

Emotional Development, Intellectual Ability, and Gender

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Dabrowski's Theory of Emotional Development provides the framework for investigating the dynamic interplay of emotion and cognition in the personality development of a group of intellectually gifted adults and a group of graduate students. When the gifted adults were compared to the graduate students on developmental potential, as measured by their overexcitability scores, the gifted subjects showed substantially greater potential for emotional development; but when actual level of development was compared, no significant differences between the two groups were found. Gender differences were discovered in areas related to traditional gender-role socialization—women scored higher on emotional potential and level of emotional development while men were higher on intellectual potential. In support of Dabrowski's theoretical position, emotional, intellectual, and imaginal intensity significantly predicted level of development.

Theories of development are usually based on the assumption that a given set of universal principles applies equally to both genders and across the intellectual spectrum. In the last decade, researchers have argued that developmental theories based on studies conducted with male samples distort our understanding of female development

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(e.g., Gilligan, 1982). However, few have questioned whether principles derived from the study of average subjects are pertinent to the gifted population. We argue that Dabrowski's Theory of Emotional Development (1964, 1967, 1972) provides a promising theoretical context for studying the dynamic interplay between intellectual and emotional development in relation to gender. In contrast to general theories of human development, Dabrowski's theory is particularly applicable to the study of the gifted since it was based on biographical, clinical, and empirical research with gifted, creative, and eminent individuals of all ages.

Dabrowski's Theory

Dabrowski posited five levels of personality development, differentiated in terms of degrees of egocentrism and altruism. At Level I, the personality structure is quite rigid and self-centered with little room for the consideration of others. At Level II, individuals are externally directed and exhibit contradictory beliefs and behaviors. Level III is the beginning of "multilevel development" which is imbued with higher-order values. Awareness of a hierarchy of values precedes the ability to apply those values in a consistent manner, and the inconsistency between the individual's ideals and behavior becomes a source of inner conflict. At Levels IV and V, these values become more and more entrenched in the personality and guide actions. Individuals at Level IV share many similarities with Maslow's (1970) self-actualizers (Piechowski, 1975). They lead lives of integrity and have a strong inner drive for self-perfection. Few moral exemplars reach Level V, the state at which the personality ideal is attained. Transcending inner conflict, Level V represents harmony, empathy, authenticity, responsibility, and service to humanity. (A more complete description of Dabrowski's levels can be found in Miller & Silverman, 1987; Nelson, 1989; Piechowski, 1991; and Silverman, 1993).

Potential for multilevel development (Levels III, IV, and V) is determined by level of intelligence, special talents and abilities, and the number and intensity of the overexcitabilities (OEs). The term "overexcitability" is a translation of the Polish "nadpobudliwosc," which means to be superstimulated (Falk & Piechowski, 1992, p. 1).

Overexcitabilities represent exceptional responsiveness to the external world and to the inner world of the individual. The difference in intensity and sensitivity is not only of a greater than

normal excitability, it is also a difference in the very quality of experience (Falk & Piechowski, 1992, p. 1).

This exceptional responsiveness can occur in five domains: emotional, intellectual, imaginal, sensual, and psychomotor. Those with emotional OE experience more intense and complex feelings toward self and others. Those with intellectual OE show increased intellectual searching and questioning. Imaginal OE is characterized by rich and creative use of imagery. Sensual OE is defined by increased sensual perception. Psychomotor OE is demonstrated by a surplus of physical energy and restlessness (Piechowski, 1979).

According to Dabrowski, the potential for multilevel development remains constant throughout the life span and is particularly affected by the strength of the emotional, intellectual, and imaginal OEs (Piechowski, 1975). In his study of gifted children in Warsaw, Dabrowski (1972) noted that "every one of the children investigated showed considerable psychomotor, sensual, affectional, imaginal, and intellectual mental overexcitability" (p. 205). Research with gifted and creative adults lends support to Dabrowski's contention that the gifted exhibit enhanced levels of overexcitability (Piechowski & Cunningham, 1985; Piechowski, Silverman, & Falk, 1985). Gifted adolescents have also been found to exhibit heightened intellectual, emotional, and imaginal OE (Gallagher, 1985; Piechowski & Colangelo, 1984; Schiever, 1985; Silverman & Ellsworth, 1980). However, the relationship between developmental potential and the actual attainment of higher levels of emotional development among the gifted has not been investigated in previous studies (Miller, Silverman, & Falk, 1992).

Gender Differences

Gilligan (1982) and others (Belenky, Clinchy, Goldberger, & Tarule, 1986; Kaplan & Surrey, 1984) suggest that stages of moral development conceived by male researchers, based on interviews with men, reflect a developmental trajectory only applicable to males and is not representative of female morality. By promoting decisions based on abstract principles and impersonal rules for equality and justice, male morality embraces achievement, autonomy, and individuation. In contrast, female morality lies in making decisions that take others into consideration. The emphasis for women appears to be on attachment and the maintenance of a network of interrelationships with choices which make the care and concern for others primary.

Whether the basis for this difference between male and female morality resides in the psychological processes of separation/attachment to the primary parent as suggested by Chodorow (1978) and Dinnerstein (1976) or in our cultural gender-role prescriptions of proper conduct for males and females (Rosenblum, 1986), the result has been that males are shown to achieve higher levels of moral development than females. (For a discussion of this issue, see Baumrind, 1986, and Walker, 1984 and 1986.) We suspected that Dabrowski's theory, with its emphasis on the role of emotions, traditionally a female realm, might eliminate the built-in disadvantage of women found in most other developmental theories.

Research Questions

The research questions we posed were analyzed with data we collected from gifted adults and with data from graduate students collected by Lysy and Piechowski (1983). In the first set of research questions, we used Lysy and Piechowski's graduate students as a comparison group for our gifted adults. Because of their demonstrated intellectual and academic ability, graduate students represent a plausible reference group; that is, both groups are assumed to possess more of the characteristics deemed necessary for heightened development than the average population. Using such a reference group allowed us to move beyond simple description of our gifted sample to meaningful comparisons between two groups with high ability. In the second set of research questions, the data from the two sources were combined to examine gender differences across samples. In the third case, we asked the same question of our data as did Lysy and Piechowski—the relationship between developmental potential (as measured by OEs) and level attainment—and our analysis then became one of replication with a gifted sample.

Our first set of questions asked whether the OEs for the intellectually gifted were higher than those for the comparison group of graduate students. Previous studies had shown that gifted individuals possess characteristics exemplified by the OEs such as intense emotions, intellectual perspicacity, creative imagination, increased sensual awareness, and an abundance of energy; therefore, we hypothesized that their OEs would exceed those of our comparison group. Next, we wanted to know whether the gifted group attained a higher overall score on level of development than the graduate group. As developmental potential is dependent on the strength of

the OEs, we hypothesized that the gifted group would achieve a higher level of emotional development than the comparison group.

Our second set of questions asked whether males or females had higher OEs and higher level scores. As gender differences had not been apparent in previous studies, we hypothesized that there would be no gender differences in either OEs or developmental level scores.

Our third area of inquiry was the relationship between developmental potential and actual level score. Specifically, we asked whether developmental potential, as measured by the OEs, predicted developmental level in a group of gifted subjects. Theoretically, three OEs—emotional, imaginal, and intellectual—are believed to be crucial in the process of moving to higher levels of development (Dabrowski with Kawczak & Piechowski, 1970). Following that prescription, we hypothesized that emotional, imaginal, and intellectual OEs would be significant determinants of current level of development while psychomotor and sensual OEs would not.

Method

Subjects

Participants in the intellectually gifted group were identified as gifted in several ways. More than one-third (15) were members of Mensa, an organization whose membership is contingent upon IQ scores at or above the 98th percentile. Most of the other participants had SAT or GRE combined verbal and quantitative scores of at least 1200 (19). Four subjects had IQ scores of 130 and above, and three showed evidence of creative achievement in adult life—two as artists and one as an author.

Questionnaires were sent to members of a Denver Mensa group who requested them after the study was announced at a Mensa meeting. A purposive sample of additional respondents were contacted personally by the researchers as they were believed to be gifted; then verification was obtained. T-tests between the means of those who were members of Mensa and those who were identified by other criteria showed no differences on our variables of interest—OEs and developmental level.

Of the 41 respondents, 11 were male and 30 were female. Many of the subjects contacted personally were gifted education teachers, a group with a disproportionate number of females. They ranged in age from 19 to 54; the average was 37. At the time of their participation

in the study, they had from 11 to 20 years of formal education, with 80 percent having completed 4 years of college.

For comparison, data collected by Lysy and Piechowski (1983) on 42 graduate students in a large midwestern university were used. These subjects were, on the average, 8 years younger than those in the intellectually gifted group; however, the age range (22 to 50) and the gender distribution (30 females, 12 males) were very similar. These students were in academic departments across many disciplines including counseling, education, natural and social sciences, and religious studies. Although the questionnaire for OEs completed by subjects in their study was twice the length of the current one, only the equivalent test items were compared. The same measurement instrument for assessing levels of development was used in both studies.

Measures

Overexcitabilities Questionnaire (OEQ). The OEQ is a 21-item open-ended questionnaire designed to assess OEs (Lysy & Piechowski, 1983). Examples include: "What is your special kind of daydreams and fantasies?"; "What kind of things get your mind going?"; and "What do you like to concentrate on most?"

Raters scored the OEs on a scale of 0 to 3, from no indication to strong expression, in each question. In the present study, questionnaires were scored independently by two trained raters. Differences in rater judgments were resolved through a consensus procedure that required raters to justify their scoring based on the rating criteria and arrive at agreement. We have used the consensus score in these analyses. Pearson's correlation coefficient between raters prior to consensus averaged .66 for the gifted group. Interrater reliability for the graduate student sample averaged .69 (Lysy & Piechowski, 1983).

Total scores were computed for each overexcitability. Cronbach's alpha for scale reliability for the gifted group equalled .66 for psychomotor, .72 for sensual, .84 for imaginal, .78 for intellectual, and .86 for emotional. Reliability, in this case, refers to the internal consistency of the scale and implies accuracy of measurement. Reliability for imaginal and emotional OEs were quite high. For the other OE measures, reliability was at a moderate or acceptable level. Cronbach's alpha was not reported for the graduate student sample.

Definition-Response Instrument (DRI). The DRI contains 6 thought-provoking questions designed to elicit responses indicating level of

emotional development (Gage, Morse, & Piechowski, 1981). Respondents are encouraged to write freely on these open-ended questions. Each questionnaire was scored independently by two raters without knowledge of other respondent data such as group membership, gender, or OE scores. A consensus procedure was used when there were differences in rater judgments. Reliability between raters averaged .73 for the gifted group and .77 for the graduate sample (Lysy & Piechowski, 1983). Consensus ratings for the 6 items were averaged to obtain an overall level score.

Scale reliability for the DRI, as measured by Cronbach's alpha, was .94 for the gifted group, representing a high degree of consistency for this six-item instrument. Similar information was not reported for the graduate sample.

The correlation between the number of words in a subject's response on the DRI and his or her level score was .23 for the gifted group (Falk, 1990). While positively related, less than 5 percent of the variance in ratings can be explained by the length of the response.

Both the OEQ and DRI were developed as alternatives to neurological exams, clinical interviews, and autobiographical essays. The close correspondence between clinical evaluations and ratings of autobiographical essays and other written material (responses to emotionally laden concepts such as "Great Sadness") was reported by Piechowski (1975).

Construct validity for imaginal and intellectual OEs has been established in several studies. In a comparison of American artists and intellectually gifted adults, the artists were found to have higher imaginal OEs, and the intellectually gifted were found to have higher intellectual OEs (Piechowski et al., 1985). In a study of Venezuelan artists, OE profiles showed imaginal OE to be higher than the other OEs (Manzanero, 1985). Schiever (1985) demonstrated that imaginal OE distinguished between a highly creative group and a less creative group of seventh and eighth graders, and Gallagher (1985) showed that intellectual OE differentiated between high and low scorers on the *Torrance Test of Creative Thinking* for sixth-grade students. Construct validity for emotional, sensual, and psychomotor OEs is yet to be confirmed, although clinical data collected on the gifted offer some preliminary support (Silverman, 1993).

Convergent and discriminant validity for the DRI was demonstrated by Gage et al., (1981) using the multitrait-multimethod approach of Campbell and Fiske (1959). Following this approach, the DRI, a situation choice method, a situation reason method, an autobiography, and an objective questionnaire were compared. Level

ratings of the first four methods yielded significant correlations, and variation between level ratings was greater than between methods, thus indicating construct validity for the DRI. The objective questionnaire was not correlated with the other four methods.

Results

Group and Gender Differences for OEs

A 2×2 between-subjects multivariate analysis of variance was performed on five dependent variables: emotional OE, intellectual OE, imaginal OE, sensual OE, and psychomotor OE. Independent variables were group (gifted or graduates) and gender (male or female). SPSSX MANOVA was used for the analyses with the sequential adjustment for nonorthogonality (unequal number of subjects in cells). The order of entry of independent variables was group, then gender, reflecting our interest first in the effect of group membership and second in the effect of respondent's gender on the dependent variables. One of the advantages of MANOVA over ANOVA is that it protects against inflated Type I errors due to multiple tests with correlated dependent variables (Tabachnick & Fidell, 1989). There were a total of 83 cases.

Using the Wilks' criterion, the combined dependent variables were significantly affected by both group, $F(5, 75) = 4.30, p < .01$, and gender, $F(5, 75) = 4.14, p < .01$, but not by their interaction $F(5, 75) = .96, p > .05$. These findings indicate that there are differences between the OE scores of the gifted adult sample and the scores of the graduate student sample as well as gender differences with regard to OE scores. The fact that there was no interaction between group and gender means that group differences are not affected by gender, and gender differences are not related to group membership.

To investigate the impact of each main effect (group and gender) on the individual dependent variables, a stepdown analysis was performed on the dependent variables in the following order: emotional OE, intellectual OE, imaginal OE, sensual OE, and psychomotor OE. In this procedure, the first dependent variable was tested in a univariate ANOVA. Then each succeeding dependent variable was tested with all preceding dependent variables treated as covariates. Results of this analysis are summarized in Table 1.

Emotional OE made a unique contribution to predicting differences between those who were in the gifted group and those who were in the graduate student group, stepdown $F(1, 79) = 7.52, p < .01$.

Table 1
Tests of Group, Gender, and Their Interaction on
Overexcitabilities

IV	DV	Univariate		Stepdown	
		F	df	F	df
Group	EMOTION	7.51 ^a	1,79	7.51 [*]	1,79
	INTELL	19.71 ^a	1,79	11.13 [*]	1,78
	IMAGINE	9.02 ^a	1,79	.33	1,77
	SENSUAL	3.83 ^b	1,79	.01	1,76
	PSYMOTOR	7.48 ^a	1,79	1.79	1,75
Gender	EMOTION	8.32 ^a	1,79	8.32 [*]	1,79
	INTELL	.58	1,79	6.84 [*]	1,78
	IMAGINE	.26	1,79	.11	1,77
	SENSUAL	1.69	1,79	2.68	1,76
	PSYMOTOR	3.33	1,79	1.78	1,75
Group by gender interaction	EMOTION	.06	1,79	.06	1,79
	INTELL	.16	1,79	.42	1,78
	IMAGINE	.12	1,79	.23	1,77
	SENSUAL	1.41	1,79	2.02	1,76
	PSYMOTOR	.07	1,79	2.03	1,75

^{*} $p < .01$ in multivariate context

^a $p < .01$ in univariate context

^b $p < .05$ in univariate context

Those in the gifted group had higher emotional OE scores (mean emotional = 13.68) than those in the graduate group (mean emotional = 9.19). After the pattern of differences measured by emotional OE was entered, a difference was also found on intellectual OE, stepdown $F(1, 78) = 11.14, p < .01$. Gifted group members had higher intellectual OE scores (adjusted mean intellectual = 11.58) than graduate students (adjusted mean intellectual = 7.74). Although a univariate comparison revealed that those in the gifted group had higher scores on imaginal, $F(1, 79) = 9.02$, sensual, $F(1, 79) = 3.83$, and psychomotor OE, $F(1, 79) = 7.48$ as well, these differences were

already accounted for in the stepdown analysis by emotional and intellectual OEs.

Two dependent variables, emotional OE and intellectual OE, also made unique contributions to the distinction between males and females. The greatest contribution was made by emotional OE, the highest ordered dependent variable, stepdown $F(1, 79) = 8.33, p < .01$. Women had higher emotional OE scores (mean emotional = 12.90) than men (mean emotional = 7.62). With differences due to emotional OE already entered, intellectual OE made an additional contribution, stepdown $F(1, 78) = 6.85, p < .01$. Men scored higher on intellectual OE (adjusted mean intellectual = 12.10) than women (adjusted mean intellectual = 8.72). (Correlations, means, and standard deviations are shown in Appendix A.)

To summarize group differences, those in the gifted group had significantly higher emotional and intellectual OE scores than those in the graduate student group. In the examination of gender differences, women had higher ratings on emotional OE while men were higher on intellectual OE.

Group and Gender Differences for Level

An independent t -test between the means of the gifted (2.22) and the graduate (2.05) groups on level of development showed no significant difference, $t = 1.10, p = .29$. This finding indicates that while the mean for the gifted group was higher, the difference was not statistically significant and therefore scores on level of development must be treated as equivalent for our samples.

A t -test between means for males (1.95) and females (2.20) on level of development revealed significant gender differences, $t = 5.03, p = .02$. Females scored higher on level of emotional development than males.

Predicting Developmental Level

Our third aim was to determine whether the OEs could be used to predict developmental level in the intellectually gifted sample. SPSSX REGRESSION analysis was used to determine whether emotional, intellectual, and imaginal OEs contributed to the prediction of level and then whether the addition of sensual and psychomotor OEs improved the prediction. Entering the first set of variables (emotional, intellectual, and imaginal OEs) followed by the sec-

Table 2
Hierarchical Regression of Overexcitabilities on Level of
Emotional Development for Gifted Sample

Step	Criterion	Predictors	BETA
1	Level	EMOTION	.33
		INTELL	-.09
		IMAGINE	.30
$R^2 = .26$ $F = 4.36$ $df = 3,37$ $p < .01$ adj. $R^2 = .20$ $R = .51$			
2	Level	EMOTION	.33
		INTELL	-.06
		IMAGINE	.30
		SENSUAL	.01
		PSYMOTOR	-.09
$R^2 = .27$ $F = 2.54$ $df = 5,35$ $p < .05$ adj. $R^2 = .16$ $R = .52$			

ond set (sensual and psychomotor OEs) complies with the ordering suggested by the theory.

Table 2 presents the standardized regression coefficients (BETA), and R, R^2 , and adjusted R^2 after entry of the independent variables in step 1 and step 2. R was significantly different from zero at the end of each step. After step 2, with all independent variables in the equation, $R^2 = .27$, $F(5, 35) = 2.54$, $p < .05$.

After step 1 with emotional, intellectual, and imaginal OE in the equation, $R^2 = .26$ (adjusted $R^2 = .20$), $F(3, 37) = 4.36$, $p < .01$. After step 2 with sensual and psychomotor OEs added to the prediction of level, $R^2 = .27$ (adjusted $R^2 = .16$), $F(5, 35) = 2.54$, $p < .05$. The addition of sensual and psychomotor OEs did not improve the

Table 3
Hierarchical Regression of Overexcitabilities on Level of
Emotional Development for Graduate Student Sample

Step	Criterion	Predictors	BETA
1	Level	EMOTION	.39
		INTELL	.37
		IMAGINE	.05
$R^2 = .48$ $F = 11.70$ $df = 3,38$ $p < .001$ adj. $R^2 = .44$ $R = .69$			
2	Level	EMOTION	.37
		INTELL	.39
		IMAGINE	.00
		SENSUAL	.07
		PSYMOTOR	.01
$R^2 = .48$ $F = 6.74$ $df = 5,36$ $p < .001$ adj. $R^2 = .41$ $R = .70$			

original R^2 which accounted for 26 percent of the variance in level, as indicated by the drop in the adjusted R^2 . (Correlations, means, and standard deviations for the gifted sample are shown in Appendix B.)

From the standardized regression coefficients (BETAS), it can be seen that emotional and imaginal OEs were the primary contributors to the prediction of developmental level. Intellectual, sensual, and psychomotor OEs made only minimal and insignificant contributions to the explanation of developmental level for this sample.

The results of a similar analysis from the Lysy and Piechowski (1983) study of graduate students are shown in Table 3.

The OEs accounted for 48 percent of the variance in level in their

sample [$F(5, 36) = 6.74, p < .01$]. Emotional and intellectual OEs were significant predictors of developmental level; imaginal, psychomotor, and sensual OEs were not.

Discussion

Comparisons Between Gifted and Graduate Samples

Following our hypotheses, we made comparisons between the gifted adult sample and the graduate student sample on OEs and level of emotional development.

Comparison of OEs. Supporting our hypothesis, the gifted adults' OEs were substantially higher than those of the graduate students. This supports our belief that the OEs may capture areas of heightened sensitivity and greater responsiveness that has been observed in gifted individuals. If this is true, Dabrowski's theoretical conception of OEs makes an important contribution to our understanding of the characteristics of giftedness.

It is possible, however, that other variables, such as age, may have biased our findings. Although the theory holds that the components of developmental potential (including the OEs) are innate qualities, it is possible that the written expression of the OEs may systematically differ with age, giving an advantage to our gifted adults who were older on average than the graduate students. We note, however, that Lysy and Piechowski (1983) found no significant correlations between OEs and age for their subjects. Likewise in our sample of gifted adults, there are no significant correlations between OEs and age of respondents.

Comparison of Level of Development. Contrary to our hypothesis that the gifted group would have a higher level of emotional development, gifted adults and graduate students had statistically equivalent level ratings. While the intellectually gifted adults appear to have greater potential for emotional development, as indicated by their higher OEs, their potential has not been actualized (i.e., their current level of emotional development is not higher than that of an unselected sample).

This leads us to question what factors are involved in turning one's potential into higher level development. Are these factors individual, social, or environmental? On the individual level, personality variables may play a crucial role and ego strength may be required; on the social level, supportive familial, educational, and mentor relation-

ships may enable one to maximize abilities. Perhaps the gifted are encouraged to develop their intellectual capacities at the expense of their emotional development. In light of our findings, it seems crucial to begin to investigate the factors involved in the realization of one's developmental potential.

One factor that may have affected the results is advanced higher education. Increased education may have fostered emotional development in the graduate students; all had more than 16 years of formal education. On the other hand, 80 percent of the gifted adults had completed 4 years of college.

Comparisons Between Males and Females Across Samples

Combining the two samples, we examined gender differences in OEs and level of development.

Comparison of OEs. The hypothesis that no gender differences exist in developmental potential was supported for three of the five OEs. No differences were found between males and females for imaginal, sensual, and psychomotor OEs. However, for emotional and intellectual OEs, gender differences were found, and these seem to be related to areas in which males and females have been differentiated by traditional socialization: women in this study tended to score higher on emotional OE and men scored higher on intellectual OE. Emotionality is fostered in women in our society while intellectual pursuits are often portrayed as the domain of men, and these different influences seem to be related to their OE scores.

Comparison of Level of Emotional Development. In addition to higher emotional OE scores, women had significantly higher developmental level scores than men. This does not support our hypothesis of no differences and is the reverse of the pattern found in studies involving most other developmental theories, which show men at the higher end. It appears from our findings that a theory that focuses on the emotional aspects of development may give women an advantage based on gender-role socialization that encourages the development of the affective side of their personality and restricts that of men (Rubin, 1976).

Comparisons in Predicting Level from OEs

For both our gifted adults and Lysy and Piechowski's graduate students, emotional OE was the strongest predictor of level of emotional

development. For the gifted subjects, imaginal OE also predicted level; for the graduate students, intellectual OE also contributed. Because significant correlations exist among intellectual, imaginal, and emotional OEs (average $r = .56$), their contribution to the prediction of level is not independent. The result is that when one of these variables is included as a predictor in the regression equation, the contribution of the others is diminished. This accounts for the fact that intellectual OE was not a predictor of level in the gifted sample, and imaginal OE did not predict level in the Lysy and Piechowski study (Lysy & Piechowski, 1983).

In both studies, psychomotor and sensual OEs did not add significantly to the prediction of level. This raises the question of whether sensual and psychomotor OEs are important for advanced development. It is also possible that our measurement techniques are not adequate with regard to these two OEs and greater specification may be required in the rating criteria. After the completion of our study, the guidelines for coders were strengthened and expanded into two formal training manuals—one for rating OEs (Falk & Piechowski, 1992) and one for rating levels of emotional development (Miller, 1991). Both of these manuals provide rating criteria and examples which should lead to improved scoring. Despite these advancements, scoring of content data remains a challenging task.

Our findings with regard to the relationship between developmental potential (the OEs) and developmental level should be viewed with caution as should any attempt to relate two domains in a single theory. Although conceptually the overexcitabilities and developmental level are clearly distinguished, the measurement procedures are similar (both self-reports) which allow for the possibility of method bias. We present the Lysy and Piechowski study analysis, however, to show that our findings replicate theirs, particularly regarding the primacy of emotional OE in predicting developmental level.

Conclusion

We have used Dabrowski's theory to suggest that heightened sensitivity and greater responsiveness to stimuli are characteristics associated with giftedness. If we are correct in our assumptions, the theory would seem to suggest that we broaden our scope of investigation to domains outside the intellectual sphere. Clearly our current study shows the importance of the emotional sphere, and more research is called for to clarify the roles of the sensual and psychomotor

spheres. Moreover, all five areas of the OEs (emotional, intellectual, imaginal, sensual, and psychomotor) and their relationship to our understanding of giftedness need further exploration.

It is important for educators and parents alike to nurture the emotional potential of gifted children (Piechowski, 1991; Silverman, 1993). Although the overexcitabilities are innately given qualities, environmental support may be needed to actualize that developmental potential. Emotional development may take longer than intellectual development for its fruition. Rationality and emotionality should *not* be seen as polar opposites but as complementary facets, and both should be encouraged at home and at school. It is particularly important for emotionality to be nourished in gifted males; otherwise, they risk an uneven form of development in which intelligence is valued but emotions are not. Emotional maturity, social development, empathy and compassion, and humanitarian values in adult life are all important outcomes of the nurturance of one's emotional life. On the other hand, intellectual endeavors should be accentuated for gifted females who have long been encouraged to emphasize only the emotional aspects of their lives.

Appendix A

Correlations Among Overexcitabilities, Level, Group, and Gender for the Combined Gifted and Graduate Samples

	1	2	3	4	5	6	7	8
1. Group	1.00							
2. Gender	.01	1.00						
3. Emotion	.28	.30	1.00					
4. Intell	.44	-.06	.54	1.00				
5. Imagin	.31	.06	.58	.58	1.00			
6. Sensual	.21	-.13	.33	.46	.48	1.00		
7. Psymotor	.28	-.18	.30	.43	.40	.71	1.00	
8. Level	.18	.23	.53	.41	.47	.24	.16	1.00
Mean	.49	1.72	11.41	9.64	8.40	5.53	5.11	2.13
SD	.50	.45	8.03	6.52	6.73	4.74	3.41	.48

Appendix B

Correlations Among Overexcitabilities and Level of Emotional Development for the Gifted Sample

	Emotion	Intell	Imagin	Sensual	Psymotor	Level
Emotion	1.00					
Intell	.49	1.00				
Imagin	.58	.48	1.00			
Sensual	.20	.49	.36	1.00		
Psymotor	.24	.44	.31	.75	1.00	
Level	.47	.21	.44	.09	.07	1.00
Mean	13.68	12.56	10.56	6.54	6.10	2.22
SD	8.98	6.43	7.48	5.16	3.89	.50

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Parent Competence in Families with Gifted Children

Robert Strom, Shirley Strom, Paris Strom,
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This study examined parent influence as perceived by gifted junior high school students and their parents. Ninety-three adolescents reported on 171 parents; self-reports were provided by 172 parents. Both generations were administered parallel versions of the Parent Strengths and Needs Inventory which identifies (a) aspects of parenthood that are satisfying, (b) ways in which parents successfully perform their role, (c) the scope of teaching expected of parents, (d) problems with the obligations of parenting, (e) child behaviors which are upsetting to parents, and (f) information parents need to function more effectively. Multivariate analysis of variance was used to determine the effects of generation of respondent, gender of parent, and child school performance on parent effectiveness. Analyses revealed significant main effects for all three independent variables. Interaction effects emerged for school performance and parent gender. Implications are considered for planning parent education programs.

Many parents believe their role is more stressful during a child's junior high school years than at any other time (Carnegie, 1990; Sebald, 1993). The anxiety comes from knowing that important physical, emotional, and social changes occur in early adolescence. Parents also worry that teenagers might experiment with drugs, sexual activity, and crime. It is generally acknowledged that growing up calls for consulting with a broader range of advisors and making more decisions. But when teenagers see immature peers as their main source of advice, the risk of poor judgment is bound to rise (Cobb, 1992).

Junior high students experience stressful changes in the classroom too. They have more teachers to satisfy, their lessons require

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