The dependent variable “has a mental disorder” is recoded so that 1=strongly agree or agree and 0=strongly disagree or disagree. This dichotomous measure results in mean scores that can be interpreted (and are reported here) as “percent agree”. The smaller sample is used representing one demographic survey per respondent.

Logically, training in the use of the *DSM* to make clinical judgments should result in accurate judgments. *DSM* training does have a significant relationship with disorder judgment ( $B = 1.146$ ,  $S.E. = .522$ ,  $OR = 3.145$ ,  $p = .028$ ) where being trained in the use of the *DSM* is associated with higher odds of making a disorder judgment. *DSM* training appears to increase the likelihood of a disorder judgment. To rule out the possibility of a confound occurring due to the expected relationship between training in the use of *DSM* generally and training in the *DSM* childhood disorders, specifically, logistic regressions were run with and without each variable. The removal of the “*DSM* childhood trained” variable strengthened the significance of the “*DSM* trained” variable ( $p = .013$ ). “*DSM* childhood trained” on its own, was not significant ( $p = .326$ ). Individual clinician characteristics are poor predictors of disorder judgments with the exception of training in the use of *DSM* to make diagnoses. In this instance, training in the use of *DSM*, as expected, was associated with increased disorder judgments.

Table 7

*Logistic Regression of Mental Disorder Judgments on Clinician Characteristics*

Characteristic	Odds Ratio (S.E.)	Sig.(p)
Age <sup>a</sup>		
<25 years	1.279 (.435)	.571
25-40 years	.640 (.373)	.231
Gender <sup>b</sup>	1.471 (.517)	.455
Marital Status <sup>c</sup>	.530 (.344)	.066
Race and Ethnicity <sup>d</sup>	.729 (.343)	.356
Primary work Adults <sup>e</sup>	1.303 (.322)	.411
DSM trained <sup>f</sup>	3.145 (.522)	.028*
DSM childhood disorder trained <sup>g</sup>	1.447 (.436)	.397
Nagelkerke $R^2$	.101	

*Note.*  $N=225$  due to listwise deletion of missing data. Moral Development and Course each have a neutral category which was used as the reference category for logistic regression. The dependent variable “has a mental disorder” is recoded so that 1=strongly agree or agree and 0=strongly disagree or disagree. <sup>a</sup>Age is treated as a categorical variable with three levels: 1=< 25 years, 2=25-40 years, and 3=41+ years. The reference category for age is 41 years and over. <sup>b</sup>Gender is coded 1=Male and 2=Female. <sup>c</sup>Marital status is recoded as 1=married and 2=non-married. <sup>d</sup>Race is recoded as 1=Caucasian and 2=minority. <sup>e</sup>Primary work population is recoded where 1=children and adolescents and 2=adults, <sup>f</sup>.DSM trained is recoded 1=not trained 2=trained and <sup>g</sup>DSM childhood disorder trained is recoded 1=not trained 2=trained.

## **Chapter Five**

### **Discussion**

#### **Conclusions and Implications**

This study focused on identifying factors that contribute to the identification of mental disorder in adolescents by manipulating variables that may be linked to antisocial behavior. It explored how likely respondents are to make disorder judgments given the level of the subject's moral development and the life-course of the antisocial behavior, as well as respondents' characteristics. The study produced several results that may add to the literature on understanding mental disorder judgments. Key to the design of the study was the premise that certain developmental failures are expressed by adolescents through life-course persistent history of antisocial behavior, could be interpreted as internal dysfunctions that support a mental disorder judgment. This chapter will discuss how social work clinicians and social work students responded to the study questions and the implications of these findings for practicing clinicians.

Low moral development does not seem to impact social work clinicians' and social work students' disorder judgments. In this study, it appeared that social work clinicians and social work students did not respond to low moral development information as an indicator of internal dysfunction when making disorder judgments about antisocial adolescents. Why do social work clinicians and social work students seem to ignore developmental and behavioral evidence that meets the requirements for a disorder judgment? This finding is intriguing as it suggests a potential failure of clinical judges to identify an indicator that may be tied both conceptually and empirically to the concept of disorder. By extension, it also suggests that there may be other instances

where clear developmental indicators of disorder are either not identified or discarded as the wrong kind of evidence.

The course of the antisocial behavior is important in clinical distinctions between disorder and non-disorder and there was no evidence of an interaction between moral development and course of behavior on clinical decision making. It was expected that social work clinicians and social work students would view a lifelong defect in ability to behave in prosocial ways as evidence of an internal failure to develop properly. By *DSM-IV-TR* definition, this qualifies the youth for a disorder judgment and social work clinicians and social work students overwhelmingly interpreted life-course persistence in this way. Social work clinicians and social work students also seem to have viewed adolescence-limited course as evidence that disorder was not present. This lends strength to the idea that clinicians recognize the relative normalcy of some antisocial behavior in adolescence and will not pathologize it unless there is other conclusive evidence of disorder.

Adolescents displaying low moral development and life-course persistent antisocial behavior were not judged to be more disordered than the adolescents described in other vignettes. The relationship between the course of the behavior and disorder judgments was not influenced by the moral development of the youth in the vignettes. In this study, life-course persistence was significantly related to mental disorder judgments but low moral development was not. It was expected that two combined developmental deficits (i.e. low moral development and life-course persistence) providing evidence of internal dysfunction, would produce greater agreement with disorder than either factor alone. This was not the case. Moral development does not seem to have been salient to

social work clinicians and social work students, nor did moral development impact the effect of course on disorder judgments.

Clinician's level of training does affect their judgments about mental disorder. When social work clinicians and social work students report that they have received training in the use of the *DSM* to make diagnoses, they are more likely to make disorder judgments. It was expected that the unique qualities of the adolescents in the vignettes would have greater impact on mental disorder judgments than the personal characteristics of the person making the judgment. On the whole, this was true in the results of the study. With the exception of *DSM* training, clinician characteristics did not seem to impact disorder judgments. If the ability of the clinician to discriminate between disorder and no disorder is tied to the level of training they have received, it indicates a need for careful consideration of how clinicians are taught to make disorder judgments and what they are instructed to look for when internal dysfunction must be identified. This finding suggests that clinicians who make more accurate diagnoses are those who are able to identify internal dysfunction when behavioral criteria are met.

### **Disorder Judgments Based on *DSM* Criteria**

**Underlying assumptions.** The *DSM-IV-TR* makes the assumption that clinicians use both the behavioral requirements and the in-text guidance to make a judgment or clinical diagnosis. In practice, the diagnostic criteria are often used in a "check list" fashion, with the in-text material receiving very little attention. Studies evaluating how clinicians use *DSM* requirements to assess disorder in antisocial youth (Hsieh & Kirk, 2003; Kirk & Hsieh, 2004/2009; Kirk et al., 1999; Pottick et al., 2003; Pottick et al., 2007; Wakefield et al., 1999) carefully incorporate the diagnostic criteria for conduct



disorder into the study methodologies. These studies were then able to manipulate the context in which adolescent antisocial behavior occurred to test the influence of context on disorder judgments. To some degree then, this body of work was addressing whether clinicians took into account the impairment requirement; “Conduct Disorder is diagnosed only if the conduct problems represent a repetitive and persistent pattern that is associated with impairment in social, academic, or occupational functioning” (APA, 2000, pg. 98). This material, in conjunction with the consideration that “...the Conduct Disorder diagnosis should be applied only when the behavior in question is symptomatic of an underlying dysfunction within the individual and not simply a reaction to the immediate social context” (APA, 2000, pg. 96), clarifies that there is an expectation that the clinician making a diagnosis has considered the social context in which the behavior occurs and the degree of impairment it causes. It also presumes that they are able to identify an underlying dysfunction driving the behavior. On the whole, results from these studies (Hsieh & Kirk, 2003; Pottick et al., 2007) found supporting evidence that clinicians do, in fact, take context into consideration when making a mental disorder judgment. Still lacking is a body of empirical research exploring whether clinicians consider “internal dysfunction” when making these judgments.

The results obtained in this study illustrate that in the diagnostic case of conduct disorder, the *DSM-IV-TR* behavioral criteria alone are not sufficient stimuli to produce consistently high levels of agreement that disorder is present in adolescents described in case vignettes. Vignettes that were neutral on course and moral development should not have provided enough information to identify an internal dysfunction indicative of disorder if social work clinicians and social work students were paying attention to the

internal dysfunction requirement. However, the addition of information about the history or course of the presenting behaviors is clearly salient to both experienced and student social workers, who reached different judgments about the presence of disorder depending on the course variable material present in the vignette. Adolescents described in the vignettes where the course was adolescence-limited qualified for a diagnosis of conduct disorder with an adolescent onset. Adolescents described in the vignettes where the course was life-course persistent qualified for a diagnosis of conduct disorder with a childhood onset. Adolescents in the neutral course group where no course information was given could have been seen as arguably not disordered as they met only the “checklist” of behavioral criterion for conduct disorder, but not the in-text requirement that the symptoms not be driven by environment, nor caused by internal dysfunction. So, in certain circumstances, a youth’s history of antisocial behavior met the behavioral requirements for a diagnosis of conduct disorder per *DSM-IV-TR*, yet social work clinicians and social work students did not tend to identify the youth as having a disorder. This provides evidence that clinicians do attend to the presence or absence of internal dysfunction when making a mental disorder judgment.

### **Internal dysfunction.**

The *DSM* definition of disorder assumes that there is an underlying dysfunction of some type but does not include a definition of the term “dysfunction”. It is necessary, however, to use the concept of dysfunction to distinguish between disorder and other negative conditions. Because it neglects to account for “dysfunction,” the definition allows for inexact classification when it is operationalized and used in diagnosis. It is therefore possible to confuse disorders and other negative conditions without running

afoul of the definition of disorder (Wakefield, 1992). *DSM* attempts to capture inferred information about dysfunction in the diagnosis of conduct disorder by allowing categorization into diagnostic subtypes: *childhood onset type*, *adolescent-onset type* and *unspecified onset*. In the study results, life-course persistence could be seen as analogous to childhood onset type conduct disorder. As life-course persistence was more associated with mental disorder this suggests that the childhood onset category of conduct disorder may be describing internal dysfunction in adolescents diagnosed with conduct disorder.

Adolescents who engage in status offenses like truancy, fighting and drinking are engaging in unexpected behaviors. They may meet criterion for the diagnosis of conduct disorder, but could merely be exhibiting a normal variant of adolescent behavior that is not associated with future disorder (Moffitt, 1993). Only when the behavior is evaluated to be harmful to the adolescent and is the result of a dysfunction should it be called disordered (Wakefield, 1992). The concept of harmful dysfunction (Wakefield, 1992; Richters, 1993) clarifies the issue of what constitutes a disorder by specifying that a condition must cause harm to the individual and is caused by the failure of an internal mechanism to function as it is intended by nature to function. “Harm” may be said to occur if the condition causes the individual to miss a benefit valued by the cultural group in which he lives. The function of such an “internal mechanism” is its evolutionary purpose for being (Wakefield, 1992). This concept of disorder is applied with equal success to physical and mental conditions. (For a full review and critique of other concepts of disorder, see Wakefield, 1992). The term “harmful dysfunction” is a cross between a value label and a scientific term. “Dysfunction” is a factual term for the failure of a mechanism to perform as intended and “harmful” is a value term for the

sociocultural consequences that occur because of the dysfunction (Wakefield,1992).

Clarifying the concept of dysfunction as it applies to diagnosis is a major task of *DSM*, and it has been argued that the manner in which it is therein conceptualized does not adequately address the concept as it actually exists in our culture (Wakefield, 2006).

In this study, adding information about level of moral development to the vignettes did not improve social work clinicians' and social work students' ability to differentiate between disorder and non-disorder, as expected. Low moral development was not interpreted as evidence of internal dysfunction, thus clarifying the ability to make disorder judgments. It can be concluded that moral development information did not reach the level of necessary relevance to impact disorder judgments. These results contradict the assumption made by *DSM-IV-TR* that the presence of a specific set of behavioral criteria *and* evidence of an internal dysfunction is sufficient to consistently result in a valid diagnosis of conduct disorder. However, the vignette condition that describes a life course persistent pattern of antisocial behavior in the absence of a context that could explain the behavior as protective could also be construed as meeting the dysfunction requirement in *DSM-IV-TR*. Clinical judgments of disorder are highest in the condition where the behavior is life course persistent, and all other variables are held constant. This particularly implies that the concept of dysfunction is engaged in the process of disorder attribution.

**False positive diagnosis.** It has been noted in other areas of this study that all of the vignettes contain enough clinical information to warrant a diagnosis of conduct disorder. However, strict adherence to the criterion for the diagnosis of conduct disorder and the supporting text in the *DSM- IV-TR* requires that the behavior be “symptomatic of

an underlying dysfunction within the individual and not simply a reaction to the immediate social context” (APA, 2000, pg. 96). This requirement was clearly at play in these results as social work clinicians and social work students did take into account the life-course in which the behavior occurred when making disorder judgments. It could therefore be argued that instances where there is agreement that a disorder is present but the vignette information does not provide either a contextual cue about the history of the behavior or specific and clear information that an internal dysfunction is associated with the behavior are instances of false positive diagnosis.

This study used a neutral vignette that included only the behavioral criterion for the diagnosis of conduct disorder. Strict adherence to the *DSM* requirement that the behavior be associated with an identifiable internal dysfunction would mean this vignette did not support a diagnosis of conduct disorder. The neutral vignette presented a case where no information about course is provided and there is no specific information about moral development. According to the *DSM-IV-TR*, this is insufficient evidence to identify disorder, yet 29% of respondents did just that. Similarly, another vignette presented a case where information about course is neutral and all indicators of moral development fall within the expected range for a normal adolescent. In this condition, there is actually evidence that there is no underlying dysfunction if we accept level of moral development as the indicator of developmental “normalcy”. In this study, social work clinicians and social work students agreed that disorder is present 21% of the time, despite the relative “normalcy” of the youth described in the vignette. Thus it appears that at least 20% of social work clinicians and social work students demonstrate a tendency to identify disorder based on behavioral evidence alone.

## Improving Disorder Judgments

**Criteria specificity in *DSM*–based diagnosis.** The internal dysfunction criterion in *DSM-IV-TR* is intended to improve the ability of the clinician to judge whether or not a set of symptoms or behaviors is the result of a mental disorder. In the vignette containing evidence of low moral development, it was expected that social work clinicians and social work students might see this as evidence of internal dysfunction and make disorder judgments accordingly. Interestingly, this was not the outcome. When moral development was average in the vignettes it could not be interpreted as depicting internal dysfunction that would qualify the youth for a diagnosis of conduct disorder. In this condition, it was expected that social work clinicians would lean toward a non-pathological view of the behavior. In fact, this result was observed. However, a contrary interpretation of the constellation of variables is possible. One could say that a youth with average moral development would not make antisocial behavior choices unless there was some other underlying internal dysfunction. What remains is a complex pattern of clinical judgments that do not consistently identify a disorder in accordance with the internal dysfunction requirement even when the criteria for such a judgment are present.

The extent to which adolescents with average moral development make antisocial behavior choices such that they could qualify for a diagnosis of conduct disorder is not yet addressed in the literature. There is ample evidence that a large group of adolescents with a pattern of antisocial behavior that begins in the adolescent years will resolve into “normally behaving” young adults. Future research may pursue a line of inquiry that examines more closely the moral functioning of this adolescence-limited group. At present, however, the clinician must rely on the diagnostic criteria of the *DSM-IV-TR*.

The weakness that remains in the criteria for diagnosing conduct disorder lies in the lack of specificity around what developmental failures constitute an internal dysfunction that would be associated with disordered antisocial behavior.

### **Implications for Theoretical Understanding of Mental Disorder**

Several vignette studies (Pottick, et al., 2007; Wakefield, Pottick & Kirk, 2002; Wakefield, et al., 1999) have documented that social work clinicians and social work students are quite accurate in identifying disorder when symptoms for conduct disorder are presented. Further, the manipulation of context does not reduce their discriminatory ability. Clinical social workers appear to actively use the *DSM-IV-TR* in-text guideline for identifying mental disorder. When a negative environment can explain the antisocial behavior as protective, they did not identify disorder. When the behavior was explained by an internal dysfunction, they made a disorder judgment.

In this study, the results either are contrary to previous findings or have identified a problem with the concept of moral development as it is applied to clinical disorder judgments. Social work clinicians and social work students made appropriate disorder judgments when the course of the behavior and symptoms reflected conduct disorder criteria. This finding is consistent with previous research. However, these findings diverge from current research when moral development is added to the mix of variables. Respondents did not identify disorder in the presence of low moral development. Applying the theory of harmful dysfunction (Wakefield, 1992) to the interpretation of moral development; low moral development is a variable that indicates internal dysfunction and therefore, should have supported a judgment of disorder. According to these data, social work clinicians and social work students did not interpret low moral

development information as evidence of internal dysfunction. Interpretation of this finding could lead to the conclusion that clinicians do not find moral development relevant in the identification of mental disorder. However, this would need to be explored in future research as it is a new area of inquiry and these findings give only an early insight into the question.

As a first consideration, the failure to identify disorder with low moral development as evidence may simply be the result of the fact that clinicians are not trained to identify indicators of low moral development. When given information indicating that an adolescent suffers from low moral development the clinician may not recognize the signs. Secondly, it could be supposed that the information included in the vignette about the adolescent's level of moral development was not explicit enough to be taken into consideration of the whole clinical picture. The moral development material may simply have been overlooked. Finally, the connection between moral development, antisocial behavior and the labeling of disorder is not specifically addressed in the *DSM-IV-TR*. Thus, clinicians are probably not deliberately seeking out information about moral development when assessing adolescent antisocial behavior.

**The concept of moral development in diagnosis.** In an effort to understand the results of the current study, one question rose above others. Why did social work clinicians and social work students not see low moral development as a clear indicator of dysfunction denoting disorder? This study found that social work clinicians and social work students made disorder judgments about life-course persistent adolescents in keeping with the *DSM-IV-TR* guidance about internal dysfunction. Yet when judging an adolescent with low moral development, they did not make the same distinction. In the



clinical psychology literature, several studies examined how reason and emotion impact moral judgments (Garb, 1989 & 1997; Garb & Boyle, 2003). Although this body of work does not specifically address the connection between level of moral development and clinical judgments, it does tap into the manner in which clinicians react to moral situations and how the reaction impacts judgments. These studies typically use vignettes to elicit a reaction from the respondents that can be identified as either emotional or intellectual. Morality is sometimes defined in this body of work by emotional reactions to the situation described in the vignette, which are considered “moral problems.” So for example, a respondent is asked “Is it permissible to eat dog meat?” and this is construed as a moral judgment. The weakness in this approach is that emotional reactions are influenced by culture as well as intellectual processes that take place below the respondents’ conscious awareness. It doesn’t account for the “ick factor,” which may solely be the result of cultural norms, not the active, intellectual analysis we expect when individuals apply moral concepts to organize information prior to making a moral judgment (Kohlberg, 2008). In effect, clinicians may react to antisocial behavior with a negative judgment, in part, because they have an immediate emotional reaction to it based on their culture and social norms. They may then apply the standards for judging mental disorders, but the initial emotional reaction may still have an influence on the final judgment. In sum, the link between these emotions and morality is still open to debate (Turiel, 2008) and there may be an “ick factor” that has not been accounted for.

The interpretation of the results obtained in this study is overshadowed by concerns about the use of vignettes. The vignettes are designed to express complex issues of moral development and tie them to specific sets of behavior. It is possible that

the vignette descriptions were not specific enough in their depiction of different levels of moral development to reach a threshold that the respondents needed to attend to the information. The vignettes may have constrained the picture of the youth such that the clinician would not use the limited available information to label a disorder. A mental disorder label can have serious far-reaching implications for a youth. Responsible professionals may hesitate to make complex mental disorder judgments unless they are absolutely certain that they are justified.

The development of a construct labeled “moral attentiveness” originates from the concern that in the assessment of moral behavior, we do not know what people actually attend to in their moral environment (Reynolds & Seranic, 2007). The researchers found that people “chronically” attend to issues in their environments that reflect their moral conception of themselves and moral awareness, moral behavior and the reporting of self and other’s morality related behavior. Turiel (2008) talks about how morality may be broken into domains that govern behaviors differently depending upon which domain the conflict falls into. He also notes that psychology has tried for ages to define behavior in opposition to how lay people would interpret behavior. Perhaps this tendency to attend to what is morally salient and not to other information is at work in the study results.

The fact that social work clinicians and social work students were less likely to identify disorder when information about low moral development was included in the vignettes may suggest that clinicians are “triggered” by their moral attentiveness to judge not just the antisocial behavior but the “moral implication” of the behavior. In effect, they are saying that when the moral development of a youth is insufficient to produce acceptable social behavior, the youth is not suffering from a mental disorder but is

antisocial for some other reason. This other reason is the missing piece that would give a non-pathological explanation for antisocial behavior. This also means that social work clinicians and social work students are quite clear that moral development information is not what they attend to when identifying an internal dysfunction that is driving antisocial behavior. The results from this study suggest that the process of assigning a diagnosis to behavior that can occur very commonly in the arena of “normal behavior” is a complex phenomenon. It seems likely that the bias and internal expectation sets of the clinician doing the assessing are key to the labeling. This dynamic lends a level of subjectivity to clinical assessment that is not intended by the *DSM*. It is questionable whether clinicians conscientiously and deliberately use the internal dysfunction criterion when they assign a label of mental disorder. This study found that social work clinicians and social work students do not appear to use low moral development as specific evidence of internal dysfunction to support mental disorder judgments.

**Developmental implications of antisocial behavior.** Antisocial behavior in adolescence is so common as to be considered a relatively normal part of adolescent growth and development (Moffitt, 2002). However, the research literature has also established that antisocial behavior is reliably associated with lower than expected moral development. There is an apparent conflict between these two findings as evidenced by the phenomenon of antisocial behavior in a huge group of adolescents who “grow out of it” and, presumably, achieve a normal level of moral reasoning. Perhaps they make the choice to misbehave during a developmental crisis and somehow contrive to suspend their moral functioning. Perhaps antisocial behavior is a method of adolescent problem solving that is abandoned when it is no longer utilitarian (Brezina, 2000). Current

research does not sufficiently explain these divergences in adolescent moral development.

**Snares.** Moffit (1993a) posited that adolescent-limited and life-course persistent adolescents were different in the course and the type of antisocial behavior in which they engaged. Adolescence-limited youth tend to offend in groups and the behavior may be social in nature, with non-violent or status offenses making up the bulk of their misbehavior. In contrast, life-course persistent offenders begin earlier, offend with more regularity and severity and are less likely to desist in adulthood. They also are more likely to be “lone offenders.” In more recent work, Moffitt hypothesized that developmental “snares” may account for the continuation of antisocial behavior beyond the point at which desistance from antisocial behavior may be expected, particularly among adolescence-limited offenders (Piquero & Moffitt, 2004). Snares are life events that delay an adolescent’s return to a non-offending lifestyle or the successful transition to adulthood. For example, a criminal record, addictions or the failure to obtain an academic degree may make it more difficult for an individual to succeed. In the study vignettes, life events were described that could constitute snares. The subject of the life-course persistent vignette had an interaction with law enforcement that could have led to serious consequences. The subject of the adolescence-limited vignette had been left back in school. This descriptive information was included to complete the picture of the specific adolescent in the respective vignette, but it is information that may have had an unintended impact on the respondent judgments. These snares could account for respondents’ judging that the vignette subject is not disordered, even when moral

development is low, if more importance is attributed to these life events than to developmental issues.

**Clinicians' Response to Moral Development Variables.** It was expected that manipulation of the level of moral development portrayed in each vignette would be associated with different levels of agreement to the disorder judgment item on the Likert scale. Evidence of low moral development and strong agreement with a judgment of disorder would be consistent with our hypothesis based on the concept of harmful dysfunction and our belief that low moral development would be interpreted by social work clinicians and social work students as a harmful dysfunction. Average moral development would be less likely to be associated with disorder judgments as there is no reason for the clinician to believe an internal dysfunction is present. It was expected that when moral development information was not provided, it would be harder for clinicians to decide whether disorder was present or not, and that the response rates to the disorder item would reflect this difficulty.

In fact, any information about level of moral development seemed to result in stronger rejection of disorder judgments. Providing no moral development information resulted in more agreement with a disorder judgment than when moral development information was offered. The relationship between level of moral development and judgments of disorder was not consistent with the concept of harmful dysfunction. Thus, when given any moral development information, social work clinicians and social work students were less likely to agree that disorder was present. When there was no moral development information given, social work clinicians and social work students more often identified disorder. It was hypothesized in this study that clinical social workers and

social work students would make different judgments about the presence of disorder in a youth, when differing levels of information about the youth's level of moral development were presented in conjunction with a picture of conduct disordered behavior. Because a diagnosis of conduct disorder per the *DSM* requires the clinician to determine that the behavioral symptoms are the result of an internal dysfunction, we expected that as the weight of evidence for low moral development increased, social work clinicians and social work students would be more likely to view the behavior as a result of inadequate internal mechanisms to govern behavior and identify disorder. This hypothesis was unsupported. Agreement to the disorder judgment item when moral development level depicted was low did not differ strongly from agreement that disorder is present when moral development depicted was neutral.

Evidence of low moral development was not interpreted as the internal dysfunction that is required to make a diagnosis of disorder. Antisocial behavior can be viewed as a normal variant of adolescent development. It is possible to take that view when reading the vignettes where moral development was average. In that case, there was no indication of an internal dysfunction that would support a mental disorder judgment. Social work clinicians and social work students overwhelmingly made this distinction: they do not pathologize antisocial behavior when there is no evidence of internal dysfunction as indicated by level of moral development. This study did little to clarify why social work clinicians and social work students failed to consider low moral development as a factor when making clinical disorder judgments. Identifying why clinicians do not interpret low moral development as internal dysfunction would benefit from further exploration in future research.

## Limitations

**Vignette weaknesses.** Case vignettes suffer several limitations though they have been used for decades in clinical judgment studies (Garb, 1997). A written vignette limits the amount of information a clinician can obtain to complete the clinical picture needed to make a judgment. In a face-to-face interview, nuances of body position, language use and interaction contribute to the information given verbally. Without a traditional interview, contextual information is lost (Kirk, 2009). Many clinicians in studies that use vignettes to measure judgments express a preference for gathering additional history prior to making a diagnosis (Hsieh, 2001). In early versions of the instrument used in this study, diagnostic impressions were requested in narrative form. In keeping with Hsieh's findings, many respondents gave the feedback that they would not make such a decision with limited information and they often declined to make a diagnosis. Subsequent instruments were simplified to include only one item asking clinicians to identify disorder. Judgments based on single item measures have face validity but present a highly simplified distillation of complex information and can be imprecise. Such single item measures have, nevertheless, been found to be statistically significant when related to disorder judgments vis-à-vis etiology, prognosis and likely treatment responsiveness (Hsieh and Kirk, 2003).

In addition, the study vignettes were used to operationalize the three levels of the life-course variable. Each level is presented in a unique vignette. The vignettes therefore differ in the information given about the course of the antisocial behavior but also contain differences in other variables. For example, the vignette subjects are either twelve or sixteen years old. The antisocial behavior ranges from minor rule breaking to stealing.

These differences were necessary to depict three distinct courses typical of adolescents as well as different levels of moral reasoning but create a potential confound in the study design. Respondents could be making disorder judgments based upon these differences in the youth and not solely the course of the behavior.

**Sample weaknesses.** This study sampled both social work students and practicing LCSW's. Although other studies have found that these two populations make similar disorder judgments in vignette-based studies and that experience does not significantly impact disorder judgments (Kirk et al., 1999; Pottick, et al., 2007), combining experienced professionals and MSW students in this sample raises some questions about the generalizability of the results. First, the number of respondents with an LCSW lacked the power to allow the two groups to be statistically compared to verify that their judgments were comparable. Second, the self-reported measures of training in the use of the *DSM* for adult and child populations provide a weak measure of actual training since they were not verified in the student group. To become an LCSW, one must have completed the MSW degree, been in practice for a certain amount of time and have documented professional continuing education credits. Therefore, LCSW respondents have necessarily received more training than student respondents.

**Study Assumptions.** Finally, the study explored the relationship between moral development and disorder judgments. Inherent in the questions asked in the study is the assumption that the respondents have knowledge that will aid them specifically in identifying the presence of mental disorder given certain data about the adolescent subjects. However, it is not clear that either group of respondents had any specific training in identifying behaviors or other signs that indicate low adolescent moral



development. Therefore, social work clinicians and social work students may not have made the connection between low moral development, the identification of internal dysfunction and the judgment of mental disorder due to lack of training in this specific application of their clinical knowledge.

### **Summary and Future Directions**

*DSM-IV-TR* is widely used by social workers and other mental health professionals in the assessment of conduct disorder and other mental illnesses. Therefore, the concept of disorder as put forth in *DSM* has far-reaching impact on clinical assessment. This study addressed the way in which social work clinicians and social work students apply the concept of disorder in their assessment of antisocial symptoms. These results suggest that the syndromal symptoms alone are not enough for clinicians to consistently judge that the behavior present is a result of a disorder. Rather, information about the course of the behavior was necessary for social work clinicians and social work students to make mental disorder judgments. The process of judging mental disorders in youth still seems to depend on a clinician's phenomenological concepts around disorder and dysfunction. Youth who are antisocial because they suffer from a mental disorder and youth who are merely behaving badly must be distinguished from one another to avoid false positives in diagnosis. This task is facilitated by taking a broader view of the history of the symptoms, their context and associated dysfunction, over a symptoms-only approach. A dysfunction based approach may become a valuable guide in identifying true disorder and avoiding labeling non-disordered behavior as mental illness in future work. The findings underline that clinicians make disorder judgments that are sensitive to

contextual information, in keeping with the expectation in the text of *DSM*. However, the process by which these judgments are made remains unclear.

In this study, all vignettes supplied sufficient criterion to meet the “checklist” requirements to make a mental disorder judgment. In fact, disorder was sometimes identified in the vignette condition in which only the syndromal symptoms were supplied. This raises the concern that there is still potential over-diagnosis of conduct disorder, particularly among adolescents whose behavior is protective in a chronically-conflicted or dangerous environment. This over-diagnosis effect needs further exploration in several arenas. First, as *DSM-IV-TR* is revised and the fifth edition is produced, the divergence between antisocial behavior that is dysfunction based versus that behavior meeting only the *DSM* criteria deserves to be addressed. Secondly, it is possible for a youth to meet the requirements for conduct disorder, yet not be disordered, having no dysfunction associated with the behavior. These youth may still be at-risk of serious long-term consequences related to their antisocial behavior but may be denied helpful mental health services if they are determined to be non-disordered. Failing to match adolescents with the services most appropriate for their particular brand of antisocial behavior is likely to result in inadequate treatment and rehabilitation outcomes. Other unexpected social service system impacts from imprecise disorder judgments could include: the high costs associated with congregate care, inappropriate penetration of disordered antisocial youth into the juvenile justice system and failure to provide early mental health intervention aimed at remediating developmental failures. Should more youth who do not meet the dysfunction criterion be judged not-disordered, it is likely that a greater number of youth will become involved in justice-related programs and facilities established to deal with

adolescent delinquency. This may, in fact, be the most appropriate route for youth who pose a societal risk but do not display a “treatable” internal dysfunction. Those youth who clearly do exhibit internal dysfunction associated with their antisocial behavior and are appropriately identified as disordered, can receive mental intervention and monitoring to guide their prosocial development.

**Implications for Training.** The problem of false positive diagnosis of conduct disorder could be approached by cross-system training in the dysfunction and contextual requirements for the identification of conduct disorder. The incidence of over-diagnosis could be significantly reduced if professionals shared a common definition of disorder and identified dysfunction similarly in their assessment interview processes. Statistics pointing to the high incidence of conduct disorder among juvenile detainees in the justice system (Teplin, et al., 2002) are suspect, as many of those studies are based on conduct disorder diagnoses made using a “checklist” approach to diagnosis that does not include careful discrimination between dysfunction driven behavior and behavior that is protective in a criminogenic or otherwise threatening environment.

This study found evidence that the relationship between mental disorder judgments and identification of internal dysfunction may hinge on the training of the clinical judge and the history of the adolescent. Given these results, it is possible that the true scope of adolescents with conduct disorder is currently unknown. A conduct disorder judgment must be qualified by the presence of internal dysfunction. When a dysfunction closely related to conduct disorder like moral development is not viewed as supporting evidence for a mental disorder judgment, inaccurate labeling may occur.

Previous proposals for changes to *DSM* were generated by research on false positive diagnosis and suggested the diagnostic criterion for conduct disorder incorporate an exclusion clause dealing with negative environment (Wakefield, et al., 2002), removing it from the realm of in-text guidance that may not be attended to in the assessment process. This distinction would make the in-text qualifications for diagnosis of conduct disorder a more active part of the assessment process and could reduce false positive diagnoses. Future research focused on the ability of clinicians to specifically identify both negative environments as a factor in antisocial behavior as well as a specific dysfunction associated with antisocial behavior would clarify how the APA could amend diagnostic criterion for conduct disorder in future editions of the *DSM*. The addition of concrete diagnostic criteria that deals with non-pathological reactions to life circumstances and specific dysfunctions associated with disordered antisocial behavior is a logical next step in moving toward the goal of providing a framework that results in valid diagnosis of not only conduct disorder but of all mental disorders.

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## Appendix A

**RUTGERS UNIVERSITY**  
**Office of Research and Sponsored Programs**  
**ASB III, 3 Rutgers Plaza, Cook Campus**  
**New Brunswick, NJ 08901**

November 2, 2005

**P.I. Name:** Harcourt  
**Protocol #**06-094M

Heather F Harcourt  
 School of Social Work - New Brunswick  
 536 George Street  
 College Avenue Campus  
 NB

Dear Heather Harcourt:

( Initial / Revised / Continuation )

**Protocol #** 06-094M

**Protocol Title:** "Judging Failures in Moral Development: The Classification of Anti-social Behavior"

This is to advise you that the above-referenced study has been presented to the Institutional Review Board for the Protection of Human Subjects in Research, and the following action was taken subject to the conditions and explanations provided below:

**Approval Date:** 10/26/2005  
**Expedited Category(s):** 7

**Expiration Date:** 10/25/2006

This approval is based on the assumption that the materials you submitted to the Office of Research and Sponsored Programs (ORSP) contain a complete and accurate description of the ways in which human subjects are involved in your research. The following conditions apply:


- The research will be conducted according to the most recent version of the protocol that was submitted;
- ORSP will immediately be informed of any injuries to subjects that occur, or problems that arise, in the course of your research;
- Proposed changes will be submitted to the IRB for approval prior to implementation;
- Each person who signs a consent document will be given a copy of that document, if you are using such documents in your research;
- This approval is valid ONLY for the dates listed above, and a Request for Continuing Review form must be submitted to the IRB for review and approval prior to the expiration date to extend the approval period;
- The Principal Investigator must retain all signed documents for at least three years after the conclusion of the research.

**Additional Notes:** Expedited Approval per 45 CFR 46.110, Category 7

**Failure to comply with these conditions will result in withdrawal of this approval.**

Please note that the IRB has the authority to observe, or have a third party observe, the consent process or the research itself. The Federal-wide Assurance (FWA) number for the Rutgers University IRB is FWA00003913; this number may be requested on funding applications or by collaborators.

Respectfully yours,

  
 László Szabó, CIP  
 Sponsored Programs Administrator  
[szabo@orsp.rutgers.edu](mailto:szabo@orsp.rutgers.edu)

cc: Kathleen Pottick



## **Appendix B**

### **CONSENT FORM**

Dear Study Participant,

We are examining the way professional Social Workers view problem behavior in young men. To help us better understand this area, we are asking you to complete the enclosed questionnaire. This packet contains three short stories, each one paragraph long. To participate in this study, simply read each short paragraph and complete the brief questions following each one. It should take approximately 10 minutes to complete the questionnaire. There are no correct answers to the questions. Knowledgeable people could have equally valid, although different opinions. For that reason, there is no category for “don’t know”.

In addition, Participants are asked to provide some demographic and professional background information that will assist in the analysis of the questionnaire. Your willingness to participate is deeply appreciated and may result in a greater understanding of adolescent clients. Should you decide not to participate there will be no negative consequence. If you wish to be excluded from follow-up mailings, simply note that at the top of the survey and return it in the envelope provided.

The form and envelope that you have received are coded so that we may track responses and remove you from the follow-up list when we have received your completed survey. Please do not put your name or return address on these forms. Your answers will be held strictly confidential and your personal information will at no time be reported as part of the study findings. The master list linking your name and responses will be held in the Principal Investigator’s private office. At the end of the research, all confidential records will be destroyed.

I am conducting this research in partial fulfillment of the doctoral requirements at Rutgers, the State University of New Jersey. Any questions you have about your participation in this study can be directed to me, Hharcourt@aol.com or 720.231.7149.

If you have any questions about your rights as a research subject, you may contact the Sponsored Programs Administrator at Rutgers University at (732) 932-0151 ext. 2104. This project is conducted under the supervision of Kathleen Pottick PhD, Institute for Health, Health Care Policy and Aging Research, 30 College Ave., New Brunswick, NJ 08854.

Signing your name below indicates that you have read and understand the contents of this consent form and that you agree to take part in this study. Signing this form will not waive any of your legal rights.

Participant Signature

Date

Researcher's Signature

Date \_\_\_\_\_

## Appendix C

Questionnaire

H.F. Harcourt Subject # \_\_\_\_\_  
For office use only

### DEMOGRAPHIC INFORMATION

Please complete the following information about yourself and your professional background. Do not put your name on these forms. Your responses will be confidential.

Highest Degree earned:

PhD. ☐ MA ☐ MSW ☐ BA ☐ Associates ☐ High School ☐ no diploma ☐

If your highest degree was other than Social Work please specify major: \_\_\_\_\_

Age: \_\_\_\_\_

Gender: Male ☐ Female ☐Marital Status: Married ☐ Single ☐ Divorced ☐ Separated ☐ Widowed ☐I identify myself as: Latin/Hispanic ☐ Asian ☐ Black/African ☐ Caucasian ☐ Native American/Indian ☐ Other: \_\_\_\_\_State in which you practice: Connecticut ☐ New Jersey ☐ New York ☐ Pennsylvania ☐  
Other (please specify) \_\_\_\_\_Which setting best describes your primary job (Check only one)? Mental Health ☐  
Corrections ☐ Child Protective Services ☐ Adult Protective Services ☐ Education ☐  
Juvenile Justice ☐  
Other: \_\_\_\_\_Which title best describes your primary job (Check only one)? Social Worker ☐  
Psychiatrist ☐ Psychologist ☐ Corrections Officer ☐ Teacher ☐ Nurse ☐ Administrator  
☐ Other: \_\_\_\_\_Do you work primarily with: Children and Adolescents ☐ Adults ☐ Other: \_\_\_\_\_

How many years have you been working in your chosen profession? \_\_\_\_\_

Of those years, how many were spent working mainly with children or adolescents  
(answer 0 if none)? \_\_\_\_\_Have you received training specifically in the use of the DSM-IV? Yes ☐ No ☐

If yes, has any of that training focused on any of the following: conduct disorder, Attention deficit /hyperactivity disorder, oppositional defiant disorder or disruptive behavior NOS? Yes ☐ No ☐

### Survey

**Instructions:** Please read the following three stories and answer the brief questions that follow each one. Responses are: SA=strongly agree, A=Agree, D=disagree, SD=strongly disagree. There is no category for “don’t know” since different people could have equally valid, different opinions and there is no correct answer.

#### Case #1

Joe is a 16-year-old boy who resides with his father and one brother. His father brought him in for evaluation after Joe stayed out overnight drinking with his friends. Joe admits to frequent marijuana and alcohol use with peers and he has a recent history of fighting and stealing from neighbor’s homes. Joe’s academic performance is average and he works at grade level but has frequently been truant for the past 3 years and is becoming increasingly disruptive in the classroom. Joe’s father reported that Joe’s behavior has been getting worse for about a year and that Joe frequently goes out at night without permission but has always returned home. Joe’s staying out all night worried him more than the other behavior problems. Joe reported that he stayed out due to an argument with his father over money. Joe and his father had agreed that Joe could go on a weekend camping trip with friends if he saved up the money for it himself. So Joe saved up the \$100 it cost to go camping and a little more besides. But just before Joe was to leave, his father changed his mind. Some of the father’s friends decided to go on a special fishing trip, and Joe’s father was short of the money it would cost to go with them. So he told Joe to give him the money Joe had saved to go camping. Joe didn’t want to give up going to camp and an argument ensued.

Please use your best judgment to respond to the following statements about this story by indicating whether you Strongly Agree, Agree, Disagree, Strongly Disagree.

This Youth:	SA	A	D	SD
1- will improve his behavior in time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2- could change if he wanted to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3- should be evaluated by a psychiatrist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4- will have lifelong behavior problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5- needs cognitive behavioral treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6- has a mental disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7- needs medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8- should be evaluated by a judge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9- is a delinquent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10- needs psychotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Case #2**

John is a 12-year-old boy who resides in a single-parent household with his mother and one older sister, Louise. His mother is seeking an evaluation for John due to a year of escalating misbehavior and his self-reported internal conflict over his own actions. John's behavioral problems include frequently beating his sister up, a history of aggression to peers, truancy and poor academic performance. John was just notified by the school that he will be left back this year. Family tension reached a peak 2 weeks ago when a family reunion conflicted with a rock concert that his mother promised John he could attend. When she learned that the two events were scheduled for the same day, his mother told John he must attend the family event. John had promised to attend the family function before learning it was planned for the same night as the concert. In private, John admits that he decided to go to the concert anyway. He bought a ticket with money stolen from his mother's purse and told his mother he was sick the night of the concert. His family attended the reunion without him. John went to the performance and spent the evening smoking marijuana with a friend. To date his mother is unaware of his actions. He states that he has been preoccupied with whether or not to tell his mother about the deceit.

Please use your best judgment to respond to the following statements about this story by indicating whether you Strongly Agree, Agree, Disagree, Strongly Disagree.

This Youth:	SA	A	D	SD
1- will improve his behavior in time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2- could change if he wanted to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3- should be evaluated by a psychiatrist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4- will have lifelong behavior problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5- needs cognitive behavioral treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6- has a mental disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7- needs medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8- should be evaluated by a judge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9- is a delinquent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10- needs psychotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Case #3**

The police picked up two brothers as they left a stop-n-shop carrying stolen goods. Karl, age 16, was brought in for assessment due to the extreme violence of his reaction to being arrested. He was combative when apprehended by police, began shouting homicidal threats at Bob, his 14-year-old brother, and repeatedly banged his head on the pavement, shouting that the officers would have to take him to the hospital instead of jail. This incident is only the last in a long history of difficult to manage behavior for Karl.

Although both boys were adopted as preschoolers by the same couple, by approximately age 5 Karl's failure to follow rules in the home was of some concern to his parents. By age 10 his over-activity had escalated into aggression at home and in the community, petty theft, and a consistent pattern of relying on coercive or illegal behavior to obtain his ends. He was subsequently removed from the adoptive home and placed in a series of foster care placements. The boys were attempting to amass enough funds to run away together. Karl had broken into a store and stolen \$1,000 and goods, which he intended to sell. Later, Karl went to their biological grandfather, a retiree on a fixed income, and convinced him to "loan" them \$1,000. During the interview Karl admitted that he never intended to repay the debt.

Please use your best judgment to respond to the following statements about this story by indicating whether you Strongly Agree, Agree, Disagree, Strongly Disagree.

This Youth:	SA	A	D	SD
1- will improve his behavior in time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2- could change if he wanted to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3- should be evaluated by a psychiatrist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4- will have lifelong behavior problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5- needs cognitive behavioral treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6- has a mental disorder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7- needs medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8- should be evaluated by a judge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9- is a delinquent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10- needs psychotherapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Appendix D

### Vignettes

*(Italics indicate text that is changed to vary level of moral development indicated)*

Vignette 1- Joe  
 Etiology-Adolescent-limited  
 Moral Development- **Neutral**

Joe is a 16-year-old boy who resides with his father and one brother. His father brought him in for evaluation after Joe stayed out overnight drinking with his friends. Joe admits to frequent marijuana and alcohol use with peers and he has a recent history of fighting and stealing from neighbor's homes. Joe's academic performance is average and he works at grade level but has frequently been truant for the past 3 years and is becoming increasingly disruptive in the classroom. Joe's father reported that Joe's behavior has been getting worse for about a year and that Joe frequently goes out at night without permission but has always returned home. Joe's staying out all night worried him more than the other behavior problems. Joe reported that he stayed out due to an argument with his father over money. Joe and his father had agreed that Joe could go on a weekend camping trip with friends if he saved up the money for it himself. So Joe saved up the \$100 it cost to go camping and a little more besides. But just before Joe was to leave, his father changed his mind. Some of the father's friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost to go with them. So he told Joe to give him the money Joe had saved to go camping. Joe didn't want to give up going to camp and an argument ensued.

Vignette 2- Joe  
 Etiology-Adolescent-limited  
 Moral Development- **Low**

Add to indicate Preconventional judgment (stage 1):

CJ #1 pg. 195

Issue: Contract

Norm: Contract

Element: Blaming/Approving

Joe is a 16-year-old boy who resides with his father and one brother. His father brought him in for evaluation after Joe stayed out overnight drinking with his friends. Joe admits to frequent marijuana and alcohol use with peers and he has a recent history of fighting and stealing from neighbor's homes. Joe's academic performance is average and he works at grade level but has frequently been truant for the past 3 years and is becoming increasingly disruptive in the classroom. Joe's father reported that Joe's behavior has been getting worse for about a year and that Joe frequently goes out at night without permission but has always returned home. Joe's staying out all night worried him more than the other behavior problems. Joe reported that he stayed out due to an argument with his father over money. Joe and his father had agreed that Joe could go on a weekend

camping trip with friends if he saved up the money for it himself. So Joe saved up the \$100 it cost to go camping and a little more besides. But just before Joe was to leave, his father changed his mind. Some of the father's friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost to go with them. So he told Joe to give him the money Joe had saved to go camping. Joe didn't want to give up going to camp and an argument ensued. *Joe refused to give his father the money. He feels that his father is a liar for going back on the deal they had made. Since Joe believed his father was wrong, he stayed out to punish his father.*

Vignette 3- Joe  
 Etiology-Adolescent-limited  
 Moral Development- **Average**

Add to indicate Conventional judgment (Stage 3):

CJ #12

Issue: Contract

Norm: Property

Element: Reciprocity/positive desert

Joe is a 16-year-old boy who resides with his father and one brother. His father brought him in for evaluation after Joe stayed out overnight drinking with his friends. Joe admits to frequent marijuana and alcohol use with peers and he has a recent history of fighting and stealing from neighbor's homes. Joe's academic performance is average and he works at grade level but has frequently been truant for the past 3 years and is becoming increasingly disruptive in the classroom. Joe's father reported that Joe's behavior has been getting worse for about a year and that Joe frequently goes out at night without permission but has always returned home. Joe's staying out all night worried him more than the other behavior problems. Joe reported that he stayed out due to an argument with his father over money. Joe and his father had agreed that Joe could go on a weekend camping trip with friends if he saved up the money for it himself. So Joe saved up the \$100 it cost to go camping and a little more besides. But just before Joe was to leave, his father changed his mind. Some of the father's friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost to go with them. So he told Joe to give him the money Joe had saved to go camping. Joe didn't want to give up going to camp and an argument ensued. *Joe refused to give his father the money, feeling that it was his money; he deserved it and had been promised he would be allowed to go on the trip. Since Joe believes his father was wrong, he did not feel obligated to follow the house rules and chose to stay out rather than return home.*

Vignette 4- John  
 Etiology-Neutral  
 Moral Development- **Neutral**

John is a 12-year-old boy who resides in a single-parent household with his mother and one older sister, Louise. His mother is seeking an evaluation for John due to a year of escalating misbehavior and his self-reported internal conflict over his own actions. John's



behavioral problems include frequently beating his sister up, a history of aggression to peers, truancy and poor academic performance. John was just notified by the school that he will be left back this year. Family tension reached a peak 2 weeks ago when a family reunion conflicted with a rock concert that his mother promised John he could attend. When she learned that the two events were scheduled for the same day, his mother told John he must attend the family event. John had promised to attend the family function before learning it was planned for the same night as the concert. In private, John admits that he decided to go to the concert anyway. He bought a ticket with money stolen from his mother's purse and told his mother he was sick the night of the concert. His family attended the reunion without him. John went to the performance and spent the evening smoking marijuana with a friend. To date his mother is unaware of his actions. He states that he has been preoccupied with whether or not to tell his mother about the deceit.

Vignette 5- John  
 Etiology-Neutral  
 Moral Development- **Low**

Add to indicate Preconventional judgment (stage 1):

CJ #1 pg. 518

Issue: Contract

Norm: Contract

Element: Blaming/Approving

John is a 12-year-old boy who resides in a single-parent household with his mother and one older sister, Louise. His mother is seeking an evaluation for John due to a year of escalating misbehavior and his self-reported internal conflict over his own actions. John's behavioral problems include frequently beating his sister up, a history of aggression to peers, truancy and poor academic performance. John was just notified by the school that he will be left back this year. Family tension reached a peak 2 weeks ago when a family reunion conflicted with a rock concert that his mother promised John he could attend. When she learned that the two events were scheduled for the same day, his mother told John he must attend the family event. John had promised to attend the family function before learning it was planned for the same night as the concert. In private, John admits that he decided to go to the concert anyway. He bought a ticket with money stolen from his mother's purse and told his mother he was sick the night of the concert. His family attended the reunion without him. John went to the performance and spent the evening smoking marijuana with a friend. To date his mother is unaware of his actions. He states that he has been preoccupied with whether or not to tell his mother about the deceit. *John decided not to tell his mother because she had promised he could go to the concert. Changing her mind constituted lying and he was therefore justified in going without permission.*

Vignette 6- John  
 Etiology-Neutral  
 Moral Development- **Average**

Add to indicate Conventional judgment (stage 3):

CJ #24 pg. 522

Issue: Contract

Norm: Contract/Affiliation

Element: Serving social ideal or harmony

John is a 12-year-old boy who resides in a single-parent household with his mother and one older sister, Louise. His mother is seeking an evaluation for John due to a year of escalating misbehavior and his self-reported internal conflict over his own actions. John's behavioral problems include frequently beating his sister up, a history of aggression to peers, truancy and poor academic performance. John was just notified by the school that he will be left back this year. Family tension reached a peak 2 weeks ago when a family reunion conflicted with a rock concert that his mother promised John he could attend. When she learned that the two events were scheduled for the same day, his mother told John he must attend the family event. John had promised to attend the family function before learning it was planned for the same night as the concert. In private, John admits that he decided to go to the concert anyway. He bought a ticket with money stolen from his mother's purse and told his mother he was sick the night of the concert. His family attended the reunion without him. John went to the performance and spent the evening smoking marijuana with a friend. To date his mother is unaware of his actions. He states that he has been preoccupied with whether or not to tell his mother about the deceit. *John decided not to tell his mother about his behavior because to do so would cause her to mistrust him in the future and further damage their relationship.*

Vignette 7- Karl and Bob  
 Etiology-Life-Course Persistent  
 Moral Development- **Neutral**

The police picked up two brothers as they left a stop-n-shop carrying stolen goods. Karl, age 16, was brought in for assessment due to the extreme violence of his reaction to being arrested. He was combative when apprehended by police, began shouting homicidal threats at Bob, his 14-year-old brother, and repeatedly banged his head on the pavement, shouting that the officers would have to take him to the hospital instead of jail. This incident is only the last in a long history of difficult to manage behavior for Karl. Although both boys were adopted as preschoolers by the same couple, by approximately age 5 Karl's failure to follow rules in the home was of some concern to his parents. By age 10 his over-activity had escalated into aggression at home and in the community, petty theft, and a consistent pattern of relying on coercive or illegal behavior to obtain his ends. He was subsequently removed from the adoptive home and placed in a series of foster care placements. The boys were attempting to amass enough funds to run away together. Karl had broken into a store and stolen \$1,000 and goods, which he intended to sell. Later, Karl went to their biological grandfather, a retiree on a fixed income, and convinced him to "loan" them \$1,000. During the interview Karl admitted that he never intended to repay the debt.

Vignette 8- Karl and Bob  
 Etiology-Life-Course Persistent

Moral Development- **Low**

Add to indicate Preconventional judgment (stage 1):

CJ #1 pg. 802

Issue: Contract

Norm: Contract

Element: Blaming/Approving

The police picked up two brothers as they left a stop-n-shop carrying stolen goods. Karl, age 16, was brought in for assessment due to the extreme violence of his reaction to being arrested. He was combative when apprehended by police, began shouting homicidal threats at Bob, his 14-year-old brother, and repeatedly banged his head on the pavement, shouting that the officers would have to take him to the hospital instead of jail. This incident is only the last in a long history of difficult to manage behavior for Karl.

Although both boys were adopted as preschoolers by the same couple, by approximately age 5 Karl's failure to follow rules in the home was of some concern to his parents. By age 10 his over-activity had escalated into aggression at home and in the community, petty theft, and a consistent pattern of relying on coercive or illegal behavior to obtain his ends. He was subsequently removed from the adoptive home and placed in a series of foster care placements. The boys were attempting to amass enough funds to run away together. Karl had broken into a store and stolen \$1,000 and goods, which he intended to sell. Later, Karl went to their biological grandfather, a retiree on a fixed income, and convinced him to "loan" them \$1,000. During the interview Karl admitted that he never intended to repay the debt. *Of all his recent problems, Karl states that promising to pay his grandfather back was the worst because it was a lie.*

## Vignette 9- Karl and Bob

Etiology-Life-Course Persistent

Moral Development- **Average**

Add to indicate Conventional judgment (stage 3):

CJ #13 pg. 805

Issue: Contract

Norm: Contract/Affiliation

Element: Good/Bad individual consequences

The police picked up two brothers as they left a stop-n-shop carrying stolen goods. Karl, age 16, was brought in for assessment due to the extreme violence of his reaction to being arrested. He was combative when apprehended by police, began shouting homicidal threats at Bob, his 14-year-old brother, and repeatedly banged his head on the pavement, shouting that the officers would have to take him to the hospital instead of jail. This incident is only the last in a long history of difficult to manage behavior for Karl.

Although both boys were adopted as preschoolers by the same couple, by approximately age 5 Karl's failure to follow rules in the home was of some concern to his parents. By age 10 his over-activity had escalated into aggression at home and in the community, petty theft, and a consistent pattern of relying on coercive or illegal behavior to obtain his

ends. He was subsequently removed from the adoptive home and placed in a series of foster care placements. The boys were attempting to amass enough funds to run away together. Karl had broken into a store and stolen \$1,000 and goods, which he intended to sell. Later, Karl went to their biological grandfather, a retiree on a fixed income, and convinced him to “loan” them \$1,000. During the interview Karl admitted that he never intended to repay the debt. *Of all his recent problems, Karl states that cheating his grandfather was the worst, since it would probably hurt his grandfather’s feelings and make it hard for him to support himself.*

## Appendix E

### Power Analysis Calculations

#### (1) Sample Size of Comparable Studies

RESEARCHERS:

N/SAMPLE:

Kirk, Wakefield, Hsieh and  
Pottick (1999)

250 MSW students

Wakefield, Pottick and Kirk  
(2002)

117 MSW and Psychology  
graduate students

Kirk and Hsieh (2004)

1540 mental health practitioners

Hsieh and Kirk (2003)

483 Psychiatrists  
( $\mu=597.50$ )

## Appendix F

### Kohlberg's Original Dilemmas

#### Dilemma 1

Original vignette Form A, Dilemma 1:

Judy was a 12-year-old girl. Her mother promised her that she could go to a special rock concert coming to their town if she saved up from baby-sitting and lunch money so she would have enough money to buy a ticket to the concert. She managed to save up the \$15 it cost plus another \$5. But then her mother changed her mind and told Judy that she had to spend the money on new clothes for school. Judy was disappointed and decided to go to the concert anyway. She bought a ticket and told her mother that she had only been able to save \$5. That Saturday she went to the performance and told her mother that she was spending the day with a friend. A week passed without her mother finding out. Judy then told her older sister, Louise, that she had gone to the performance and had lied to her mother about it. Louise wonders whether to tell their mother what Judy did.

#### Dilemma 2

Original vignette Form C, Dilemma VII: Karl and Bob

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

#### Dilemma 3

Original vignette Form A, Dilemma 1:

Joe is a 14-year-old boy who wanted to go to camp very much. His father promised him he could go if he saved up the money for it himself. So Joe worked hard at his paper route and saved up the \$100 it cost to go to camp and a little more besides. But just before camp was going to start, his father changed his mind. Some of his friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost. So he told Joe to give him the money he had saved from the paper route. Joe didn't want to give up going to camp, so he thinks of refusing to give his father the money.

## Appendix G

Figure 1

### *Kohlberg's Moral Stages*

Moral Level	Moral Stage	Orientation
Level One Preconventional	Stage One	Obedience and punishment, heteronomous morality
	Stage Two	Individualism, instrumental purpose, obeys to gain reward
	Two/Three mixed stage	Typical level of development in adolescence with potential for occasional stage four ability
Level Two Conventional	Stage Three	Conforming to stereotypical images of role behavior with emphasis on expectancies of others, approval
	Stage Four	Authority maintaining, conscience, conformity to avoid guilt
Level Three Post-conventional	Stage Five	Autonomous, social contract, recognizes individual rights, works to maintain good regard of others
	Stage Six	Individual principles, avoids self-condemnation, ethics, human rights recognizes intrinsic value of human life.