Spring 2012

A new moral socialization model: Wrongfulness and legal atitutde as mediators in predicting adolescent rule-violating behavior

Kristen M. Williams
University of New Hampshire - Main Campus

A new moral socialization model: Wrongfulness and legal atitutde as mediators in predicting adolescent rule-violating behavior

Abstract
One of the most baffling questions in delinquency literature is why some adolescents engage in these rule-violating behaviors while others refrain. Some researchers have found support for a link between moral reasoning and rule-violating behaviors (Blasi, 1980). The legal socialization model includes legal attitudes as the mediator between the two (Cohn, Bucolo, Rebellon & Van Gundy, 2010). In the current two studies, the researchers tested a moral socialization model with wrongfulness and approval as mediators based on data from middle and high school students as well as college students. In the first study, the model was tested longitudinally with middle and high school students. Support was found for full mediation across assault, stealing, and substance behaviors. In the second study, where the model was tested cross-sectionally with college students, the results only showed support for a direct relation between moral reasoning and stealing behaviors. In the second study the researchers also found support for full mediation across all three types of behaviors (assault, stealing and substance). The results of the two studies suggested that moral reasoning might already be well established in college students and as a result, their attitudes might be better predictors of their engagement in rule-violating behavior. The different interpretations of wrongfulness are discussed.

Keywords
COLA, Psychology

Subject Categories
Social Control, Law, Crime, and Deviance

A New Moral Socialization Model:

Wrongfulness and Legal Attitude as Mediators in Predicting Adolescent Rule-Violating Behavior

Kristen M. Williams

Advisor: Ellen Cohn

University of New Hampshire

Abstract

One of the most baffling questions in delinquency literature is why some adolescents engage in these rule-violating behaviors while others refrain. Some researchers have found support for a link between moral reasoning and rule-violating behaviors (Blasi, 1980). The legal socialization model includes legal attitudes as the mediator between the two (Cohn, Bucolo, Rebellon & Van Gundy, 2010). In the current two studies, the researchers tested a moral socialization model with wrongfulness and approval as mediators based on data from middle and high school students as well as college students. In the first study, the model was tested longitudinally with middle and high school students. Support was found for full mediation across assault, stealing, and substance behaviors. In the second study, where the model was tested cross-sectionally with college students, the results only showed support for a direct relation between moral reasoning and stealing behaviors. In the second study the researchers also found support for full mediation across all three types of behaviors (assault, stealing and substance). The results of the two studies suggested that moral reasoning might already be well established in college students and as a result, their attitudes might be better predictors of their engagement in rule-violating behavior. The different interpretations of wrongfulness are discussed.

A New Moral Socialization Model: Wrongfulness and Legal Attitude as Mediators in Predicting Adolescent Rule-Violating Behavior

When studying delinquency in adolescence, the main objective is to gain a better understanding of the factors that may influence an individual to either engage in or refrain from these rule-violating behaviors. While researchers have yet to pinpoint one specific factor that can account for this difference in adolescents' engagement, there have been some factors that have emerged as possible predictors.

One of the most notable factors that has been linked to rule-violating behavior is an individual's level of moral reasoning (Palmer & Hollin,1998). In its most basic definition, moral reasoning can be described as an individual's ability to distinguish between right and wrong in a moral situation (Gilligan, 1982). Expanding upon the link between moral reasoning and rule-violating behavior, researchers have found support for an indirect relationship in which attitudes may serve as possible mediators (Blasi, 1980). More recently, Cohn and colleagues found support for a mediating model in which legal attitudes served as partial mediators (Cohn, Bucolo, Rebellon & Van Gundy, 2010).

While support has been found for legal attitudes as mediators, the current literature has yet to test the mediation model using non-legal attitudes such as wrongfulness (Cohn et al. 2010). In order to develop a more viable argument for attitudes as mediators, different types of attitudes should be applied to the model (Blasi, 1980). According to Blasi, one of the major shortcomings of literature surrounding moral reasoning and rule-violating behavior is its disregard for non-incarcerated delinquents. Current research focusing on rule-violating behavior often compares incarcerated delinquents to non-delinquents (Blasi, 1980). The major drawback of this research is that

it may not be accounting for possible confounding variables that may be explaining some of the differences between the two. While prevalent research supports a mediating relation in which moral reasoning predicts attitudes, which in turn predict engagement in rule-violating behavior, it is important that gaps in the literature be addressed in order to strengthen the validity of these findings.

Moral Reasoning

Research surrounding moral reasoning often begins with the work of Kant (1785) and his view of moral reasoning as a largely cognitive rational phenomenon. Building off this concept, Piaget (1932/1965) made great strides in the moral reasoning literature with his developmental stages. According to Piaget, moral reasoning is a natural part of development where children's ability to reason morally increases with age. Piaget's stages were later modified by Kohlberg and the two have often been credited with the surge of interest in cognitive moral reasoning literature. According to Piaget and Kohlberg, as children develop, they become less self-focused and are better able to rationalize the effects their behaviors have on those around them (Piaget, 1932/1965; Kohlberg, 1969/1984). This cognitive view of moral reasoning development presents a stage based approach in which individual's moral reasoning develops over time. The first stages of moral reasoning begin with an individual's desire to avert punishment, and eventually transitions into the later stages where individuals' seek the approval of those around them. According to Kohlberg, in the final stage of moral development, individuals eventually develop their own personal moral code, which takes into account the interest of individuals other than themselves (Kohlberg, 1984; Chen & Howitt, 2007).

Building off these developmental stages, researchers later began to integrate social

psychology into the cognitive moral reasoning literature. This research focused on the importance of moral reasoning development in children to the overall functioning of society (Hardy, Padilla-Walker & Carlo, 2008; Steinberg, 1990). Children's ability to take into the account the effects their behaviors have on society at large has been linked to their tendency to act in a more moral manner (Hardy et al., 2008; Hardy & Carlo, 2005; Padilla-Walker & Carlo, 2007). When individuals are better able to reason morally, they are less likely to engage in behaviors that would negatively affect those around them (Berenguer, 2008).

Similar to the cognitive developmental approach, social psychologists have found support that motivation for prosocial behaviors differentiate depending on the level of moral reasoning development (Eisenberg, Miller, Shell, McNalley & Shea, 1991). Younger individuals tend to have lower levels of moral reasoning than their older counterparts (Eisenberg, Cumberland, Guthrie, Murphy & Shepard, 2005). As a result these younger individuals with lower levels of moral reasoning tend to be more self-focused and concerned with the acquisition of external rewards (Manning & Bear, 2011). Contrary to this, individuals with higher levels of moral reasoning tend to be more empathetic, caring and concerned with maintaining relationships (Manning & Bear, 2011; Palmer, 2005)

In accordance with the finding that more developed moral reasoning comes with further consideration of others, researchers examining the effects of moral reasoning on delinquency have found a negative correlation between the two. Researchers suggest that as individuals' level of moral reasoning increases, they are less likely to engage in delinquent acts (Raaijmakers, Engels, & Van Hoof, 2005).

However, more recently, researchers argue that the way in which moral reasoning is measured may affect its relationship with delinquency (Cohn et al., 2010). Their argument is that some moral reasoning measures focus to heavily on cognition and often overlook behaviors. Cognitive based approach used by Piaget and Kohlberg has often been criticized for its lack of real life scenario, as well as its focus on judgments rather than behaviors (Shelton, 1984). In response to this overly cognitive measure of moral reasoning, Shelton & McAdams developed their own measure, which analyzed moral reasoning as it applies to everyday scenarios. For the purpose of the current two studies, Shelton & McAdams' 1990 *Visions of Morality Scale* was used to assess adolescents' level of moral reasoning as it applies to everyday prosocial behaviors.

Rule-Violating Behavior

Rule-violating behavior embodies similar characteristics as delinquency and is often used to measure an individual's engagement in deviant behaviors. Higher levels of engagement in rule-violating behavior tend to be greatest amongst adolescents as they commit the most crimes in the United States (United States Department of Justice, 2008). Research suggests that the spike in delinquency during adolescents is often followed by a sharp decline as individuals reach adulthood (Hirschi & Gottfredson, 1983). For this reason, research surrounding rule-violating behavior often focuses on adolescents as a population of interest.

Adolescents' engagement in rule-violating behaviors has often been linked to their lever of moral reasoning (Mak, 1991). Research supports a negative relationship between the two variables in which individuals with higher levels of moral reasoning are less likely to engage in rule-violating behavior (Levy, 2001; Palmer, 2003). Although an

individual's level of moral reasoning has been found to directly influence their engagement in rule-violating behavior, some research suggests that this relationship may also have indirect effects (Blasi, 1980).

Attitudes as Mediators

The indirect effects found between moral reasoning and rule-violating behavior suggest a mediating variable (Tarry & Elmer, 2007). Attitudes have often been found to mediate this relationship although most research on attitudes has focused on legal attitudes such as approval. While legal attitudes often emerge from legal reasoning, they still measure an individual's acceptance of the norms and rules of society (Sykes & Matza, 1957). Based on this definition, legal attitudes are often used in conjunction with moral reasoning as well as legal reasoning.

In their 2010 legal socialization model, Cohn and colleagues found support for partial mediation for legal attitudes in a sample of middle and high school students. Their results suggest that moral reasoning predicts how much an individual approves of rule-violating behavior which then predicts how likely the individual is to engage in rule-violating behavior. While Cohn and colleagues found support for a partial mediation model, sum researchers have found legal attitudes to have an even greater influence on moral reasoning and rule-violating behavior. This research finds that although moral reasoning has direct effects on rule-violating behavior, when attitudes are taken into account this relationship no longer exists (Leenders & Brugman, 2005; Tarry & Elmer, 2007).

Although researchers examining legal attitudes have shown support for a mediation model, present studies have yet to factor non-legal attitudes such as

wrongfulness into the model. While literature has yet to study wrongfulness, this attitude is comparable to approval in that it measures the extent to which an individual views rule-violating behaviors as wrong. In order to build upon the current literature, it is important to study the effects non-legal attitudes may have on the model. Because wrongfulness and approval both measure individuals' attitudes towards rule-violating behavior it is conceivable that both will have similar effects as mediating variables.

Present Studies

The goal of the present two studies is to address the current gaps in the literature in order to better understand the relation between moral reasoning, mediating attitudes, and rule-violating behavior. In order to so, the current study will be the first to apply both a legal (approval) and non-legal (wrongfulness) attitude to Cohn et al.s's original mediating model to see whether both types of attitudes will serve as mediators. The two studies will compare the findings from the middle and high school sample of study one to the findings from the college sample of study two to see how the model generalizes to different age groups. In order to gain a better understanding of the newly applied non-legal attitude (wrongfulness), the second study will incorporate participants' personal definitions of wrongfulness. The purpose of the current two studies is to explore the significance of the non-legal attitude wrongfulness as a mediator for moral reasoning and rule-violating behavior across different age groups.

Based on past literature suggesting a direct link between moral reasoning and rule-violating behavior, the researchers first hypothesize that high levels of moral reasoning will predict less engagement in rule-violating behaviors. Secondly, because moral reasoning can be defined as the ability to distinguish between right and wrong, it is

hypothesized that individuals with high levels of moral reasoning are more likely to consider rule-violating behaviors to be wrong and will be less likely to approve of these behaviors for both the middle and high school sample and the college sample. Similarly, the researchers hypothesize that individuals considering rule-violating behaviors to be wrong, will report less engagement in such behaviors. Finally, it is hypothesized that the current two studies will support Cohn et al's mediating model, so that attitudes will significantly mediate moral reasoning and rule-violating behavior.

Study 1

The purpose of Study 1 is to adjust Cohn and colleagues' legal socialization model to account for non-legal attitudes as mediators. Their 2010 findings suggest that legal attitudes such as approval, partially mediate the relationship between moral reasoning and rule-violating behavior (Cohn et al., 2010). Although these findings support attitudes as mediators, current literature has yet to examine the effects of non-legal attitudes on the model. The current study re-applies approval into the model while also incorporating the non-legal attitude wrongfulness. The variable wrongfulness is used to measure the extent to which an individual considers a rule-violating behavior to be wrong. The goal of the current study is to analyze the effects of approval and wrongfulness as mediators of the relation between moral reasoning and rule-violating behavior in middle and high school students. Based on previous literature suggesting attitudes as mediators, the current study predicts that both approval and wrongfulness will mediate this relation.

Method

Participants

The participants for Study 1 were 930 New Hampshire middle and high school students. The majority of participants were Caucasian (76.5%,) with a mean age of 13.36 SD (1.63). There was a relatively even split between males and females in the participant pool with 40.6% males and 59.4% females. The data was collected from the ongoing longitudinal New Hampshire Youth Study (NHYS) funded by a grant from the National Science Foundation. The present study analyzed data collected from Time 2 (Spring 2007), Time 3 (Fall 2007), Time 4 (Spring 2008) and Time 6 (Spring 2009). These times were selected for use in order to analyze how different variables would predict other variables in the future. For the purpose of the current study, moral reasoning was measured from Time 2, approval from Time 3, wrongfulness from Time 4 and rule-violating behavior from Time 6. In return for completing the survey, all participants were given a Barnes & Nobles gift card.

Measures

Moral Reasoning. A subscale of Shelton and McAdams' *Visions of Morality Scale* was used to measure an individual's level of everyday moral reasoning. In order to make the measures easier for middle school students to understand, this measure only incorporated seven different moral scenarios from the original scale and asks participants to rate the likelihood that they would engage in these prosocial acts. An example of the types of prosocial acts used is "I am walking alone and I find a dollar on the street. I pick it up and continue walking. I pass a group of people who are collecting money for muscular dystrophy. I drop the dollar that I found into the basket." Using a seven-item Likert Scale, participants then rated the likelihood that they would engage in these prosocial acts with their responses ranging from 1 (*I definitely would not do*) to 7 (*I*

definitely would do). An overall moral reasoning score was calculated for each participant using their mean score across all eight different scenarios. Participants with scores closer to seven were considered to have higher levels of moral reasoning while participants with scores closer to one were considered to have lower levels of moral reasoning.

Rule-Violating Behavior. In order to measure an individual's overall engagement in rule-violating behaviors, The Delinquency Componenent of the Natiional Youth Longtitudinal Survey was used (Wolpin, 1983). This portion of the survey included 26 different rule-violating behaviors (e.g., attacked someone with the intention of seriously hurting them and stolen something from a store worth more than $50), and asked students to record the number of time they engaged in each behavior over the last six months. The numbers of times recorded by participants were later coded into Yes/No responses with a one representing a "Yes" to engagement of the behavior in the last six months and a zero representing a "No" to no engagement. Researchers have recently suggested that variety measures of delinquency tend to have more reliable results than frequency measures (Hidelang, Hirschi, & Weis, 1981). In 2003, Bendixen, Endresen, and Olweus found that the incorporation of frequency as a measure of rule-violating behavior resulted in a greater internal consistency and produced higher stability over time (Trinker, Cohn, Rebellon & Van Gundy, *in press*). Thus, for the current two studies an overall behavior score was calculated for each participant based on the sum of their engagement across all 26 behaviors (range from 0.00 to 26.00).

Approval. Cohn and White's 1990 normative status measure was used to measure how much participants approved of rule-violating behaviors (e.g., attacking someone with the intention of seriously hurting them). Participants first read the same 26

behaviors used to assess engagement and then rated how much they approved of each behavior using a four-point Likert Scale (0: *Strongly disapprove*; 3: *Strongly approve*). An overall approval variable was created using the mean approval score of each participant across all 26 different behaviors (range from 0.00 to 3.00).

Wrongfulness. Similar to approval, wrongfulness was measured using the same 26 rule-violating behaviors. Participants re-read the 26 rule-violating behaviors and rated how wrong they believed each behavior to be using a four-point Likert Scale (0: *Not at all Wrong*; 3: *Very Wrong*). An overall wrongfulness score was calculated for each participant based on their mean wrongfulness score across all 26 different behaviors (range from 0.00 to 3.00).

Results

Preliminary Analyses

Factor Analysis. To assess the dimensionality of the 26 different rule-violating behaviors, a factor analysis was conducted using Principal Component Analysis (PC), with the default criterion set at eigenvalues greater than 1.75 and varimax rotation was requested. Principal Component Analysis was selected based on the large number of variables in order to create a smaller number of components (Warner, 2008). As previously mentioned, each of the 26 rule-violating behaviors was coded with either a 0 to represent no engagement or a 1 to represent any engagement in the last six months.

The correlation matrix indicated that that these 26 rule-violating behaviors seemed to fall into one of three subcategories which can be seen in Table 1. The first subcategory that emerged encompassed assault behaviors such as “gotten into a fight at school” while the second subcategory encompassed stealing behaviors such as

"knowingly held stolen goods." The third subcategory that emerged included behaviors related to substance abuse such as "smoked marijuana."

Because only these three factors (assault, stealing and substance) had eigenvalues greater than 1.75, only these factors were retained and rotated. Following varimax rotation, Factor 1 (assault behaviors) accounted for 34.47% of the variance, Factor 2 (substance behaviors) accounted for 10.74% and Factor 3 (stealing behaviors) accounted for 9.69%. Together, these three emerging factors accounted for a total of 54.90% of the variance in the dataset.

Correlation Analysis. Once the three specific rule-violating behavior types had been established, Pearson correlations were performed to assess whether each type of rule-violating behavior was related to moral reasoning, approval and wrongfulness. Moral reasoning had a significant negative relation with each of the three types of behaviors (assault: $r(771) = -.19$, $p < .001$; stealing: $r(772) = -.18$, $p < .001$; substance: $r(767) = -.09$, $p < .05$). These negative relations suggested that higher levels of moral reasoning were associated with less engagement in each of the three types of rule-violating behaviors. Moral reasoning also had a significant negative relation with approval ($r(941) = -.37$, $p < .001$) and a significant positive relation with wrongfulness ($r(828) = .33$, $p < .001$). These findings supported the hypothesis that higher levels of moral reasoning were associated with less approval of each rule-violating behavior and a higher consideration of these behaviors to be wrong. Approval had a significant positive relation with each type of rule-violating behavior (assault: $r(771) = .33$, $p < .001$; stealing: $r(772) = .34$, $p < .001$; substance: $r(767) = .28$, $p < .001$). Contrary to these positive relations, wrongfulness was found to have a significant negative relation with

each type of rule-violating behavior (assault: r (771) = - .36, p < .001; stealing: r (772) = - .29; p < .001; substance: r (767) = - .21, p < .001). These two findings support the hypotheses that approval of rule-violating behaviors is associated with higher levels of engagement in these behaviors, while the wrongfulness of rule-violating behavior was associated with less engagement in rule-violating behavior.

Primary Analysis

Regression Analysis. The preliminary analyses suggested a direct correlation between moral reasoning and each of the three rule-violating behaviors. In an attempt to further explore whether moral reasoning could predict rule-violating behavior, Baron and Kenny's 1986 regression analysis was used to test for mediation. According to Baron and Kenny, there are four significant steps in testing for mediation. The first step is to see if there is in fact a direct relation between the predictor variable moral reasoning and the outcome variable rule-violating behavior (assault, stealing, substance). Support for this direct relation was established, with moral reasoning at Time 2 significantly predicting less engagement in each of the three behavior types at Time 6 (assault: $F(1, 695) = 26.90$, $p < .001$, $R^2 = .04$; stealing: $F(1,697) = 22.15$, $p < .001$, $R^2 = .03$; substance: $F(1,691) = 5.1$, $p < .05$, $R^2 = .01$). The second step is to see whether the predictor variable moral reasoning predicts the mediating variables approval and wrongfulness. Moral reasoning at Time 2 was found to significantly predict both approval at Time 3 ($F(1,785) = 124.73$, $p < .001$, $R^2 = .14$) and wrongfulness at Time 4 ($F(1, 697) = 82.52$, $p < .001$, $R^2 = .11$). These results suggested that higher levels of moral reasoning predicted less approval for rule-violating behaviors and a higher consideration for rule-violating behaviors to be wrong.

The third step in testing for mediation was to see if the mediating attitudes, approval and wrongfulness predicted each of the outcome variables, assault, stealing and substance. Approval at Time 3 was found to be a significant predictor of each type of rule-violating behavior (assault: $F(1,770) = 90.92$, $p < .001$, $R^2 = .11$; stealing: $F(1,771) = 97.66$, $p < .001$, $R^2 = .11$; substance: $F(1,776) = 64.45$, $p < .001$, $R^2 = .08$) Wrongfulness at Time 4 was also found to be a significant predictor of each of the three types of behaviors at Time 6 (assault: $F(1,714) = 108.28$, $p < .001$, $R^2 = .13$; stealing: $F(1,715) = 64.18$, $p < .001$, $R^2 = .08$; substance: $F(1,709) = 33.35$, $p < .001$, $R^2 = .05$).

According to Baron and Kenny's regression model, the fourth and final step in testing for mediation was to see if moral reasoning was still predicting rule-violating behavior when controlling for the mediating variables, approval and wrongfulness. When controlling for approval and wrongfulness, moral reasoning no longer had a direct effect on any of the three behavior types (assault: $\beta = -.01$, *ns*; stealing: $\beta = .01$, *ns*; substance: $\beta = .01$, *ns*). These findings supported full mediation of moral reasoning and rule-violating behavior by approval and wrongfulness in the adolescent participants.

Discussion

The findings from Study one support the literature on legal attitudes as mediators of moral reasoning and rule-violating behavior. These findings go beyond the current literature and suggested that non-legal attitudes such as wrongfulness may also mediate this relationship. When approval and wrongfulness were held constant, moral reasoning no longer predicted any of the three types of rule-violating behaviors (assault, stealing, and substance). This finding supported a full mediation model suggesting that both approval and wrongfulness may play a

significant role in the relationship between moral reasoning and rule-violating behavior in middle and high school students.

One limitation of study one was that the new moral socialization model was only applied to a middle and high school sample. Study one was unable to test how the model would apply to different populations and if wrongfulness would serve as mediating attitude. A second limitation of study one was that the researchers could not be sure how participants were recognizing wrongfulness. Because wrongfulness had never been studied as a mediating attitude, the researchers wanted to better understanding how participants were defining this attitude. Based on the findings of study one which supported wrongfulness as a significant mediating attitude for moral reasoning and rule-violating behavior, the researchers wanted to further explore this relationship.

Study 2

In order to address the limitations of study one, the researchers conducted a second study using a college sample. The purpose of study two was to see if wrongfulness would still serve as a mediating attitude for moral reasoning and rule-violating behavior when applied to a college-age sample. Based on the findings of study one, study two hypothesized that both approval and wrongfulness would again significantly mediate this relation. The second goal of study two was to gain more insight into how individuals were viewing wrongfulness. Because wrongfulness has yet to be studied as a mediating attitude, the researchers wanted to conduct an exploratory analysis. In order to gain a better understanding of individuals' view of wrongfulness, study two incorporated an open-ended question asking participants to record their own personal

definition of wrongfulness as it relates to behaviors. Based on the findings of study one, which suggests wrongfulness as a mediator of the relation between moral reasoning and rule-violating behavior, the researchers hypothesized that participants' definitions would include some form of the word morality. The overall goal of the present study was to further explore the significance of wrongfulness as a new mediating variable.

Method

Participants

The participants for study two were 294 college students from the University of New Hampshire. The majority of participants were Caucasian (93.9%,) with a mean age of 19.26 SD (3.52). The majority of participants were female with 64.3% female and 35.7 males. Participants were recruited form the University's psychology subject pool through an online survey system. Once participants gave consent to take part in the study, they were given a new link and brought to the actual survey via the online program Survey Monkey. Participants then completed a similar survey as study one were given an hour of study credit for their participation.

Measures

Definition of Wrongfulness. A new addition from study one was the open-ended response question of study two. The purpose of this question was to gain a better understanding of how individuals were viewing the attitude wrongfulness. In order to measure personal definitions of wrongfulness, participants were prompted with the question "*People engage in all different kinds of behaviors. Some people judge certain behaviors as wrong. What does it mean to you for a behavior to be wrong?"* Immediately following this question, participants were given space to elaborate on their personal

qualifications for a behavior to be considered wrong. Participants' responses were later coded into four separate categories (1: *Moral*, 2: *Legal*, 3: *Harmful*, 4: *Other*). Responses were coded into each of these four categories, with the possibility that some responses may include more than one of these categories.

Moral Reasoning. As in study one, Shelton and McAdams' *Visions of Morality Scale* was used to measure an individual's level of everyday moral reasoning. This measure varied from study one slightly as it included 43 different moral scenarios and again adked participants to rate the likelihood that they would engage in these prosocial acts. An example of the types of prosocial acts used is "there is a blood drive at school. I am in good health, can give blood and not afraid of the sight of blood or needles. I volunteer to give a pint of blood." Using the seven-item Likert Scale, participants then rated the likelihood that they would engage in these prosocial acts with their responses ranging from 1 (*I definitely would not do*) to 7 (*I definitely would do*). An overall moral reasoning score was calculated for each participant using their mean score across all 43 different scenarios. Participants with scores closer to seven were considered to have higher levels of moral reasoning while participants with scores closer to one were considered to have lower levels of moral reasoning.

Rule-Violating Behavior. In order to measure an individual's overall engagement in rule-violating behaviors, The Delinquency Componenent of the National Youth Longtitudinal Survey was used (Wolpin, 1983). This portion of the survey encompassed 26 different rule-violating behaviors (e.g., attacked someone with the intention of seriously hurting them and stolen something from a store worth more than $50), and asked students to record the number of time they engaged in each behavior over

the last six months. The numbers of times recorded by participants were later coded into Yes/No responses with a one representing a "Yes" to engagement of the behavior in the last six months and a zero representing a "No" to no engagement. Thus the same behavior score from study one was applied to study two and calculated the sum of each participant's engagement across all 26 behaviors (range from 0.00 to 26.00).

Approval. Cohn and White's 1990 normative status measure was used to measure how much participants approved of rule-violating behaviors (e.g., attacking someone with the intention of seriously hurting them). Participants first read the same 26 behaviors used to assess engagement and then rated how much they approved of each behavior using a four-point Likert Scale (0: *Strongly disapprove*; 3: *Strongly approve*). An overall approval variable was created using the mean approval score of each participant across all 26 different behaviors (range from 0.00 to 3.00).

Wrongfulness. Similar to approval, wrongfulness was measured using the same 26 rule-violating behaviors. Participants re-read the 26 rule-violating behaviors and rated how wrong they believed each behavior to be using a four-point Likert Scale (0: *Not at all Wrong*; 3: *Very Wrong*). An overall wrongfulness score was calculated for each participant based on their mean wrongfulness score across all 26 different behaviors (range from 0.00 to 3.00).

Results

Preliminary Analyses

Chi-Square. In order to better understand how participants were viewing wrongfulness, a Chi-Square was conducted. Once each response was coded as at least one of the four categories (moral, legal, harmful, other), a Chi-Square was manually

calculated to see the distribution of responses. Contrary to the hypothesis that most participants would mention morality in their definition, the majority of participants mentioned harm instead. The first step in calculating a Chi-Square was to find the observed frequency for each category: harm (189), legal (77), moral (69) and other (62). The second step was to calculate the expected frequency by taking the total number or responses (397) and dividing by the four possible categories equaling 99.25. The expected frequency represented what each score would be if responses were equally distributed. The final step in calculating a Chi-Squared was to plug both the observed and expected frequencies into the equation: Sum $(f_o - f_e)^2 / f_e$. The Chi- Squared was significant $X^2(3, N = 397) = 109.35$. This finding suggested that when answering how wrong they viewed a behavior to be, the majority of participants are basing this decision on whether or not it may cause harm.

Factor Analysis. To assess the dimensionality of the 26 different rule-violating behaviors, a factor analysis was again conducted using Principal Component Analysis (PC), with the default criterion set at eigenvalues greater than 1.75 and varimax rotation was requested. Again each of the 26 rule-violating behaviors was coded with either a 0 to represent no engagement or a 1 to represent any engagement in the last six months.

As in study one, the correlation matrix indicated that that these 26 rule-violating behaviors seemed to fall into the same three subcategories (assault, stealing, substance). Because only these three factors (assault, stealing and substance) had eigenvalues greater than 1.75, and only these factors were retained and rotated. Following varimax rotation, Factor 1 (assault behaviors) accounted for 19.16% of the variance, Factor 2 (substance behaviors) accounted for 13.61% and Factor 3 (stealing behaviors) accounted for 10.01%.

Together, these three emerging factors accounted for a total of 42.78% of the variance in the dataset.

Correlation Analysis

In order to study the relation between moral reasoning, approval, wrongfulness and the three different behavior types, bivariate correlation tests were conducted. Contrary to study one's findings, moral reasoning only had a significant negative relationship with stealing behaviors ($r(293) = -.13$, $p < .05$). This negative relationship suggests that higher levels of moral reasoning are only associated with less engagement in stealing behaviors. Moral reasoning was also found to have a significant negative relationship with approval ($r(295) = -.31$, $p < .001$) and a significant positive relationship with wrongfulness ($r(295) = .25$, $p < .001$). These findings support the hypothesis that higher levels of moral reasoning are associated with less approval of each rule-violating behavior and a higher consideration of these behaviors to be wrong. Approval had a significant positive relationship with each type of rule-violating behavior (assault: $r(293) = .28$, $p < .001$; stealing: $r(293) = .33$, $p < .001$; substance: $r(294) = .14$, $p < .05$). Contrary to this positive relationship, wrongfulness was found to be significantly correlated with each type of rule-violating behavior (assault: $r(293) = -.23$, $p < .001$; stealing: $r(292) = -.29$; $p < .001$; substance: $r(294) = -.16$, $p < .01$). These two findings support the hypotheses that approval of rule-violating behaviors is associated with higher levels of engagement in these behaviors, while considering rule-violating behavior to be wrong is associated with less engagement.

Primary Analysis

The preliminary analyses suggested only a direct relationship between moral reasoning and stealing behaviors. In an attempt to further explore the dynamics of this relationship, Baron and Kenny's 1986 regression analysis was again used to test for mediation. Although Baron and Kenny's original model stated that a direct relationship between the predictor variable and outcome variable should first be established, this concept was later argued. Literature analyzing Baron and Kenny's original 1986 mediation model argues that requiring a direct relation between the independent and dependent variable is overly conservative and restricts such testing (MacKinnon, Lockwood, & Williams, 2004; Williams & MacKinnon, 2008). Based on these arguments, recent research on mediation has moved away from evaluating the first step of Baron and Kenny's 1986 model and suggests that mediation can still occur without this direct relationship (Hayes, 2009, Williams & MacKinnon, 2008). Because preliminary correlation analysis found no direct relationship between moral reasoning and assault and substance behaviors, the first step of Baron and Kenny's mediation model was not included in these results.

In the second step, a linear regression was conducted to see if the predictor variable moral reasoning predicted the mediating variables approval and wrongfulness. Moral reasoning was found to significantly predict both approval ($F(1, 292) = 29.96$, $p < .001$, $R^2 = .09$) and wrongfulness ($F(1,292) = 19.68$, $p < .001$, $R^2 = .06$). These results again found that higher levels of moral reasoning predict less approval for rule-violating behaviors and a higher consideration for rule-violating behaviors to be wrong.

In the third step in testing for mediation, the mediating attitudes, approval and wrongfulness were tested to see if they would predict each of the outcome variables

(assault, stealing and substance). Approval was found to be a significant predictor of each type of rule-violating behavior (assault: $F(1, 292) = 25.06$, $p < .001$, $R^2 = .08$; stealing: $F(1, 292) = 35.43$, $p < .001$, $R^2 = .11$; substance: $F(1,293) = 5.86$, $< .05$, $R^2 = .02$). Wrongfulness was also found to be a significant predictor of each of the three types of behaviors (assault: $F(1,2920 = 16.93$, $P < .001$, $R^2 = .06$; stealing: $F(1,292) = 27.32$, $p < .001$, $R^2 = .09$; substance: $F(1,293) = 8.00$, $p < .01$, $R^2 = .03$)

Finally, the fourth step in testing for mediation was to see if moral reasoning would predict rule-violating behavior when controlling for the mediating variables, approval and wrongfulness. When controlling for approval and wrongfulness, moral reasoning did not have a direct effect on any of the three behavior types (assault: $\beta = .02$, *ns*; stealing: $\beta = -.02$, *ns*; substance: $\beta = .03$, *ns*). These findings support full mediation of moral reasoning and rule-violating behavior by approval and wrongfulness in the college sample.

Overall Discussion

For the most part, study two had similar findings to study one, sand suggested a full mediation model. Moral reasoning significantly predicted both approval and wrongfulness in college students. Individuals with higher levels of moral reasoning were less likely to approve of rule-violating behaviors and more likely to find these behaviors to be wrong. Approval and wrongfulness were also significant predictors of each type of rule-violating behavior (assault, stealing and substance). These findings suggested that individuals who approved of rule-violating behaviors were more likely to engage in these behaviors and individuals who viewed rule-violating behaviors as wrong were less likely

to engage in these behaviors. When all factors were accounted for, moral reasoning did not predict any of the three rule-violating behaviors, suggesting full mediation.

In response to the initial findings in study one which suggested wrongfulness as a mediator between moral reasoning and rule-violating behavior, study two explored personal views of wrongfulness. In study two, participants were asked what it meant to them for a behavior to be wrong. The results of this open-ended question did not support the hypothesis that most participants would mention morality in their definition. Instead, study two found that the majority of participants responded that a behavior that causes harm is considered to be wrong,

The main difference between study one and study two's findings was that moral reasoning only had a direct relation with stealing behaviors in the college sample. When tested in the college sample, moral reasoning did not directly predict assault behaviors nor did it predict substance behaviors. These findings suggest that moral reasoning may predict rule-violating behavior differently in middle and high school students than in college students.

Implications for the Literature

The purpose of the current two studies was to test wrongfulness as a possible mediating attitude for moral reasoning and rule-violating behavior. Prior to the current study, researchers analyzing this relation found support for attitudes as mediators (Tarry & Elmer, 2007). However, these researchers focused heavily on legal-attitudes often overlooking other possible mediation attitudes such as wrongfulness. The current two studies addressed this gap in the literature by testing both a legal attitude (approval) and a non-legal attitude (wrongfulness) as mediators in both an adolescent and college sample.

The researchers found support for the literature as the legal attitude approval significantly mediated the relation between moral reasoning and rule-violating behavior (Cohn et al, 2010). Expanding on this literature, the researchers tested a new model and found support for the non-legal attitude wrongfulness as another significant mediator. These findings suggest that future research testing mediators of the relation between moral reasoning and rule-violating behavior should account for both legal and non-legal attitudes.

One of the most notable findings from the two studies was the varying effect moral reasoning had on rule-violating behavior. Study one found support for a direct relationship between the two suggesting that higher levels of moral reasoning significantly predicted less engagement in each of the three types of behaviors (assault, stealing and substance). However in study two, this direct relation was no longer significant for assault and substance behaviors. The discrepancies in these findings suggested possible differences between adolescents and college students. For adolescents, it appeared that moral reasoning played a significant role in their engagement in rule-violating behaviors. In college students however, these direct effects were no longer present suggesting that attitudes may play more of a role than moral reasoning.

One explanation for these findings may be that moral reasoning is already well established in college students. This explanation is congruent with the developmental stages of moral reasoning proposed by Piaget and Kohlberg. In the early stages of moral development, individuals struggle to satiate their own needs while also trying to follow the rules of society. Based on this principle, it makes sense that moral reasoning has a significant direct effect on rule-violating behavior in adolescents. Because adolescents'

moral reasoning is still evolving, their decision not to engage in rule-violating behaviors may be a direct result of avoiding punishment. In contrast, a college student's decision to refrain from rule-violating behaviors may have a more a more altruistic base (Eisenberg, Miller, Shell, McNalley & Shea, 1991.

Our findings suggested that in college, an individual's engagement in rule-violating behavior may be influenced more by their attitudes towards these behaviors than by their level of moral reasoning. One reason for this finding may be linked to Piaget and Kohlberg's stages where moral reasoning increases with age. According to Piaget and Kohlberg, as an individual's moral reasoning develops, they are better able to conceptualize the effects their behaviors have on those around them. For college students, moral reasoning may already be well established thus limiting its effects on their behaviors (Kaplan, 2008). Because moral reasoning directly affects an individual's attitudes, college students may be more influenced by these attitudes once moral reasoning no longer plays a direct role. As a result, college students may be less punishment focused and more concerned with effects their behaviors have on others.

Another reason for these findings may be that specific types of rule-violating behaviors influence college students differently (Rest & Narvaez, 1991). For college students, moral reasoning directly influenced stealing behaviors but not assault and substance behaviors. One explanation for this finding may be how college students interpreted wrongfulness. The open-response question suggested that most college students believed that for a behavior to be wrong it must cause harm. Based on this finding, it is plausible that college students may have considered assault behaviors and substance behaviors to be particularly harmful. Their decision to engage in these

behaviors may be more influenced by their attitudes towards these particular behaviors once their moral reasoning has fully developed. Based on these findings, further research should study the effects of moral reasoning on rule-violating behaviors in college-aged samples.

Limitations and Future Directions

The current studies are the first to create a moral socialization model in which wrongfulness mediates the relation between moral reasoning and rule-violating behavior. By incorporating wrongfulness into the model, the current studies were able to build upon the literature and study the effects of non-legal attitudes as mediators. Although the current studies addressed previous gaps in the literature, there were several limitations which should be addressed in future research.

First, while both studies found support for a non-legal attitude as a mediator for moral reasoning and rule-violating behavior, they only focused on wrongfulness. By only using one non-legal attitude the current studies were unable to determine if wrongfulness may be a unique non-legal attitude that ahs the ability to mediate this relation. In order to expand this new model, future research should incorporate more non-legal attitudes as possible mediators. In doing so, researchers will be able to further examine the effects of mediating variables on the relationship between moral reasoning and rule-violating behavior.

Another limitation of the current two studies is the use of self-report measures for rule-violating behaviors. One problem with this type of measure is that participants may be less inclined to give honest answers. Although responses remained completely anonymous, participants may have been concerned with openly admitting to engagement

in rule-violating behaviors. In order to increase the validity of the results, it may be beneficial for future research to use police and school reports to record participants' involvement in rule-violating behaviors.

A third limitation of the current studies is that that the second study only included a young adult sample from college students. Some researchers suggest that college students may be a unique sample in that they have much higher levels of moral reasoning compared to non-college students of the same age (Rest & Narvaez, 1991). It may be beneficial for future research to compare a college sample with a non-college sample of the same age to see how moral reasoning may be developing differently and the effects it has on rule-violating behaviors.

A final limitation of the current studies was that the open-ended response question was only incorporated in the college survey. The researchers developed this question after collecting data from the middle and high school students and were unable to use this measure in the first study. It would be interesting for future research to analyze adolescents' definitions of wrongfulness and compare them to the findings from the college sample. If moral reasoning is still developing in this population, they may consider a behavior to be wrong if they are likely to be punished for it.

Future research should further explore wrongfulness as a new mediating attitude for moral reasoning and rule-violating behavior. The two studies should be further replicated to determine whether wrongfulness may be a significant mediator in this relation. For college students, research should compare the effects of attitudes to moral reasoning in predicting engagement in rule-violating behavior. If moral reasoning is in

fact already established in college students, it may be crucial to focus on further developing moral reasoning in younger populations.

References

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51(6), 1173–1182. doi:10.1037/0022-3514.51.6.1173.

Berenguer, J. (2007). The effect of empathy in proenvironmental attitudes and behaviors. *Environment and Behavior, 39*, 269-283.

Berenguer, J. (2010). The effect of empathy in environmental moral reasoning. *Environment and Behavior, 42*(1), 110-134. doi:10.1177/0013916508325892

Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. Psychological Bulletin, 88, 1–45.

Brugman, D. (2010). Moral reasoning competence and the moral judgment-action discrepancy in young adolescents. In W. Koops, D. Brugman, T. J. Ferguson & A. F. Sanders (Eds.), *The development and structure of conscience.* (pp. 119-133). New York, NY US: Psychology Press. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2010-04267-005&site=ehost-live

Cohn, E. S., Bucolo, D. O., Rebellon, C. J., & Van Gundy, K. (2010). An integrated model of legal and moral reasoning and rule-violating behavior: the role of legal attitudes. Law and Human Behavior, 34(4), 295–309. doi:10.1007/s10979-009-9185-9.

Cohn, E. S., & White, S. O. (1990). Legal socialization: A study of norms and rules. New York: Springer-Verlag.

Eisenberg, N., Cumberland, A., Guthrie, I. K., Murphy, B. C., & Shepard, S. A. (2005). Age changes in prosocial responding and moral reasoning in adolescence and early adulthood. *Journal of Research on Adolescence, 15*(3), 235-260. doi:10.1111/j.1532-7795.2005.00095.x

Eisenberg, N., Miller, P. A., Shell, R., McNalley, S., & Shea, C. (1991). Prosocial development in adolescence: A longitudinal study. Developmental Psychology, 27, 849–857.

Gilligan, C. (1982). In a different voice. Cambridge, MA: Harvard University Press.

Hardy, S. A., & Carlo, G. (2005). Identity as a source of moral motivation. *Human Development, 48*(4), 232-256. doi:10.1159/000086859

Hardy, S. A., Padilla-Walkera, L., & Carlo, G. (2008). Parenting dimensions and adolescents' internalisation of moral values. *Journal of Moral Education, 37*(2), 205-223. doi:10.1080/03057240802009512

Hayes, A. F. (2009). Beyond baron and kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408-420. doi:10.1080/03637750903310360

Hindelang, M., Hirschi, T., & Weis, J. (1981). *Measuring delinquency*. Thousand Oaks, CA: Sage Publications.

Hirschi, T., & Gottfredson, M. (1983). Age and the explanation of crime. American Journal of Sociology, 89, 552–584. doi:10.1086/ 227905.

Kant, I. (1785/1959). Foundations of the metaphysics of morals (L. Beck, Trans.). Indianapolis, IN: Bobbs-Merrill.

Kaplan, U. (2008). *Cognitive and emotional dynamics in moral motivation and development.* ProQuest Information & Learning). *Dissertation Abstracts International: Section B: The Sciences and Engineering, 68*(10-) Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2008-99080-435&site=ehost-live. (2008-99080-435)

Kohlberg, L. (1969). Stage and sequence: The cognitive-develop- mental approach to socialization. In D. A. Goslin (Ed.), Handbook of socialization theory (pp. 347–480). Chicago, IL: Rand McNally.

Kohlberg, L. (1984). The psychology of moral development: The nature and validity of moral stages. San Francisco, CA: Harper and Row.

Leenders, I., & Brugman, D. (2005). Moral/non-moral domain shift in young adolescents in relation to delinquent behaviour. The British Journal of Developmental Psychology, 23, 65–79. doi: 10.1348/026151004X20676.

Levy, K. C. (2001). The relationship between adolescent attitudes towards authority, self-concept, and delinquency. Adolescence, 36, 333–346.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*(1), 99-128. doi:10.1207/s15327906mbr3901_4

Mak, A. S. (1991). Psychosocial control characteristics of delinquents and nondelinquents. Criminal Justice and Behavior, 18, 287 303.doi:10.1177/009385489101800PA.

Manning, M. A., & Bear, G. G. (2011). Moral reasoning and aggressive behavior: Concurrent and longitudinal relations. *Journal of School Violence, 10*(3), 258-280. doi:10.1080/15388220.2011.579235

Nelson, J. R., Smith, D. J., & Dodd, J. (1990). The moral reasoning of juvenile delinquents: A meta-analysis. Journal of Abnormal Child Psychology, 18, 231–239. doi:10.1007/BF00916562.

Padilla-Walker, L., & Carlo, G. (2007). Personal values as a mediator between parent and peer expectations and adolescent behaviors. *Journal of Family Psychology, 21*(3), 538-541. doi:10.1037/0893-3200.21.3.538

Palmer, E. (2003). An overview of the relationship between moral reasoning and offending. *38*(3), 165-174. doi: 1742-9544

Palmer, E. J. (2005). The relationship between moral reasoning and aggression, and the implications for practice. *Psychology, Crime & Law, 11*(4), 353-361. doi:10.1080/10683160500255190

Palmer, E. J., & Hollin, C. R. (1998). A comparison of patterns of moral developmental in youth offenders and non-offenders. Legal and Criminological Psychology, 3, 225–235.10.1023/A:1025004303603.

Piaget, J. (1932/1965). The moral judgement of the child. New York: Harcourt, Brace & World.

Raaijmakers, Q. A. W., Engels, R. C. M. E., & Van Hoof, A. (2005). Delinquency and moral reasoning in adolescence and young adulthood. International Journal of Behavioral Development, 29, 247–258.

Rest, J., & Narvaez, D. (1991). The college experience and moral development. In W. M. Kurtines, & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development, vol. 1: Theory; vol. 2: Research; vol. 3: Application.* (pp. 229-245). Hillsdale, NJ England: Lawrence Erlbaum Associates, Inc. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1991-98694-022&site=ehost-live

Shelton, C. M. (1984). Adolescent morality: A revised paradigm. Religious Education, 79, 192–202.

Shelton, C. M., & McAdams, D. P. (1990). In search of everyday morality: The development of a measure. Adolescence, 25, 923– 943.

Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: A theory of delinquency. American Sociological Review, 22, 664– 670. doi:10.2307/2089195.

Steinberg, L. (1990) Autonomy, conflict and harmony in the family relationship, in: S. S. Feldman & G. R. Elliot (Eds) At the threshold: the developing adolescent (Cambridge, Harvard University Press), 255–276.

Tarry, H., & Elmer, N. (2007). Attitude, values and moral reasoning as predictors of delinquency. The British Journal of Develop- mental Psychology, 25, 169–183.doi:10.1348/026151006X 113671.

Trinkner, R., et al., Don't trust anyone over 30: Parental legitimacy as a mediator between parenting style and changes in delinquent behavior over time, Journal of Adolescence (2011), doi:10.1016/ j.adolescence.2011.05.003.

United States Department of Justice, Federal Bureau of Investigation. (2008, September). Crime in the United States, 2007. Retrieved January 09, 2009, from http://www.fbi.gov/ucr/07cius.htm.

Warner, B. (2008). *Applied statistics*. Thousand Oaks, CA: Sage Publications.

Wolpin, K. (1983). The national longitudinal handbook 1983–1984. Columbus, OH: Center for Human Resource Research, Ohio State University.

Williams, J., & MacKinnon, D. P. (2008). Resampling and distribution of the product methods for testing indirect effects in complex models. *Structural Equation Modeling, 15*(1), 23-51. doi:10.1080/10705510701758166

Table 1

Study 1: Factor analysis of Rule-Violating Behaviors

	Rule-Violating Behavior Factor		
	Assault	Substance	Stealing
Item	Loadings		
Run Away from home	.02	.09	.24
Skipped School	-.10	.00	.16
Lied to Parents	**.97**	.06	.04
Taken < $50, other than a store	-.04	-.01	-.00
Taken >$50, other than a store	-.06	.01	**.80**
Tried to Con	**.97**	-.01	.04
Taken Vehicle Without Permission	.35	.03	**.63**
Broken in Building.	**.60**	-.01	**.50**
Knowingly Sold or Held Stolen Goods	.48	.03	**.69**

Table 1 (continued)

	Rule-Violating Behavior Factor		
	Assault	Substance	Stealing
Item	Loadings		
Taken Something from a Store (no pay)	.30	.02	**.67**
Carried a Handgun	**.97**	-.01	.06
Belonged to a Gang	**.78**	.05	.19
Damaged/Destroyed Other's Property	.04	.01	.02
Gotten into a fight at School/Work	.00	-.00	-.01
Hit or Seriously Threatened to Hit Someone	.14	-.01	.24
Attacked with Intent to Hurt or Kill	**.91**	-.01	.14
Hurt Someone to Need Bandages/ Doctor	**.86**	-.02	.19
Set Fire to Another's Property on Purpose	**.89**	-.00	.15

Table 1 (continued)

	Rule-Violating Behavior Factor		
	Assault	Substance	Stealing
Item	Loadings		
Used Knife/Gun/Other Object to Get Something From a Person	**.91**	.10	.14
Hit an Instructor or Supervisor	**.88**	.01	.12
Committed Assault	.05	.01	-.03
Used Force to Get Money/ Things From Another Person	.26	-.10	.06
Smoked a Cigarette	.04	**.98**	.05
Had an Alcoholic Drink	.05	**.97**	.06
Used Marijuana	.05	**.97**	.04
Used Other Illegal Drugs	.44	.13	.04
Sold Any Drugs	**.91**	.04	.12

NOTE: Loadings of Significance are bolded

Table 2: Adolescent Correlations

	Moral Reasoning	Approval	Wrongfulness	Assault	Stealing	Substance
Moral Reasoning	___	- .37***	.33***	- .19***	- .18***	- .09*
Approval	- .37***	___	- .47***	.33***	.34***	.28***
Wrongfulness	.33***	- .47***	___	- .36***	- .29***	- .21***
Assault	- .19***	.33**	- .36***	___	.53***	.31***
Stealing	- .18***	.34***	- .29***	.53***	___	.25***
Substance	- .09*	.28***	- .21***	.31***	.25***	___

Table 3: Adolescent Regresssions

		Predicted				
		Wrongfulness	Approval	Assault	Stealing	Substance
Predictor	Moral Reasoning Direct	82.52***	124.73***	26.90***	22.15***	5.1*
	Wrongfulness		-0.46***	108.28***	64.18***	33.35***
	Approval	-0.46***		90.92***	97.66***	64.45***
	Moral Reasoning Indirect	-0.16***	.23***	-0.01	0.01	0.01

Chart 1: Open-Response of Wrongfulness

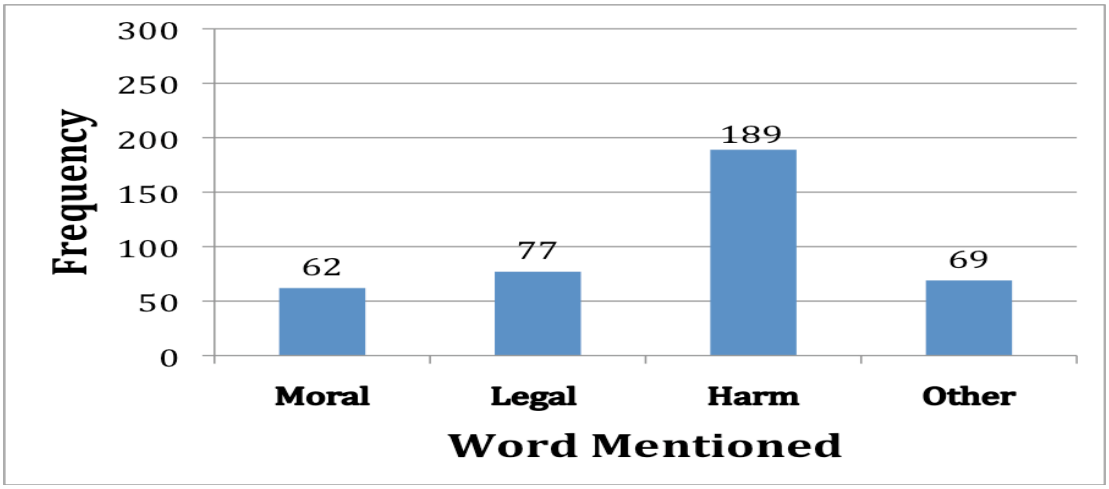

Table 4: College Correlations

	Moral Reasoning	Approval	Wrongfulness	Assault	Stealing	Substance
Moral Reasoning	___	- .31***	.25***	- .08	- .13*	- .02
Approval	- .31***	___	- .55***	.28***	.33***	.14*
Wrongfulness	.25***	- .55***	___	- .23***	- .29***	- .16**
Assault	- .08	.28***	- .23***	___	.52***	.13*
Stealing	- .13*	.33***	- .29***	.52***	___	.09
Substance	- .02	.14*	-.16**	.13*	.09	___

Table 5: College Regressions

		Predicted				
		Wrongfulness	Approval	Assault	Stealing	Substance
Predictor	Moral Reasoning Direct	19.68***	29.96***	-.08	-.13*	-.02
	Wrongfulness		-.55***	16.93***	27.32***	8.00**
	Approval	-.55***		25.06***	35.43***	5.86*
	Moral Reasoning Indirect	-.16*	.24***	.02	-.02	.03

Table 6

Study 2: Factor analysis of Rule-Violating Behaviors

	Rule-Violating Behavior Factor		
	Assault	Substance	Stealing
Item	Loadings		
Taken Something from a store (No Pay)	.06	**.70**	.14
Taken < $50, other than a store	.30	.46	.05
Taken >$50, other than a store	.28	.44	.37
Tried to Con	.38	.45	.10
Taken Vehicle Without Permission	-.04	.24	**.**57
Broken in Building.	.21	.34	**.56**
Knowingly Sold or Held Stolen Goods	.07	**.60**	.25

Table 6 (continued)

	Rule-Violating Behavior Factor		
	Stealing	Substance	Assault
Item	Loadings		
Kicked somebody on purpose	**.56**	.02	.10
Pushed or shoved somebody on purpose	**.73**	.02	-.03
Taken handgun to school	-.12	.02	**.70**
Participated in gang activities	.15	-.06	**.79**
Intentionally damaged/destroyed property Not belonging to you	.42	**.52**	.27
Gotten into fight at school	.14	-.01	.24
Hit or seriously threatened to hit someone	**.71**	.26	.15
Attacked with Intent to Hurt or Kill	**.31**	.11	**.64**

Table 6 (continued)

	Rule-Violating Behavior Factor		
	Assault	Substance	Stealing
Item	Loadings		
Hurt Someone to Need Bandages/ Doctor	**.40**	-.02	**.61**
Set Fire to Another's Property on Purpose	.02	.19	**.62**
Used Knife/Gun/Other Object to Get Something From a Person	.00	.01	**.82**
Committed Assault	.20	.20	**.62**
Used Force to Get Money/ Things From Another Person	.20	.09	**.68**
Smoked a Cigarette	.13	**.50**	.04
Had an Alcoholic Drink	-.02	**.**11	-.02
Used Marijuana	.06	**.58**	.03

Used Other Illegal Drugs	.01	**.64**	.31
Sold Any Drugs	-.02	**.62**	.23

NOTE: Loadings of Significance are bolded

Appendix

Thank you very much for participating in our study! Remember that your answers will be kept completely confidential. Please DO NOT write your name anywhere on this survey.

First, we would like you to tell us a little about your background. For each question below, please **circle** or **fill in** the answer that is correct.

1. What is your grade in school?

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

2. What is your sex?

   1. Male
   2. Female

3. How old are you?

   _____ years old

   (Please fill in)

4. What is your religion?

6. What is the highest level of education of your **mother**?

   1. Less than High School
   2. High School
   3. Some College Education
   4. Associate Degree (2-year college)
   5. Bachelor's Degree (4-year college)
   6. Graduate or Professional Degree (PhD, M.D., M.A.)

7. What is the highest level of education of your **father**?

   1. Less than High School
   2. High School
   3. Some College Education
   4. Associate Degree (2-year college)
   5. Bachelor's Degree (4-year college)
   6. Graduate or Professional Degree (PhD, M.D., M.A.)

8. What is your **mother's** job (if she has one)?

   _____

1. Agnostic
2. Atheist
3. Buddhist
4. Catholic
5. Christian
6. Greek Orthodox
7. Jewish
8. Protestant
9. Muslim
10. Hindu
11. Other _____

(If "other," please fill in)

5. What is your main racial background?

1. African American
2. Native American (Indian)
3. Asian American
4. Caucasian (White)
5. Hispanic American
6. Other _____

(If "other," please fill in)

(Please fill in)

9. What is you **father's** job (if he has one)?

_____

(Please fill in)

10. Which of the following best describes your grades on your last report card?

1. All A's
2. Mostly A's and B's
3. All B's
4. Mostly B's and C's
5. All C's
6. Mostly C's and D's
7. All D's
8. Mostly D's and F's
9. All F's

11. How many **close** friends do you have?

0 1 2 3 4 5 6 or more

Below is a list of behaviors that people sometimes do. In the first column, please **fill in** how many times (0, 1, 2, etc.) you have done each behavior in the last 6 months. In the second column, **circle** the number (0, 1, 2, or 3) that shows if "none," "a few," "some," or "many" of your close friends have done each behavior in the last 6 months.

	(1)	**(2)**			
	In the 6 months, how many times have you…	***In the 6 months, how many of your close friends have…***			
	_____times (fill in)	**None**	**A Few**	**Many**	**All**
1. …run away from home?		0	1	2	3
2. …skipped a full day of school without a real excuse?		0	1	2	3
3. …lied to your/their parent(s) about something important?		0	1	2	3
4. …other than from a store, taken something not belonging to you/them that was worth LESS THAN $50?		0	1	2	3
5. …other than from a store, taken something not belonging to you/them that was worth $50 OR MORE?		0	1	2	3
6. …tried to get something by lying to someone about what you/they would do for him or her? (tried to con someone)		0	1	2	3
7. …taken a vehicle without the owner's permission?		0	1	2	3
8. …broken into a building or vehicle to steal something or to just look around?		0	1	2	3
9. …knowingly stole or held stolen goods?		0	1	2	3
10. …taken something from a store without paying for it?		0	1	2	3
11. …taken a handgun to school?		0	1	2	3

12. …participated in gang activities?		0	1	2	3
13. …intentionally damaged or destroyed property that did not belong to you/them?		0	1	2	3
14. …gotten into a fight at school?		0	1	2	3
15. …hit or seriously threatened to hit someone?		0	1	2	3
16. …attacked someone with the idea of seriously hurting or killing them?		0	1	2	3
17. …hurt someone badly enough to need bandages or a doctor?		0	1	2	3
18. …set fire to someone's property on purpose?		0	1	2	3
19. …used a knife/gun/other object (like a bat) to get something from a person?		0	1	2	3
20. …hit a teacher?		0	1	2	3
21. …committed assault (a violent verbal or physical attack)?		0	1	2	3
22. …used force to get money or things from another person?		0	1	2	3
23. …smoked cigarettes?		0	1	2	3
24. …had an alcoholic drink?		0	1	2	3
25. …used marijuana?		0	1	2	3
26. …used other illegal drugs?		0	1	2	3
27. …sold any drugs?		0	1	2	3

On the next page, you will see the same list of behaviors you just saw. For each behavior, we would like you to think about <u>how much you approve</u> of the behavior. Please use the following scale to answer the questions in column 1 on the next page:

(0) Strongly Disapprove	(1) Disapprove	(2) Approve	(3) Strongly Approve

In column 2 on the next page, we would like you tell us if you think <u>people should be punished for</u> doing each behavior. Please use the following scale to answer the questions in column 2 on the next page:

(0)	(1)	(2)	(3)

No, Definitely Not	No, Probably Not	Yes, Probably	Yes, Definitely

In the first column, please circle the number (0, 1, 2, or 3) that shows how much you approve of each behavior. In the second column, please circle the number that shows if you think people should be punished for each behavior.

	(1)				**(2)**			
	How much do you approve of…				***Should people be punished for…***			
	Strongly Dis-approve	**Dis-approve**	**Approve**	**Strongly Approve**	**No, Definitely Not**	**No, Probably Not**	**Yes, Probably**	**Yes, Definitely**
1. …running away from home?	0	1	2	3	0	1	2	3
2. …skipping a full day of school without a real excuse?	0	1	2	3	0	1	2	3
3. …lying to your/their parent(s) about something important?	0	1	2	3	0	1	2	3
4. …other than from a store, taking something not belonging to you/them that was worth LESS THAN $50?	0	1	2	3	0	1	2	3
5. …other than from a store, taking something not belonging to you/them that was worth $50 OR MORE?	0	1	2	3	0	1	2	3
6. …trying to get something by lying to someone about what you/they would do for him or her? (tried to con someone)	0	1	2	3	0	1	2	3

7. …taking a vehicle without the owner's permission?	0	1	2	3	0	1	2	3
8. …breaking into a building or vehicle to steal something or to just look around?	0	1	2	3	0	1	2	3
9. …knowingly stealing or holding stolen goods?	0	1	2	3	0	1	2	3
10. …taking something from a store without paying for it?	0	1	2	3	0	1	2	3
11. …taking a handgun to school?	0	1	2	3	0	1	2	3
12. …participating in gang activities?	0	1	2	3	0	1	2	3
13. …intentionally damaging or destroying property that did not belong to you/them?	0	1	2	3	0	1	2	3
14. …getting into a fight at school?	0	1	2	3	0	1	2	3
15. …hitting or seriously threatening to hit someone?	0	1	2	3	0	1	2	3
16. …attacking someone with the idea of seriously hurting or killing them?	0	1	2	3	0	1	2	3
17. …hurting someone badly enough to need bandages or a doctor?	0	1	2	3	0	1	2	3
18. …setting fire to someone's property on purpose?	0	1	2	3	0	1	2	3
19. …using a knife/gun/other object (like a bat) to	0	1	2	3	0	1	2	3

get something from a person?								
20. …hitting a teacher?	0	1	2	3	0	1	2	3
21. …committing assault (a violent verbal or physical attack)?	0	1	2	3	0	1	2	3
22. …using force to get money or things from another person?	0	1	2	3	0	1	2	3
23. …smoking cigarettes?	0	1	2	3	0	1	2	3
24. …having an alcoholic drink?	0	1	2	3	0	1	2	3
25. …using marijuana?	0	1	2	3	0	1	2	3
26. …using other illegal drugs?	0	1	2	3	0	1	2	3
27. …selling any drugs?	0	1	2	3	0	1	2	3

Now we'd like to ask about how you think you would act in certain situations. Please read carefully about each situation below and circle the number of the response (1 to 7) that shows how likely you would be to do what is described.

(1) I Definitely Would Not Do	(2) I Would Not Do	(3) I Probably Would Not Do	(4) Neutral	(5) I Probably Would Do	(6) I Would Do	(7) I Definitely Would Do

1. I am walking alone and find a dollar on the street. I pick it up and continue walking. I pass a group of people who are collecting money for hurricane survivors. I drop the dollar that I found in their basket.	1 2 3 4 5 6 7
2. It is a snowy day and I am off from school. I decide to walk around the block to get some fresh air. As I begin to walk I notice a driver and his car stuck in the snow. I keep walking and do not stop to help.	1 2 3 4 5 6 7
3. I am asked to write, in class, a short paper on what job I would like to choose for my career and what makes me choose this job. When I write my short paper, I say that the most important reason for choosing that job is to help people.	1 2 3 4 5 6 7
4. I read in the paper about a family who has lost all their belongings in a fire. I secretly send money to a fund set up for the family by the town newspaper.	1 2 3 4 5 6 7
5. I am walking downtown fairly quickly with a friend so we can make a movie on time. As I am walking by, I notice a person standing by a car next to a parking meter. He is holding some change in his hands and looks frustrated. I interrupt my walk to the movies and go over to ask him if he needs correct change for the parking meter. I exchange money with him so that he will have the correct change.	1 2 3 4 5 6 7

6. I hear a local radio station say that the city animal shelter is having a newspaper drive and is asking residents to bring in their newspapers. The money received from the newspaper drive will be used to buy toys for the animals. I gather my newspapers at home and walk to the animal shelter to drop them off.	1 2 3 4 5 6 7
7. The principal of the school asks all students to give some serious thought to ways to improve the school for future students. Each student is requested to spend some time seriously thinking about their years at the school and then to fill out a questionnaire (you do not have to write your name on it) and to send the form to the school. I take the request seriously and over the next few weeks think of ways to improve the school. I fill out the form and send it in.	1 2 3 4 5 6 7
8. The school I attend needs volunteers who will come two hours early one evening next week to be help set up for the annual parents' night. I volunteer and come two hours early.	1 2 3 4 5 6 7

How WRONG do you think it is to…
0= Not at all Wrong 1= Not too Wrong 3 = A little Wrong 4= Very Wrong

1. take something from a store without paying for it? 0 1 2 3
2. other than from a store, take something not belonging to you that is worth LESS THAN $50? 0 1 2 3
3. other than from a store, take something not belonging to you that is worth $50 OR MORE? 0 1 2 3
4. try to get something by lying to someone about what you will do for him or her (con someone)? 0 1 2 3
5. take a vehicle without the owner's permission? 0 1 2 3
6. break into a building or vehicle to steal something or to just look around? 0 1 2 3
7. knowingly steal or hold stolen goods? 0 1 2 3
8. use bad or profane language (like swearing)? 0 1 2 3
9. kick somebody on purpose? 0 1 2 3
10. push or shove somebody on purpose? 0 1 2 3
11. take a handgun to school? 0 1 2 3
12. participate in gang activities? 0 1 2 3
13. intentionally damage or destroy property that does not belong to you? 0 1 2 3
14. get into a fight at school? 0 1 2 3
15. hit or seriously threaten to hit someone? 0 1 2 3
16. attack someone with the idea of seriously hurting or killing them? 0 1 2 3
17. hurt someone badly enough to need bandages or a doctor? 0 1 2 3
18. set fire to someone's property on purpose? 0 1 2 3
19. use a knife/gun/other object (like a bat) to get something from a person? 0 1 2 3
20. commit assault (a violent physical attack)? 0 1 2 3
21. use force to get money or things from another person? 0 1 2 3
22. smoke cigarettes? 0 1 2 3
23. have an alcoholic drink? 0 1 2 3
24. use marijuana (pot)? 0 1 2 3
25. use other illegal drugs? 0 1 2 3
26. sell any drugs? 0 1 2 3