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Moral Judgment Developmental Differences Between Gifted Youth and College Students

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In order to better understand contributing factors of moral judgment development, gifted youth and college students were compared. Moral judgment development, ACT scores, attributional complexity, and descriptors of personality were assessed among 140 college students and 97 gifted youth. Important distinctions favoring the gifted sample were seen among aspects of all considered variables. Stepwise hierarchical regression models noted that there was variability in how these variables accounted for the moral judgment developmental variance of each group. Discussed are explanations for the differences seen in the gifted sample relative to the college sample. Efforts to understand populations prone to early advancement, such as the gifted, are recommended in the hopes of transferring gained knowledge to other populations.

To fully understand the psychology of morality, one must necessarily work by induction. What factors make up and/or contribute to our moral development and functioning? According to the neo-Kohlbergian approach of James Rest and his colleagues (Rest, Narvaez, Bebeau, & Thoma, 1999), moral development and functioning are the result of a conglomeration of cognitive, behavioral, and affective forces that can be represented in four component processes: moral sensitivity, moral judgment, moral motivation, and moral character. Though the neo-Kohlbergian approach addresses the importance of all four components, their research has mostly focused on moral judgment. A major reason for this focus is attributed to the success of their Defining Issues Test (DIT; Rest et al., 1999) in measuring this construct. Considering that Lawrence Kohlberg originally posited that moral judgment advancement is the entirety of moral development (Rest et al., 1999), an emphasis on moral judgment is not unwarranted.

It is here that our query lies. Working again to understand the psychology of morality by induction, we ask, what underlying factors are fundamental contributors to one's moral judgment development? Also, how and under what situations are such factors likely to impact growth? To be sure, these questions are not new to the study of moral judgment development and various factors of note have been revealed. From prior research, two populations have been identified that can provide a wealth of knowledge regarding these two questions: those attending college (Pascarella & Terenzini, 1991; Rest, Deemer, Barnett, Spickelmier, & Volker, 1986) and gifted youth (Howard-Hamilton, 1994; Narvaez, 1993; Tirri & Pehkonen, 2002). Before addressing these questions, however, it is important to characterize moral judgment development according to

the aforementioned neo-Kohlbergian approach (Rest et al., 1999).

As the neo-Kohlbergian contingent maintains, moral judgment development transpires as individuals come to understand and operate from three different moral judgment schemata: the *personal interest schema* (i.e., akin to Kohlberg's stages 2 and 3 where moral judgments are based on personal and self-serving interests and associations), the *maintaining norms schema* (i.e., akin to Kohlberg's stage 4 where moral decisions revolve around the conventions, rules, or standards of the social system), and the *postconventional schema* (i.e., akin to Kohlberg's stages 5 and 6 where a social contract and/or a prior-to-society viewpoint is employed resulting in moral judgments being based on universal principles of justice and fairness; Rest et al., 1999). In distancing themselves from the hard stage notions of moral judgment development that Kohlberg (Colby & Kohlberg, 1987) advocated, Rest et al. (1999) have maintained that any understood moral judgment schema can be referenced in making ethical decisions in conjunction with, instead of, or as a result of any other sociocognitive sources of information relevant to moral decision-making. At the same time, though, neo-Kohlbergian research has supported the existence of a developmental pattern in which a particular moral judgment schema is modal and is emphasized over the other two when moral decisions are required (Rest et al., 1999). As such, the personal interest schema is modal and emphasized most at the start of moral judgment development. By early adolescence, moral judgment ability begins to further advance such that the influence of the personal interest schema lessens, the maintaining norms schema becomes modal, and the postconventional schema starts to better materialize. At the peak of moral judgment development, which can occur as early as late adolescence and possibly never at all, the maintaining norms schema is referenced less and the postconventional schema becomes modal.

College students and gifted youth are relevant groups to the considered questions about factors and situations likely to contribute to and impact moral judgment growth. They are relevant because some specific moral judgment developmental trends have been seen regularly in both populations (see Narvaez, 1993; Rest et al., 1986, 1999). For example, individuals of both groups rarely emphasize the personal interest schema in making moral and ethical decisions. Additionally, many within these two groups also go through the important developmental shift in which the postconventional moral judgment schema becomes modal as a result of factors such as continued education and concurrently advancing cognitive and intellectual abilities.

Although both groups illustrate fundamental moral judgment developmental advances, such growth can be the result of different reasons. For example, college students often accrue a diversity of experiences as a result of their age and academic experiences. As such, they may have opportunities to consider and challenge ideas that they have been exposed to through the various social experiences and interactions of the college experience. Indeed, such correlates have been strongly linked with the advancement of moral judgment (Pascarella & Terenzini, 1991; Rest et al., 1986). Though gifted youth may not necessarily have had the same socioacademic opportunities that college students have had, they have the verbal and nonverbal intellectual faculties, as well as the academic and educational orientations that have been addressed as necessary (though not sufficient) sources for moral judgment growth (Rest, 1979; Rest et al., 1986; Walker, 1980). When such attributes exist for individuals, it is not unusual to witness an operational emphasis of the postconventional moral judgment schema before college (Rest et al., 1986). The current study therefore operates on the assumption that the similarities and differences of college students and gifted youth can be explored to develop a greater understanding of the contingencies of moral judgment. In doing so, it is important to further discuss some factors relevant to the development of moral judgment.

Influences on Moral Judgment Development

Formal Education

The influence of formal education on moral judgment development has been the focus of much research in the last 20 years. Rest et al. (1986) noted that formal education and age account for 30–50% of the variance in DIT scores in referencing 30 published articles that address the impact of these factors on moral judgment growth. As Rest et al. (1986) illustrated in discussing a 10-year longitudinal study considering moral judgment development as assessed by the DIT, formal education provided the greater contribution of these two correlates. Specifically, Rest et al. (1986) noted DIT scores starting at high school and at three subsequent points during a 10-year span. Participants were divided into three education groups: those with a high degree of education after high school (e.g., college graduates and pursuit of graduate education), those with a moderate amount of education after high school (e.g., some college matriculation but no completion), and those with a low amount of education after high school (no or

minimal college matriculation). Although differences in DIT scores were minimal among these groups at the initial testing, significant differences were seen among groups at the final testing. As Rest et al. (1986) stated,

> The high group continues to increase over time, the mediate group increases some and then levels off, and the low group actually increases only for the two years immediately following high school, then falls off. . . . In other words, whether a person continues schooling seems to determine his general course of development after high school. (p. 34)

Because of these findings, Rest et al. (1986) set the stage for consideration of what it is about formal education that fosters moral judgment development. Concordantly, other researchers have followed (Derryberry & Thoma, 2000; Pascarella & Terenzini, 1991). Rest et al. (1986) concluded that moral judgment develops in conjunction with advances in general social development that accompany formal education. Pascarella and Terenzini acknowledged that formal education fosters the use of postconventional thinking due to certain within-college effects such as individual experiences, academic major, residential arrangement, and moral educational interventions. The works of Rest et al. (1986) and Pascarella and Terenzini agree that the type of person who chooses to go to college, or the type of person that college helps one to become, may have greater impact on moral judgment development rather than academic experience or specific courses of instruction. Further, Derryberry and Thoma (2000) addressed the role of friendship networks that may develop during college in influencing moral judgment growth. Thus, formal education's influence on moral judgment development stems from the interaction between the opportunities and experiences of college and a person's receptiveness to them.

Intellectual Ability

Intelligence has been regarded as an important correlate of moral judgment for some time (Rest, 1979). Although Rest regarded intelligence as a necessary but not sufficient contributor to moral judgment development, Sanders, Lubinski, and Benbow (1995) claimed that moral judgment development is reducible to intellectual ability in suggesting that DIT scores could be entirely accounted for by measures of intelligence assessing verbal ability. In considering how the DIT related to groups of "cognitive" (e.g., defined by ACT/SAT scores, GPA, and scores on the Raven's Progressive Matrices) and "non-cognitive" (e.g., defined by scores on the Family Environment Scale, Adjective Checklist, Study of Values Scale, and a Demographics Questionnaire) variables, Sanders et al. noted that the DIT did not provide any significant contributions to their non-cognitive criterion once their cognitive criterion was entered in a regression model. Research that Thoma spearheaded (e.g., Derryberry, Thoma, Narvaez, & Rest, 2000; Thoma, Derryberry, & Narvaez, 2000; Thoma, Narvaez, Rest, & Derryberry, 1999) maintained that Sanders et al. overlooked some key considerations in making their conclusions. For example, Thoma et al. (1999) asserted that Sanders et al. deprecated the role that the correlation between intelligence and moral judgment plays in the cognitive-developmental approach to moral judgment as Rest (1979) originally denoted. As such, Thoma et al. (1999) maintained that the findings of Sanders et al. were misinterpreted because the DIT has not been shown to strongly relate to instruments such as those defining their "non-cognitive" criterion. Thus, the trends that Sanders et al. noted are to be expected, according to Thoma et al. (1999). That is, when intellect is removed, nothing is left in the relationship.

As Thoma et al. (1999) illustrated, the discriminant validity of the DIT is not impacted when criteria noted to strongly relate to moral judgment development are considered after controlling for verbal intellectual ability. For example, Thoma et al. (1999) discussed the six grouping criteria that have been used in establishing the construct validity of the DIT, including: (a) correlations with moral comprehension, (b) differentiation among known groups, (c) longitudinal trends, (d) sensitivity to intervention, (e) correlations with political attitudes, and (f) correlations with behavior. In discussing how the DIT relates to each criterion, Thoma et al. (1999) cited various studies and discussions that illustrate how unique variance remains in each considered relationship after controlling for verbal intellectual ability. Therefore, Thoma et al. (1999) asserted that assumptions about the DIT's construct validity should not be based on the amount of shared variance it has with known correlates but should instead be based upon the amount of unique variance that remains after known correlates have been controlled.

Other studies verified these suggestions by empirically examining particular relationships that Thoma et al. (1999) noted. For example, Thoma et al. (2000) and Derryberry et al. (2000) explored the relationships among moral judgment as defined by DIT scores, verbal intellectual ability as inferred by ACT scores and GPA, and social political ideology as defined by various measurements of human rights attitudes, religious fundamentalism, and political ideology. In using structural equation modeling,

these studies statistically verified two important aspects of the relationship among these constructs. First, these studies illustrated through confirmatory factor analysis that the best-fitting measurement model is as three unique and independent latent constructs. Second, in their structural models, both studies illustrated a significant path coefficient from the moral judgment latent construct to the social political ideology construct and a nonsignificant and minimal path coefficient from the verbal intellectual ability latent construct to the social political ideology latent construct. Given these trends along with the discussion of Thoma et al. (1999), it is difficult to support the assumptions of Sanders et al. (1995) that DIT scores and indices of intellectual ability are synonymous or reducible to each other.

Though moral judgment scores and verbal intellectual ability are not synonymous, the relationship between intellect and moral judgment cannot be denied. Evidence for this relationship is evident in research showing that those advanced in verbal and other intellectual abilities tend to illustrate moral judgment developmental advances (Howard-Hamilton, 1994; Narvaez, 1993; Sanders et al., 1995; Tirri & Pehkonen, 2002). Thus, the relationship between verbal intellectual ability and moral judgment may be indicative of underlying, concurrent processes that contribute to moral judgment ability and verbal ability simultaneously. Given that verbal ability refers to the intellectual capacity that enables us to use, discern, and/or refer to linguistic sources of information, the formation of a moral judgment would be impossible without it. For reasons like these, such trends should be expected and not come as a surprise (Rest, 1979).

Just as verbal intellectual ability can be recognized as an important correlate of moral judgment, so too can other facets of intellect such as nonverbal ability. As Rest (1979) acknowledged, intelligence measures that also account for nonverbal ability in composite indices are more highly correlated with DIT scores than by assessments that solely measure verbal intellectual ability. Indeed, making a moral decision or judgment requires reasoning ability and problem-solving skill. As Kohlberg (Colby & Kohlberg, 1987) noted, there are certain requirements in making a moral judgment. These requirements include determining whether or not an issue is a moral situation, deciding what is valued, and making a normative prescription of what ought to be done. As the schema approach of Rest's (Rest et al., 1999) neo-Kohlbergian theory has maintained, the task for the individual in taking the DIT is to decide which issues best represent his or her perspective regarding the proposed dilemma. Given the role of both reasoning and problem solving in the formation and recognition of a moral judgment, it would be unacceptable for any consideration of its development to rule out the role of nonverbal intellectual ability.

Attributional Complexity

The complexity or depth of individual thinking has routinely been cited as an important facet of moral judgment (Kohlberg, 1987). Depth of thinking is required for optimal moral judgment development because advanced levels of moral judgment require a complex consideration of sociomoral perspectives (Kohlberg). Multiple intrinsic and extrinsic factors can affect a person's needs and feelings about a given situation. Greater moral judgment no doubt takes many of these factors into consideration. Indeed, in explicating the nature of postconventional thinking, Kohlberg illustrated how this advanced level requires the individual to engage in "moral musical chairs . . . [or] . . . reversible role taking" (p. 35). In doing so, the individual objectively focuses on all aspects involved in a moral situation. Thus, the individual is able to employ the operations of procedural justice that lead to the identification and understanding of the defining principle that should underlie action.

An important cognitive construct that may facilitate one's processing of moral situations to the level that Kohlberg noted is required at advanced stages is known as attributional complexity (Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986). Defined, attributional complexity refers to the depth of thinking one uses in regard to the explication of the behavior of others (Fletcher et al., 1986). Attributional complexity has been illustrated to be a cognitive construct where a fair amount of variability is seen among a variety of contexts, settings, and demographics (Fletcher et al., 1986). Furthermore, the uniqueness of this construct has been noted in that it is independent of other cognitive related constructs such as academic ability and verbal and nonverbal IQ scores (Fletcher, Roeder, & Bull, 1990). Attributional complexity has been recognized as measuring seven different constructs including (a) level of interest or motivation in explaining the behavior of others; (b) preference for complex rather than simple explanations; (c) presence of metacognition concerning explanations; (d) awareness of the extent to which people's behavior is a function of interaction with others; (e) tendency to infer abstract or causally complex internal attributions; (f) tendency to infer abstract, contemporary, external causal attributions; and (g) tendency to infer external causes operating from the past.

Attributional complexity should be an important correlate of and potential contributor to the kind of thinking and

sociomoral perspective taking that Kohlberg (1987) and others (Rest et al., 1999) have recognized as vital for advanced moral judgment development. Indeed, pilot research noted that attributional complexity was linked to the moral judgment development of gifted students (Norman, 1997). Specifically, in considering the attributional complexity of a group of gifted youth, Norman noted a significant relationship between their attributional complexity and DIT scores (r = .278, p < .01). The nature of the design precluded Norman from making definitive statements about the role of attributional complexity in contributing to moral judgment development. As noted, moral judgment scores of gifted youth often have been cited as more advanced than their contemporaries (Howard-Hamilton, 1994; Narvaez, 1993; Tirri & Pehkonen, 2002). Thus, Norman's findings give reason to presume that attributional complexity may accompany intellectual ability in helping to facilitate moral thought and suggest the need to explore how this construct relates to moral judgment.

Personality

Many researchers embrace the idea that some traits of personality (e.g., McCrae & Costa, 1999) relate to moral functioning (Walker, 1999). In using Costa and McCrae's (1992) NEO-Five Factor Inventory, Dollinger and LaMartina (1998) found that the openness to experience personality trait moderately related (B = .45, p < .001) with moral judgment development as measured by DIT scores. Theoretically, this can be expected as openness to experience has been referenced as the five-factor trait most closely linked to intelligence (McCrae, 1994). For Rest (1979), moral judgment, being a product of cognitive-intellectual advancement, is and should be moderately correlated with general intelligence. However, though the correlation was lowered when Dollinger and LaMartina controlled for three intellectual factors, the contribution of the openness to experience trait to the variance of DIT scores remained significant (B = .17, p < .05). As Dollinger and LaMartina suggested, it seems that Rest et al. (1986) indirectly acknowledged the openness to experience construct with his statement that people who are prone to greater moral judgment development are those

> who love to learn, who seek new challenges, who enjoy intellectually stimulating environments, who are reflective, who make plans and set goals, who take risks, who see themselves in the larger social contexts of history and institutions and broad cultural trends, who take responsibility for themselves and their environs. (p. 57)

As such, there is a basis for consideration of this trait with moral judgment development.

Aside from openness to experience, other literature provides additional reasons to assume that other personality traits may also impact moral judgment development. For example, Walker (1999) addressed the perceived personality of moral exemplars. One trait most often attributed to moral exemplarity was high conscientiousness. If we are to presume that one of the criteria for moral exemplarity is moral judgment, then it is not farfetched to assume that high pole conscientiousness may relate to moral judgment development. At the same time, it seems that this aspect of conscientiousness may only pertain to moral judgment development to a certain extent. To be sure, Turiel (2003) maintained that resistance and subversion are integral features of high moral development. This makes sense, because those who stand up for what is right may find themselves going against popular opinion. Consequently, if resistance is a facet of advanced moral judgment development, it is reasonable to expect the low polar dimension of the agreeableness personality trait to relate to moral judgment developmental variance.

Summary and Purpose of the Study

This study seeks to explore and better understand the role of formal education, verbal and nonverbal intellectual faculties, attributional complexity, and aspects of personality on the moral judgment of samples of college students and gifted youth. Given the differences between the two samples, this study's purpose is to determine how the aforementioned factors are related to moral judgment development in both groups. Therefore, the research questions asked are:

1. Are there differences between college students and gifted youth on indices of moral judgment and indices related to moral judgment?

2. Are there differences between college students and gifted youth in how certain variables account for or predict moral judgment?

Consideration of these questions can provide some important answers about the nature of moral judgment development. Where the first question is concerned, research involving the moral judgment development of the gifted has traditionally only addressed two factors: moral judgment and intellect. Though moral judgment developmental advances relative to their peers has been seen, it is unknown whether such differences translate to related areas. Furthermore, research only has focused on comparisons of gifted youth with individuals that are similar in age

and grade level. The advantage of the present study is that the moral judgment of the gifted group can be considered in comparison to a group that may be less advanced in terms of intellectual ability yet more advanced in age and socioacademic experiences.

Consideration of the second question may elaborate upon answers generated in the first question. Indeed, it will not be unexpected if moral judgment developmental differences are seen between both groups. Given the diversity of both groups in terms of intellect and experiences, answers regarding the second question will help contribute to understanding the potential pathways that moral judgment development can take. Though prior research has illustrated that the moral judgment of the gifted advances more readily than it does for nongifted individuals, it is unknown as to why, and no theoretical models exist that help to account for this. If the consideration of the second question illustrates differences that predict the moral judgment development of both groups, then needed preliminary information would be available regarding pertinent factors related to gifted moral judgment growth. From this preliminary information, further information would be garnered that may ultimately contribute to our understanding of moral judgment growth in general. This understanding then could be transferred to programs of moral education, for all ages and ability levels.

Method

Participants

Gifted Youth. A verbally and mathematically talented gifted sample was obtained from a summer program for gifted youth hosted by a university in the Southeastern United States. This program is for students in grades 7 through 10 who have earned requisite ACT or SAT scores. Program entry requires a minimum score of 18 on the ACT math subtest and 25 on the ACT English subtest or a minimum score of 500 on SAT math and verbal subtests. Participants totaled 97 youth including 52 females and 45 males ranging from ages 12 to 16 (M = 14.39, SD = 1.14). In terms of ethnicity, 70 classified themselves as White, 9 as Asian, 3 as Black, 4 as Hispanic, 9 as other, and 2 did not provide information about ethnicity.

College Students. A sample of 140 college students was solicited from various classes at the same Southeastern university that sponsored the gifted program. These participants were offered extra credit as an incentive for participation. Participants ranged in age from 17 to 52 (M = 20.52, SD = 3.98). For gender, 109 were female and 31 were male. For class year, 38 were freshmen, 53 were sophomores, 24 were juniors, 16 were seniors, and 9 classified themselves as other. In terms of ethnicity, 126 classified themselves as White, 9 as Black, and 5 as other.

Instruments

Moral Judgment. The Defining Issues Test (DIT; Rest et al., 1999) was used to assess moral judgment development. For more than 25 years, the DIT has served as a valued assessment of this construct. The reliability of the DIT is strong with test-retest correlations ranging from .70 to .80 and Cronbach alpha ranging from .76 to .83 (Rest et al., 1999). Rest (1979), Thoma et al. (1999), and Rest et al. (1999) have reported on a variety of studies that support the DIT's validity.

On the DIT, participants read 6 individual dilemmas involving a moral situation and then were asked what the main character should do. Next they rated 12 issues in terms of importance in making their decisions about the actions of the main character. Each of these 12 issues is reflective of content pertaining to the personal interest, maintaining norms, and postconventional moral judgment schemata. Additionally, some items reflect either meaningless or antisocial content as a reliability check. Once the 12 items have been rated, participants ranked the four items that were most relevant to the decision that was made about the main character.

From participants' noted importance of ranked issues, developmental indices can be generated that designate reference to the three moral judgment schemata that the neo-Kohlbergians have identified. Specifically, three indices can be denoted. The P score indicates the relative importance of the postconventional schema in making moral judgments. The MN score indicates the relative importance of the maintaining norms schema in making moral judgments. The PI score indicates the relative importance of the personal interest schema in making moral judgments. Each score ranges from 0–95 and is computed according to how items are ranked. As such, items ranked as most important for a dilemma are weighted 4 times, items ranked second most important are weighted 3 times, and so on. All ranking totals for schema-related items are then totaled in determining each of the three indices.

In assessing participant moral judgment development, it is important to refer to all three indices. Although the P score has a long history as an important referent of moral judgment development (Rest et al., 1999), it does not provide information regarding the relative influence of the maintaining norms or personal interest schemata. For example, two individuals could have fairly low P scores

yet be developmentally distinct in terms of moral judgment. While one individual could be largely making moral judgments according to the maintaining norms schema, another might be making moral judgments based on the personal interest schema. Solely attending to their P scores would not reflect this difference. By also attending to participant MN and PI scores, developmental differences such as this one are more effectively observed.

Intellectual Ability. The SAT and ACT achievement tests are typically administered to assess the level of competence that a student should have in completing college-level work. They are considered to be assessments of achievement or aptitude. Such scores are inferential of intellectual ability, however, and various considerations that compared moral judgment and intellectual ability referenced them in deducing information regarding general intellectual ability (Derryberry et al., 2000; Rest, 1979; Sanders et al., 1995; Thoma et al., 2000). Because of this past use, ACT and SAT scores are considered a reflection of verbal and nonverbal intellectual abilities in the current study. ACT scores and/or SAT scores were obtained through university records via permission from participants. The ACT breaks down into four sections: English, Mathematics, Reading, and Science Reasoning. The SAT breaks down into two sections: Verbal and Mathematical. All SAT composite scores were converted to an ACT equivalent using standardized conversion tables.

Attributional Complexity Scale. The Attributional Complexity Scale (ACS; Fletcher et al., 1986) is a 28 item, 7-point scale that assesses participants' complexity of thought involved in explaining human behavior. Relationships between the ACS and the DIT have been verified (Norman, 1997). Examples of ACS items include "I don't usually bother to analyze or explain people's behavior," "I think a lot about the influence I have on other people's behavior," and "I have found that the causes for people's behavior are usually complex rather than simple." In addition to a composite ACS score that ranges from 0 to ±84, the ACS can be indexed into seven subscales ranging from 0 to ±12 reflecting seven constructs of attributional complexity. The seven subscales include motivation (ACSmot), preference for complex explanations (ACSce), metacognition (ACSmeta), behavior as a function of interaction (ACSbfi), complex internal explanations (ACScin), complex external explanations (ACScext), and use of the temporal dimension (ACStemp). One subscale that may be an important aspect of how attributional complexity may relate to DIT scores is ACSce due to its focus on the complexity of explanations. Because of this emphasis, the ACSce score is the aspect of attributional complexity of most interest in the current study, though the other six subscales are considered. Fletcher et al. (1986) reported good reliability for the ACS with a test-retest correlation of .80 and Cronbach alpha of .85. Fletcher et al. (1986) also have documented the validity of the ACS.

Personality Descriptors. Participants considered a list of 50 personality trait adjectives that Walker (1999) identified as illustrating the five most commonly used adjectives in describing the high and low poles for each trait of McCrae and Costa's (1999) Big-Five factor model of personality. Examples include "joyful" to describe high pole extroversion, "stubborn" to describe low pole agreeableness, "faithful" to describe high pole conscientiousness, "emotional" to describe low pole emotional stability, and "open" to describe high pole openness to experience. Participants were asked to denote the 10 adjectives that describe them best. Scores can be tallied for both poles of each of the five factors. Scores ranging from 0 to 5 can be derived in describing high and low pole dimensions for each trait, based on the number of adjectives from each dimension that a participant denotes. Because specific personality trait dimensions are identified as having or potentially having a relationship with moral judgment (e.g., Dollinger & LaMartina, 1998; Turiel, 2003; Walker, 1999), only scores pertaining to high pole openness to experience (HPO), low pole agreeableness (LPA), and high pole conscientiousness (HPC) are noted.

This assessment is best interpreted as a participant's description of individual personality and not an objective and comprehensive personality assessment. As such, it is more accurately interpreted as a measurement of self-understanding. Such assessments are noted as successfully describing aspects of personality and self-concept, however. For example, Walker (1999) used this approach in characterizing the personality of moral exemplars. Similar approaches for considering how the participants understand and describe themselves date to the 1970s, and test-retest correlations on such approaches range from .83 to .91 (Peevers & Secord, 1973).

Procedures

For both groups, data were collected in two sessions ranging from 45 minutes to 1 hour each. Consent or assent was obtained from both groups at the start of the first session and participant numbers were assigned. Parental consent was verified prior to the first session for the gifted group. The DIT and the ACS were completed in the first session. In the second session, participants were asked to denote the 10 personality trait adjectives from the considered list.

Results

Before considering the research questions, it is important to address the role of gender because Gilligan (1977) suggested that distinct gender differences should be seen for Kohlbergian-based considerations of moral judgment development. As a result of different processes of socialization and identification, Gilligan maintains that males should outperform females on Kohlbergian-based assessments of moral judgment development. According to Gilligan, the moral judgment development of females should revolve around stage 3 issues. Because males may be more accustomed to making justice-based decisions, they should show a greater propensity to make moral judgments according to stage 4 issues and beyond. In the current study, significant differences favoring females were seen for MN scores (F [1, 231] = 7.465, p = .007, η^2 = .031) and favoring males on PI scores (F [1, 231] = 6.527, p = .011, η^2 = .027), indicating differences in how females and males reference the maintaining norms schema and personal interest schema in making moral judgments. No significant gender differences were seen on P scores, which suggests that males and females of this sample are equally equipped in their ability to reference the postconventional schema. The direction of these effects does not substantiate Gilligan's claims because the trends noted do not follow the patterns that Gilligan suggested. Because the personal interest schema incorporates stage 3 considerations and because the maintaining norms schema solely revolves around stage 4 issues, corroboration of Gilligan's contentions would require the opposite of the effects that occurred. It should be noted, however, that it is difficult to evaluate the validity of these findings given the disparity of gender. At the same time, though, research has been able to effectively refute assertions that gender differences exist in the considered moral developmental indices (Thoma, 1986; Walker, 1995) in the manner that Gilligan suggested. In consideration with this research, then, the direction of these trends support that the role of gender was minimal in contributing to any group differences. Nonetheless, because distinctions were present, gender was employed as a fixed factor in the analyses of this study in order to account for its role.

Descriptive statistics for each group can be found in Table 1. In considering potential differences that exist between gifted youth and college students, three 2 (college vs. gifted) X 2 (gender) Multivariate Analyses of Variance (MANOVA) and one 2 (college vs. gifted) X 2 (gender) Analysis of Variance (ANOVA) were conducted. The first MANOVA considered differences on P, MN, and PI DIT scores. Multivariate tests revealed significant differences between the gifted and college groups (F [3, 229] = 4.335, p = .005, η^2 = .054) and between males and females (F [3, 229] = 3.936, p = .009, η^2 = .049) across the three DIT indices. There was not a significant interaction at the multivariate level. At the univariate level, significant differences favoring gifted students existed on P scores (F [1, 231] = 12.623, p < .001, η^2 = .052) and favoring college students on PI scores (F [1, 231] = 3.937, p = .048, η^2 = .017) between gifted and college students and on MN scores and PI scores between males and females as reported earlier. No significant interactions were observed at the univariate level.

In the second MANOVA, differences on the seven ACS subscales were considered. Multivariate tests revealed significant differences existed between the gifted and college students across the seven subscales (F [7, 225] = 6.065, p < .001, η^2 = .159). No multivariate significance was seen between males and females. There was not a significant interaction at the multivariate level. At the univariate level, college students outperformed the gifted youth on five of the ACS subscales with significant differences noted on ACSmot (F [1, 231] = 4.716, p = .051, η^2 = .016), ACSmeta (F [1, 231] = 6.220, p = .013, η^2 = .026), ACSbfi (F [1, 231] = 6.625, p = .011, η^2 = .028), and ACStemp (F [1, 231] = 14.558, p < .001, η^2 = .059). Though not significant, gifted students outperformed college students on ACSce (F [1, 231] = 3.126, p = .078, η^2 = .013). Negligible differences were seen between gifted and college students on ACScext (F [1, 231] = .561, p = .455, η^2 = .002). No significant differences were observed between males and females on any of the ACS indices. No significant interactions were observed at the univariate level.

In the third MANOVA, differences in referencing personality descriptors were considered. Significance was reported between gifted and college students at the multivariate level (F [3, 229] = 3.083, p = .028, η^2 = .039). No multivariate significance was seen between males and females. There was not a significant interaction at the multivariate level. At the univariate level, significant differences were observed favoring the gifted in their reference to high pole openness to experience adjectives (F [1, 231] = 4.153, p = .043, η^2 = .018). No significance was observed at the univariate level between males and females in referencing personality descriptors. No significant interactions were observed at the univariate level.

An ANOVA assessed ACT score differences. Results reported that gifted youth significantly outperformed college youth on the ACT (F [1, 231] = 7.054, p = .008, η^2 = .030). No significant differences were observed between

Table 1

Descriptive Statistics

Gifted Youth (N = 97)	M	SD	College Students (N = 140)	M	SD	Males (N = 75)	M	SD	Females (N = 160)	M	SD
P	34.88	11.41	P	29.57	10.79	P	32.43	13.05	P	31.38	10.45
MN	33.22	13.36	MN	37.76	12.23	MN	31.93	14.03	MN	37.80	11.87
PI	24.83	9.91	PI	26.08	10.69	PI	27.77	11.69	PI	24.55	9.58
ACSmot	3.01	5.39	ACSmot	4.57	4.41	ACSmot	3.35	5.26	ACSmot	4.22	4.69
ACSce	3.46	4.65	ACSce	2.34	4.18	ACSce	2.60	4.85	ACSce	2.89	4.19
ACSmeta	4.55	4.65	ACSmeta	5.86	3.40	ACSmeta	5.04	4.47	ACSmeta	5.47	3.76
ACSbfi	4.52	4.77	ACSbfi	6.31	3.53	ACSbfi	5.17	4.63	ACSbfi	5.78	3.93
ACScin	4.57	5.24	ACScin	4.97	3.37	ACScin	4.67	4.19	ACScin	4.88	4.25
ACScext	5.58	4.11	ACScext	5.48	3.74	ACScext	5.05	4.30	ACScext	5.74	3.67
ACStemp	1.68	4.69	ACStemp	4.53	4.19	ACStemp	2.19	4.37	ACStemp	3.94	4.62
ACScomp	27.53	25.16	ACScomp	34.07	20.11	ACScomp	28.07	25.06	ACScomp	32.90	21.19
ACT	22.38	3.39	ACT	21.10	3.63	ACT	22.47	3.94	ACT	21.25	3.36
HPO	1.53	.97	HPO	1.24	.88	HPO	1.43	.95	HPO	1.32	.91
LPA	.58	.89	LPA	.38	.68	LPA	.53	.92	LPA	.43	.71
HPC	2.12	1.30	HPC	2.39	1.22	HPC	2.21	1.17	HPC	2.31	1.30

Note. No significant interactions observed. P = Postconventional schema, MN = Maintaining Norms schema, PI = Personal Interest schema, ACSmot = ACS Motivation, ACSce = ACS Preference for Complex Explanations subscale, ACSmeta = ACS metacognition, ACSbfi = ACS behavior as a function of interaction, ACScin = ACS complex internal explanations, ACScext = ACS complex external explanations, ACStemp = ACS temporal dimension, ACScomp = ACS Composite Score, ACT = American College Test, HPO = High Pole Openness to Experience, LPA = Low Pole Agreeableness, HPC = High Pole Conscientiousness

males and females. No significant interactions were observed.

Stepwise hierarchical regression analyses were conducted to determine how the variables impacted moral judgment development. Stepwise regression was used in this analysis for two primary reasons. The principal reason was that the fundamental purpose of this study is to consider differences between samples from two distinct populations. It is possible that moral judgment developmental advances of gifted youth result from different factors than those responsible for the moral judgment development of college students, and that certain factors may more strongly contribute to gifted moral judgment development than to college student moral judgment development. Certainly, the previous analyses addressing the mean differences between the samples suggest that these scenarios are possible. Because of these possibilities, the stepwise method of selecting predictor variables is warranted. The stepwise method begins selection by denoting the independent variable that relates most strongly with the dependent variable in the first step, then controls for this relationship in the second step in locating the independent variable with the highest partial correlation with the dependent variable. The method then continues this process of controlling for independent variables entered in previous steps until the inclusion of independent variables no longer results in a significant increase in R^2. Thus, the stepwise method of selection is aptly suited for this analysis because its individual consideration of each independent variable illustrates the variables that are distinctly related to each sample and denotes how certain variables provide greater and lesser contributions in each sample. A second reason for using the stepwise method is because little is known about why the moral judgment of the gifted is often more advanced than moral judgements in other populations. Consideration of that which predicts gifted moral judgment development is largely an exploratory process at this point.

In the regression analyses, P scores served as the dependent variable and six different predictors were entered including ACT, LPA, HPC, HPO, and ACS scores. Distinctions were seen in ACS scores between the two samples. Because ACSce scores were the only ACS index favoring the gifted and because college students had significantly higher scores on the majority of the other ACS indices, two different ACS indices were entered: the ACSce and ACS composite scores after responses to questions that comprise the ACSce scale were removed (ACScomp-

Table 2

Correlation Matrices

Gifted Youth	P	ACSce	ACScomp-ce	ACT	HPO	LPA	HPC
P							
ACSce	.240*						
ACScomp-ce	.220*	.673**					
ACT	.231*	.132	.030				
HPO	.081	.072	.136	-.145			
LPA	.045	-.100	-.151	.083	-.151		
HPC	-.109	.193	.109	.187	-.062	-.313**	

College Students	P	ACSce	ACScomp-ce	ACT	HPO	LPA	HPC
P	1.00						
ACSce	.283**	1.00					
ACScomp-ce	.244**	.539**	1.00				
ACT	.335**	.180*	.050	1.00			
HPO	.180*	.230**	.062	.205*	1.00		
LPA	.037	.047	-.027	-.039	-.162	1.00	
HPC	-.056	-.022	-.081	.159	-.161	-.336**	1.00

Note. P = Postconventional schema, ACSmot = ACS Motivation, ACSce = ACS Preference for Complex Explanations subscale, ACScomp-ce = ACS composite minus complex explanations, ACT = American College Test, HPO = High Pole Openness to Experience, LPA = Low Pole Agreeableness, HPC = High Pole Conscientiousness.
* $p < .05$, ** $p < .005$

ce). As seen in Tables 2 and 3, differing relationships were evident for both samples. For the gifted sample, three steps were suggested (see Table 3). In the first step, the ACSce subscale accounted for the most variance in P scores. ACT composite scores accounted for a significant amount of the variance of P scores in the second step. A third step was specified that noted that HPC scores negatively contributed to a significant portion of P score variance. Two steps were suggested for the sample of college students (see Table 3). ACT composite scores were noted in the first step as the primary variable contributing to P score variance while ACScomp-ce scores were shown to significantly account for P score variance in the second step.

Table 3

Summary of Stepwise Hierarchical Regression Analyses for Variables Predicting P Scores

Gifted Youth	Variable	B	SE B	β
	Step 1 (R^2 = .057)			
	ACSce	.59	.25	.24
	Step 2 (R^2 = .098)			
	ACSce	.52	.24	.21
	ACT	.68	.33	.20
	Step 3 (R^2 = .136)			
	ACSce	.61	.24	.25
	ACT	.79	.33	.24
	HPC	-1.75	.87	-.20
College Students	Variable	B	SE B	β
	Step 1 (R^2 = .112)			
	ACT	.99	.24	.34
	Step 2 (R^2 = .164)			
	ACT	.96	.23	.32
	ACScomp-ce	.14	.05	.23

Discussion

The purpose of this study was to explore how moral judgment development and related constructs may differ between gifted youth and college students and to determine whether there were differences that predicted their moral judgment development. Significant moral judgment advances were seen for the gifted youth. Similarly, gifted youth were more advanced on indices that are related to moral judgment including the ACSce ($p < .10$), HPO ($p < .05$), and ACT ($p < .05$). Significant differences ($p < .05$) favoring the college students were seen for ACSmot, ACSmeta, ACSbfi, and ACStemp scores. Differences

were also seen in how the considered areas impact moral judgment development. For the gifted youth, a stepwise regression model illustrated that ACSce scores were most predictive of DIT scores, followed by ACT scores in the second step. In a third step, a negative relationship was illustrated between HPC and DIT scores. For the college students, a stepwise regression model noted two predictors of moral judgment: ACT scores, followed by ACScomp-ce scores in a second step.

Taken together, these findings provide some important preliminary considerations regarding advanced moral judgment development—particularly that of the gifted. To be sure, the advances seen on the part of the gifted sample relative to students who average to be 6 years older are striking. These findings echo other studies that illustrated that the moral judgment development of the gifted is more advanced than their peers (Howard-Hamilton, 1994; Narvaez, 1993; Tirri & Pehkonen, 2002). Additionally, this study is important in that it shows that gifted moral judgment development can be more advanced than those who are not only more advanced in age but also in education. It may be tempting, then, to make the case that the reason for such differences is solely the product of intellectual ability as some have claimed (Sanders et al., 1995). Such a claim might be especially tempting given the significant differences between samples for ACT scores. It is true that moral judgment development would be virtually impossible without advances in cognitive and intellectual structures (Rest, 1979; Walker, 1980). At the same time, it is important to remember that cognitive and intellectual development have been recognized as necessary but not sufficient conditions for the growth of moral judgment (Rest, 1979; Rest et al., 1986; Thoma et al., 1999, Walker, 1980). Though the gifted regularly evince higher levels of a variety of forms of sociocognitive development at an earlier time in life, reducing moral judgment development to intellectual ability makes too great a presumption about the role of intellect as the regression analyses support.

In the regression analyses, ACT scores were most predictive of the moral judgment development of college students, accounting for 11% of DIT score variance. Attributional Complexity Scale scores (minus complex explanations questions) followed this contribution, accounting for just over 5% of DIT score variance. Given the significant ACT score differences favoring the gifted, one might expect ACT scores to account for an even higher amount of DIT score variance in the gifted sample and for the same trends to follow. Furthermore, if postconventional reasoning is the product of advanced intellectual ability as some have asserted (Sanders et al., 1995), a stronger contribution in the gifted youth sample would make even more sense given their significant P score differences. However, ACT scores accounted for just 4% of DIT score variance in the gifted sample and were noted as the second most influential predictor of gifted DIT scores behind Attributional Complexity Scale preference for complex explanation subscale scores. Though these findings support that intellectual ability predicts moral judgment development, the steps of the regression analyses suggest advanced ability is neither the primary nor sole reason for moral judgment growth.

Though ACT and Attributional Complexity Scale scores account for a significant amount of variance in both regression analyses, how these indices do so are different. In noting the first step suggested for the gifted sample, attributional complexity (the desire to process complex personal and social behavioral information in depth) is a factor that is important in predicting the moral judgment development of the gifted youth, while the amount of shared variance along with the second step of the regression model suggests that this ability may not be enough to cause significant advances in moral judgment growth. Also important for gifted moral judgment advancement is advanced intellectual ability—as inferred by ACT scores and noted in the significant ACT score differences favoring the gifted group. Their advanced intellectual ability allows the gifted to acquire, organize, and adapt a wealth of knowledge at an early age. However, this knowledge and the abilities that bring about such information may be of little impact where moral judgment is concerned without first the ability or desire to reflect upon knowledge and information in depth—particularly knowledge that pertains to the behavior of self and others—as the contribution of their Attributional Complexity Scale preference for complex explanation (ACSce) subscale scores suggests. In joint consideration, then, it is not advanced intellectual ability that is primarily responsible for the advances seen in the moral judgment development of the gifted. Also necessary are other forces or preferences that help to support the abilities that advanced intellect precipitates, as suggested in the various steps. This likelihood has seen support in prior discussions about the growth of moral judgment. As Rest et al. (1986) discussed, those who show the most advancement in moral judgment development are those who are most prepared to do so. According to Rest et al. (1986), this preparation is a product of specific educational and academic orientations and abilities. Thus, a plausible reason gifted samples such as the one of this study score more highly in terms of moral judgment development may be because they are most prepared to do so due to the kinds of academic, educational, and personal orientations and abilities they possess. As such, it is

conceivable that the preference for complex explanation subscale of the Attributional Complexity Scale and ACT scores may reflect aspects pertaining to such orientations.

In noting the steps of the college student regression analyses, intellectual ability and attributional complexity can follow different patterns in contributing to moral judgment developmental variance. Interestingly, ACT scores were most important in predicting the moral judgment scores for those of this group. As analyses of mean differences between samples acknowledged, this contribution should not be interpreted as advanced intellectual ability. Instead, it may be that this contribution reflects a tendency in making moral judgments to reference any relevant knowledge that has been acquired, organized, and adapted. Indeed, the large amount of contributed variance among the college sample relative to the gifted sample from ACT scores to DIT scores supports this contention. As their significantly lower DIT scores suggest, however, this gained knowledge is not enough to result in moral judgment development that parallels the gifted sample. Furthermore, the significant contributions from the Attributional Complexity Scale subscale scores in the second step is not enough to serve the contribution of ACT scores so that higher DIT scores occur. Such a possibility could have been presumed given the contributions noted for aspects of attributional complexity in the gifted sample and the fact that most Attributional Complexity Scale subscale scores significantly favored the college students. At the same time, however, Table 1 indicates that the attributional complexity of those in each sample was the result of different factors. Specifically, the attributional complexity of college students was driven more by other aspects contributing to attributional complexity. The fact that there were differences on the ACSce subscale scores in favor of the gifted sample, as well as significant differences favoring the college student sample for other ACS subscale scores is supportive that it is specific aspects of attributional complexity that are most related to advanced moral judgment development. Thus, the lower levels of moral judgment development noted among the college students may not simply be the result of lesser intellectual ability but may also be related to that which drives their attributional complexity. To be sure, there is support that as college students matriculate, their moral judgment development will rival that seen among gifted youth (Pascarella & Terenzini, 1991; Rest et al., 1986). It makes sense to expect that advances in their moral judgment development may be seen as these students continue to gain more knowledge and understanding—particularly pertaining to moral situations—as they matriculate. At the same time, though, growth may be minimal unless attributional complexity in terms of preference for complex explanations is also fostered.

Though both models illustrate the role of ACT and ACS scores, it is important to recognize that the amount of variance they shared with DIT P scores was not the same. ACT and ACS scores had an R^2 of .16 in the college sample and an R^2 of .10 in the gifted sample. Even with the third step that suggests the contribution of the conscientiousness high pole factor, the R^2 of .14 for the gifted sample was still less than the variance accounted for in the college sample. Thus, it is apparent that there was more unaccounted variance in the gifted model than there was in the college model—even though the gifted model had more suggested contributors and was significantly more advanced in terms of moral judgment development.

It is apparent that more work is needed in better ascertaining the contributors to the moral judgment development of the gifted—especially because such advances are occurring earlier than the norm. The third step of the gifted regression model may offer some insight in that there may be aspects of personality or self-understanding that may foster moral judgment growth. As noted, conscientiousness high pole descriptors negatively related to DIT P scores of the gifted group. It should not be presumed that the conscientiousness personality factor would not positively correlate with moral judgment development. Asking participants to identify 10 adjectives that describe themselves should not be considered a thorough or even partial assessment of personality. Those participants that rejected conscientiousness high pole adjectives may be reflecting a desire to question conformity, because the included terms may have a flavor that suggests strict legal adherence and propriety. Certainly, this would be a plausible explanation, as the 2002 annual meeting for the Association for Moral Education was themed around the role of conflict and contrarianism. Also, the conscientiousness high pole terms that were used in this study may be terms that the gifted sample was loath to use in describing themselves. Given their intellectual abilities, which they may see as a deterrent in their ability to form relationships with nongifted peers, they may have rejected, denied, or even rebelled against any attribute of self that might harm them socially. Thus, future research should address such possibilities and better delve into the role of personality and self-understanding among the gifted.

Regardless of what these indices represent, there is no doubt that more research of gifted populations and the nature of their moral judgment development is necessary. The findings from this study are but one start. To be sure, the continuation of the explication of the potential factors that operate in conjunction with intellectual ability

seems a promising line of research of both the gifted and moral judgment development in general. As identified in the regression models, intellectual ability is important for those in both populations addressed in this study. How it is contributing is different, however. Attempts to better explain what serves the contributions of intellect are indeed warranted. Furthermore, because gifted and nongifted samples appear to be different in terms of moral judgment development, it seems that answers gained relative to moral judgment development and formation of groups that vary from each other in terms of factors such as ability, disposition, and background would be beneficial not only in simply understanding differences but also in promoting optimal advancement and growth for all. At the very least, this study represents a small step toward such a goal.

References

Colby, A., & Kohlberg, L. (1987). *The measurement of moral judgment.* Cambridge, MA: Cambridge University Press.

Costa, P. T., Jr., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual. Odessa, FL: Psychological Assessment Resources.

Derryberry, W. P., & Thoma, S. J. (2000). The friendship effect: It's role in the development of moral thinking in students. *About Campus, 5*(2), 13–18.

Derryberry, W. P., Thoma, S. J., Narvaez, D., & Rest, J. (2000, August). *Verbal ability and the Defining Issues Test: Some recent findings.* Poster session presented at the annual meeting of the American Psychological Association, Washington, DC.

Dollinger, S. J., & LaMartina, A. K. (1998). A note on moral reasoning and the five-factor model. *Journal of Social Behavior and Personality, 13*, 349–358.

Fletcher, G. J. O., Danilovics, P., Fernandez, G., Peterson, D., & Reeder, G. D. (1986). Attributional complexity: An individual differences measure. *Journal of Personality and Social Psychology, 51*, 875–884.

Fletcher, G. J. O., Roeder, G. D., & Bull, V. (1990). Bias and accuracy in attitude attribution: The role of attributional complexity. *Journal of Experimental Social Psychology, 16,* 275–288.

Gilligan, C. (1977). In a different voice: Women's conceptions of the self and of morality. *Harvard Educational Review, 47*, 481–517.

Howard-Hamilton, M. (1994). An assessment of moral development in gifted adolescents. *Roeper Review, 17,* 57–59.

Kohlberg, L. (1987). Theoretical introduction to the measurement of moral judgment. In A. Colby & L. Kohlberg (Eds.), *The measurement of moral judgment* (Vol. 1, pp. 1–61). Cambridge, MA: Harvard University Press.

McCrae, R. R. (1994). Openness to experience: Expanding the boundaries of Factor V. *European Journal of Personality, 8,* 251–272.

McCrae, R. R., & Costa, P. T., Jr. (1999). A Five-factor theory of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (2nd ed., pp. 139–153). New York: Guilford Press.

Narvaez, D. (1993). High achieving students and moral judgment. *Journal for the Study of the Gifted, 16,* 268–279.

Norman, A. (1997). *Moral reasoning, attributional complexity, and social status of gifted children.* Unpublished manuscript.

Pascarella, E. T., & Terenzini, P. (1991). *How college affects students: Findings and insights from twenty years of research.* San Francisco: Jossey-Bass.

Peevers, B. H., & Secord, B. F. (1973). Developmental changes in attribution of descriptive concepts to persons. *Journal of Personality and Social Psychology, 27,* 120–128.

Rest, J. (1979). *Development in judging moral issues.* Minneapolis: University of Minnesota.

Rest, J., Deemer, D., Barnett, R., Spickelmier, J., & Volker, J. (1986). Life experiences and developmental pathways. In J. Rest (Ed.), *Moral development: Advances in research and theory* (pp. 28–58). New York: Praeger.

Rest, J., Narvaez, D., Bebeau, M. J., & Thoma, S. J. (1999). *Postconventional moral thinking: A neo-Kohlbergian approach.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Sanders, C. E., Lubinski, D., & Benbow, C. P. (1995). Does the Defining Issues Test measure psychological phenomena distinct from verbal ability?: An examination of Lykken's query. *Journal of Personality and Social Psychology, 69,* 498–504.

Thoma, S. J. (1986). Estimating gender differences in the comprehension and reference of moral issues. *Developmental Review, 6,* 165–180.

Thoma, S. J, Derryberry, W. P., & Narvaez, D. (2000, April). *Does the Defining Issues Test measure psychological phenomena distinct from verbal ability? Some relevant data.* Paper presented at the annual meeting of

the American Educational Research Association, New Orleans, LA.

Thoma, S. J., Narvaez, D., Rest, J., & Derryberry, P. (1999). Does moral judgment development reduce to political attitudes or verbal ability? *Educational Psychology Review, 11,* 325–342.

Tirri, K., & Pehkonen, L. (2002). The moral reasoning and scientific argumentation of gifted adolescents. *Journal of Secondary Gifted Education, 13,* 120–129.

Turiel, E. (2003). Resistance and subversion in everyday life. *Journal of Moral Education, 32,* 115–130.

Walker, L. J. (1980). Cognitive and perspective-taking prerequisites for moral development. *Child Development, 51,* 131–139.

Walker, L. (1995). Sexism in Kohlberg's moral psychology? In W. M. Kurtines & J. L. Gewirtz (Eds.), *Moral development: An introduction* (pp. 83–107). Needham Heights, MA: Allyn and Bacon.

Walker, L. J. (1999). The perceived personality of moral exemplars. *Journal of Moral Education, 28,* 145–163.

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