High Achieving Students and Moral Judgment

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Research exploring the relationship of intellectual aptitude to moral judgment has indicated that, as a group, those with a high intellectual aptitude score significantly above their age peers on measures of moral judgment. These data support the contention that intelligence is a "general factor" that cuts across domains. Some theorists have advocated an alternative view, that intelligence is domain specific. In looking at high achievers, the current study offers support for both views by reporting data that indicate a dependence of moral judgment precocity upon high intellectual achievement. As a group, the high achieving students scored higher on the Defining Issues Test's Principled score. However, there was a wide variation in scores among the high achievers, indicating that apparent intellectual aptitude was not enough for high scores in moral judgment. This variance, along with the fact that no low achiever received an unusually high score, supports the "independent domains" hypothesis of intelligence.

When one hears about an intellectually high achieving child, what image comes to mind, that of a socially well-rounded individual or that of a child painfully awkward in the presence of others? Research in the social development of gifted children presents a mixed picture. The media has often portrayed intellectual achievers as social 'nerds'

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The author would like to thank Paul van den Broek, Jim Rest, and the teachers and directors of The Blake School and Dakota Hills Middle School for their help in this project. Parts of this research were reported at the 9th World Conference on Talented and Gifted Children at The Hague, Netherlands, in August, 1991 and at the annual meeting for the Association for Moral Education (AME) in Athens, Georgia, in November, 1991. The research was supported by the Center for the Study of Ethical Development, University of Minnesota, and by the Center for Research in Learning, Perception and Cognition, University of Minnesota.

Journal for the Education of the Gifted. Vol. 16, No. 3, 1993, pp. 268–279.

who spend the majority of their time alone with books or a computer. Although research by Terman (1925) indicated that gifted students are usually popular and socially accepted, recent research indicates that, in fact, gifted children often do have personality characteristics that are different from those of popular peers (Monks & Ferguson, 1983), characteristics such as independence and non-conformity.

A review by Barnette (1989) signals that gifted children have a greater proportion of adjustment problems than their age peers. On the other hand, there is evidence that intellectually gifted youth are not social isolates; they *do* have friends, often *older* friends (Freeman, 1979). There are numerous accounts of children who are conscious, far beyond their years, of social and global issues that affect us all. Such anecdotes have led some to ask if gifted youngsters might actually exceed their age peers in social maturity and in their ability to deal with moral issues?

Moral Judgment

Moral judgment is one of many aspects of social maturity. Cognitive developmental research in morality has focused primarily on this aspect of moral development. Building on the work of Jean Piaget (1932/1965), Lawrence Kohlberg (1976) constructed a developmental stage theory of moral judgment whose stages ascend from an egocentric orientation to one based on principles for constructing ideal societies. The stage theory will not be reviewed here since it has been discussed extensively elsewhere. Suffice it to say that the stages reflect how people develop in their thinking about what is right and wrong and about how to organize cooperation based on justice.

The Defining Issues Test (DIT) is a widely used and well-documented measure of moral judgment, configured on Kohlberg's theory. The DIT has been used in over 1000 studies around the world (Rest, 1986). The index most frequently used is the "P-score" which reflects the relative importance a person gives to principled reasoning (Stages 5 and 6 in Kohlberg's scheme). Principled reasoning is used by moral philosophers in making moral decisions. Significant age and education trends have been reported in both longitudinal and cross-sectional studies. Education has turned out to be the more significant variable (Rest, 1986). Table 1 contains means from norming studies based on over 1000 subjects. It provides the average scores to be expected at particular age and education levels.

Table 1

Defining Issues Test Principled Score Averages by Age Group

Group	Mean	SD
Junior high	21.9	8.5
Senior high	31.8	13.5
College students	42.3	13.2
Graduate students	53.3	10.9
Adults in general	40.0	16.7

Source: *GUIDE for the DIT*, version 2.1, 1990
Total N > 1000 students and adults

Moral Judgment and Gifted Students

Several studies of moral judgment in gifted adolescents have been performed. These studies, which primarily investigated scores on the Defining Issues Test, will be briefly summarized here. The researchers have been interested in measuring the moral judgment scores of groups of previously identified gifted adolescents and, sometimes, in comparing DIT scores with scores from other domains.

In published studies concerning giftedness and moral judgment using the DIT, the determining characteristics of giftedness are often not explicitly stated. However, in all of these studies, the identified gifted students as a group score higher than their peers. In a study by Tan-Willman and Gutteridge (1981), creativity and moral judgment were measured in two groups of academically gifted adolescents enrolled in an accelerated program. Although the third-year males scored at the level of their age peers (M = 35.55, SD = 13.05), the female third-year students scored at a college level on the DIT (M = 43.20, SD = 11.96). The fourth-year students, both male and female, scored significantly above their age peers on the DIT P scale, 43.06 (SD = 13.14) and 45.06 (SD = 9.76), respectively. Kolloff & Stevenson (1990) administered the DIT to gifted high school students enrolled in the Indiana Governor's Scholars Academy. The students scored at a college level at two different testings, 41.18 and 43.38. (No standard deviations were provided.)

Keen (1990) gave the DIT as a pre-test and as a post-test to a group of students attending the Governor's School on Public Issues. Scores were above age peers on both occasions, 40.40–45.86. (No standard deviation was provided) Hamilton (1991) gave the DIT as a pre-test to a group of gifted high school students and found the

mean to be at an adult level (M = 40.0). (No standard deviation was provided.) In an investigation by Janos, Robinson and Sather (1983), three groups of gifted adolescents were compared on DIT P-scores. One group was formed of accelerated university students, another of college-age National Merit Finalists and another of gifted high school students. All three groups scored significantly higher than typical college students, P-scores were in the 40's. (No specific mean nor standard deviation was provided.) According to these studies, intellectually gifted adolescents score significantly higher on moral judgment than their peers. The foregoing studies indicate that the average score for the gifted high school student is at a college undergraduate level. How is this explained? One possible interpretation for this recurrent outcome is that intellectual giftedness is a general factor which influences other arenas. This view of intelligence may be called the "general factor" viewpoint, or 'lumper' perspective (Weinberg, 1989), advocated by intelligence theorists such as Spearman, Guilford, Thurstone and Sternberg.

A second explanation might be that there are highly specific talents or particular skills that are largely independent and fairly autonomous (Howe, 1991). That is, intelligence is not a general factor but is domain-specific; one may be highly intelligent in any one or more separate arenas. Intelligence theorists of this ilk, the 'splitters' (Weinberg, 1989), include Binet, Simon, Feldman, and Gardner. Specifically, Gardner (1983) theorizes that logico-mathematical intelligence, which is necessary for doing well in school, is not the same as interpersonal intelligence, which would be important in dealing with the moral aspects of life. Since each of his 'multiple intelligences' has its own developmental course, Gardner might argue that one can be gifted in social relations without being gifted in intellect, and vice versa. This perspective may be called the "independent domains" viewpoint of intelligence. Accordingly, in approaching the studies mentioned earlier, one might determine whether there was a subset of individuals who were raising the mean of the entire 'gifted' group; this condition would signal support for an independent domains hypothesis. The present study gathered data in an attempt to determine whether scholastic high achievers consistently outscore scholastic low achievers in moral judgment, supporting a general factor hypothesis, or whether there is evidence for variability among the high moral judgment scorers and resulting support for an independent domains hypothesis.

Moral Judgment and High Achievers

The current study focuses on students who obtained high ranl on achievement subtests. In investigating the relationship of hig achievement to moral judgment development, the present study co related the DIT Principled, or "P," score, with scholastic achiev ment rank as measured on standardized tests, involving a two-scho mixed-IQ group of middle school students. A "general factor" h pothesis might suggest a correlation between scholastic scores ar P scores. An 'independent domains' hypothesis might predict no lir ear relationship but anticipate instead a crossover effect where son students with low scholastic scores achieve high scores on mor judgment and some students with high scholastic scores earn lo scores on moral judgment.

Method

Subjects

Eight grade students (ages 14–15) from two different school popu lations were administered the DIT. One group was from a privat preparatory middle school (N = 80) and one from a suburban middl school (N = 81), both in Minnesota. Due to inconsistencies in ar swers on the DIT or lack of scholastic test information, the final tall of usable scores was reduced to 69 and 53 respectively.

Materials

The subjects were administered the Defining Issues Test (DIT), computer-scored, objective measure of moral judgment. The DI consists of six moral dilemmas, each presented in a paragraph. Afte reading about each situation, the subject is asked to rate the impor tance of and rank a list of concerns one might have in the particula situation. The P-score (based on moral judgment Stages 5 and 6) i the most valid and widely used index (Rest, 1990). It is reported a the percentage of Principled reasoning preferred, the reasoning base on principles used by moral philosophers in judging fairness in socia situations. Test-retest reliability ranges between .70 and .80 for th P-score. Internal consistency as measured by Cronbach's Alpha ha the same range in various studies (Rest, 1990). The DIT typicall takes from 35–50 minutes to complete.

Scholastic scores were drawn from the Educational Records Bureau

(ERB) Comprehensive Testing Program (CTPII) for the private school students and from the Metropolitan Achievement Tests Survey (MAT6) for the public school students. These were obtained, with permission, for each subject (eighth-grade scores for the private school students and seventh-grade scores for the suburban school students.) Scores are expressed as percentile ranks in reference to national norms. The subtest scores used were vocabulary and reading comprehension, and their combination. These were chosen because they were subtests common to both scholastic achievement tests and because reading is one of the primary tasks in completing the DIT. Moreover, Gage and Berliner (1984) suggest that intellectual giftedness is signaled by an extensive vocabulary and a precocious reading ability. Correlations were obtained between ranks and the DIT P, or Principled reasoning, score.

Procedure

Subjects were tested in large groups (20–85). They were allowed unlimited time to complete the DIT, which normally takes from 35–50 minutes to complete. Most finished within that time.

Results and Discussion

The subjects performed above average on both kinds of measures. Correlations between scholastic ranks and DIT P-scores are presented in Table 2. The correlation between vocabulary rank and P-score for both groups combined was .35. Separately, the correlation was .28 for the suburban students, and .35 for the private school. Correlations between P and reading comprehension ranks were similar. In the suburban group, the correlation between the combination of vocabulary and reading comprehension ranks and P-score was .32, and in the private school, .40. When the schools are combined into one group, the correlation for vocabulary and reading comprehension was .38. It must be noted that these correlations are depressed due to a truncated or restricted range in the scholastic scores. As is evident from the overall means in the 80–83 percentile range (Table 3), this appears to be a highly selected sample. However, there exists no formula for a correction in a situation such as this where the combined scores (ranks) are subsets of two different measures.

Scores did not significantly differ between the sexes. Girls (N = 72) had an average score of 28.18 (SD = 14.08) while the boys (N = 50)

Table 2

Correlations between Scholastic Scores and DIT Principled Score

	Vocabulary Rank	Reading Compre-hension Rank	Vocabulary and Readin Compre-hension
Suburban 8th-graders (N = 81)	.28	.31	.32
Preparatory 8th-graders (N = 80)	.35	.36	.40
Both schools combined (N = 161)	.35	.36	.38

had an average score of 25.57 (SD = 10.84). These are both abov average mean scores for their age group.

Table 3 presents both school samples combined. Subjects fron both schools are grouped according to percentile rank on each an both achievement subtests. Since there is no consensus among thos who work with high achieving students on score cutoffs for assessin intellectual giftedness (Reis, 1989), two typical cutoffs were selected the upper 1% and the upper 2% of scores. These are listed for eac subtest and for both subtests in combination. The first column in th table lists the average P-scores for students at that percentile rank o higher on the vocabulary test. The second column refers to the ran on the reading comprehension test while the third column refers to a ranking based on the addition of the ranks for vocabulary and readin comprehension combined.

The overall mean for each subtest, 83.50 for vocabulary and 81.0 for reading comprehension, confirms the fact that these are above average students. It is clear that the higher academic achievers (a measured by these scholastic tests) have higher P-scores. In effect these group means support the implication of the earlier finding cited from studies with gifted students. Interestingly, percentil groups above the 80th percentile tend to obtain above average mean scores. This is another indicator that this is a highly selected grou of students. Only below the 80th percentile do we see scores near th *normative age level* for junior high students (Table 1), around 21%.

Tables 2 and 3 would seem to favor the "general factor" hypothesis of intelligence, but closer inspection of the data suggests that

Table 3

Mean Principled Score and Standard Deviation by Percentile Rank (Both Schools)

Rank		Vocabulary	Reading Comprehension	Vocabulary and Reading Comprehension
99th	X	40.65	38.54	51.52
	(SD)	(14.23)	(18.64)	(13.37)
		N=14	N=10	N=6
98th	X	37.27	45.12	37.91
	(SD)	(11.42)	(10.71)	(13.10)
		N=6	N=6	N=10
90th–97th	X	29.08	29.38	30.20
	(SD)	(12.40)	(12.09)	(12.73)
		N=43	N=37	N=41
80th–89th	X	22.75	25.80	24.89
	(SD)	(11.43)	(10.60)	(10.11)
		N=26	N=29	N=30
70th–79th	X	21.94	20.96	18.74
	(SD)	(7.04)	(10.18)	(7.62)
		N=12	N=15	N=12
69th+ below	X	19.52	20.09	20.00
	(SD)	(7.48)	(7.07)	(6.96)
		N=21	N=25	N=23

the relation between apparent academic talent and moral judgment scores is more complex. The scores are graphed on a representative scatterplot, Figure 1. The X axis represents the P-score and the Y axis represents the scholastic score—the resulting rank when vocabulary and reading comprehension ranks are combined. If one looks at the top of the figure where achievement ranks are spread over possible P-scores, it is clear that *only* those with high academic ranks are obtaining high P-scores. But the variance in scores seen in the upper lefthand quadrant indicates that not all those with a high scholastic rank are obtaining high P-scores. This variability in moral judgment scores among the high achievers provides evidence to counter the claim for a "general factor" theory of intelligence. On the other hand, there is an entire quadrant, the lower righthand corner, that is blank.

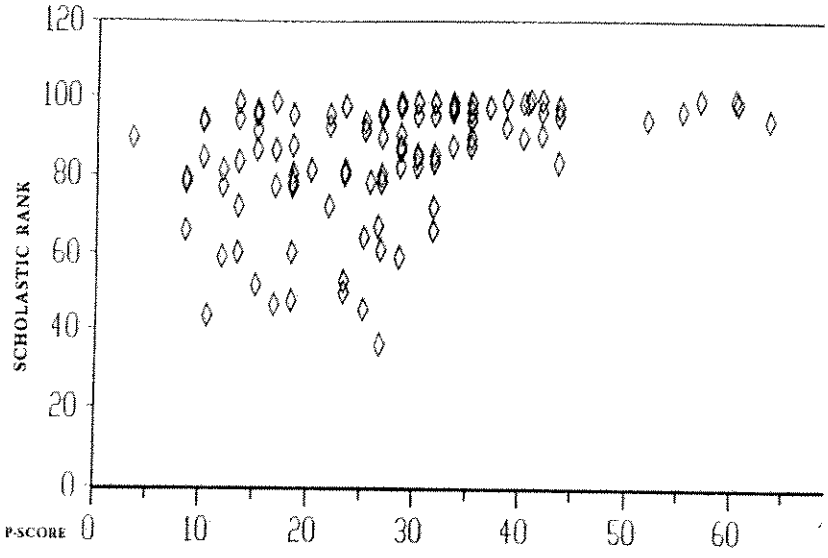

Figure 1

Scatterplot of P-scores by Combined Scholastic Ranks

Virtually no one with a low scholastic rank obtained a high P-scor This, in turn, counters the claim for an "independent domains theory of intelligence. These data suggest that demonstrated hig academic competence is *necessary* for an unusually high P-score. Bu the spread of P-scores among the high scholastic scorers indicate that the academic ability demonstrated in these achievement ranks i not sufficient for principled thinking. That is, high academic abilit is required for scores high in moral judgment but does not necessaril predict them. It seems that high achievers can have average to hig moral judgment scores whereas low achievers cannot be high scorer in moral judgment.

An alternate interpretation of the relationship between academi achievement and moral judgment then emerges. This interpretation held by cognitive developmental psychologists, asserts that mora development, specifically moral judgment, is constrained by cogni tive development. Demonstration of precocity in the social domain is dependent upon a demonstration of precocity in intellect (Piaget 1932/1965; Kohlberg, 1976; Walker, 1991). The latter is fundamen tal to growth in the former. According to this view, one cannot b precocious in moral judgment without a parallel aptitude in intel lect. Advanced cognitive development, as indicated by high score on achievement tests, appears to be necessary for advanced mora

judgment but is, in some sense, independent of it since there are many intellectual achievers who do not demonstrate moral judgment precocity. The "independent domains" hypothesis is thereby given some support. As a result, we have a more complex picture than anticipated.

Conclusion

These data suggest that above-average cognitive ability, as measured here by achievement subtests, is necessary for higher scores in moral judgment. High achievers obtain high scores in moral judgment while average to below-average achievers do not. Higher cognitive achievement ability appears to provide a foundation for higher scores in moral judgment, but it is not all that is needed, for not every high achiever obtained a high score on moral judgment. In fact, quite a number have norm-average scores. There appears to be something in addition about moral judgment that apparent cognitive ability does not embrace.

In summary, high achieving students can have either similar conceptions about moral judgments as their peers, or they can make judgments at levels beyond their age peers. If we understand moral judgment to be a measure of social cognition, these data suggest a dismissal of the notion that intellectual high achievers are inept about moral issues or less developed on moral judgments than their age peers. Some *are* precocious in their moral understanding but others, who score at a normal level, are not. Yet these students are not retarded in moral understanding either. These data suggest that intellectual accomplishment is necessary but not sufficient for a high score in moral judgment.

Why are there differences in moral judgment scores among the high achievers? One possibility is that the differences are due to life experiences. Hogan, Viernstein, McGinn, Bohannon, and Daurio (1977) suggest that, at least in gifted populations, when one moves beyond a certain level of academic intelligence, the critical determinants of practical sociopolitical intelligence may be determined by personality and biographical factors. Longitudinal studies with the Defining Issues Test demonstrate that moral judgment develops in concert with a more general social development. Various experiences in the social world, rather than specifically moral experiences, appear to stimulate growth in moral judgment (Rest, 1986).

It is helpful to realize that moral behavior entails much more than

moral judgment. According to Rest's Four Component Model (Re 1983), a specific moral behavior encompasses at least three ot psychological processes: a) moral sensitivity, the interpretation events, possible actions and their effect on interested parties, b) mc motivation, the prioritizing of the moral action over all other p sonal values of the moment, and c) ego strength, the perseverence a skills to implement the action judged to be most moral. It remains be researched whether there is a difference among the intellectua accomplished and the normal population, on moral behavior as w

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