

Social-Emotional Development and Adjustment of Gifted Children

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Abstract—This chapter reviews the empirical literature relevant to the psychosocial adjustment and maturity of academically highly capable (academically "gifted") children and adolescents. The predominant picture of such groups is a positive one, in comparison with children of average academic ability, a finding perhaps not unrelated to the fact that the socioeconomic status of their families tends also to be more favorable than average. Academically gifted children tend to show greater than average maturity in psychosocial development and friendship patterns, high degrees of perseverance and commitment, more positive self-views, and fewer behavior problems. Within this generally encouraging framework, however, special areas of vulnerability can be identified, including global/social self-concept (especially during adolescence), competitiveness, perfectionism, depression, notions of the nature of intelligence which diminish achievement, and the experience of giftedness as a social handicap. Special populations such as the highly gifted, females, and minority group members each have their own issues to face. Implications for teachers and counselors are discussed.

Introduction

In view of the long history of questions concerning the social and affective development and adjustment of gifted children, it is perhaps surprising that there is so little sophistication in the queries which have been posed or the answers which have been developed. Few investigators have progressed beyond the simplistic question: Are gifted children less well-adjusted than their age peers? (Clearly they are not.) On the other hand, there is so much conceptual confusion in this field that one must admire those hardy investigators who do chip away at more complex issues.

One basic handicap to both theory and research in this area is the lack of a comprehensive, broadly accepted, organizing theory of normal child development in the social-affective realm, a theory describing progression in capacity and performance with increasing age. The lack is critical in a field such as giftedness, in which rate of development is a central issue. Even in the cognitive realm, only a few such explicitly developmental theories exist, the most salient being that of Piaget. In

the affective realm, however, theories tend to be specific to a single transition, to represent basic processes which are not expected to vary systematically with age, or to be almost impossible to measure.

Another basic handicap to research in this area is the existence of conflicting definitions of giftedness (Reis, 1989; Sternberg & Davidson, 1986), a matter discussed by Feldhusen elsewhere in this volume and therefore omitted here. The research we report deals specifically with children who have been identified as intellectually advanced through their performance on tasks related to academic attainment such as verbal reasoning, quantitative reasoning, and/or measures of general intelligence. We accord relatively little attention to those gifted in other socially valuable domains such as the arts or interpersonal skills, because the research about such children is extremely meager. By restricting our definition to cognitive aspects of developmental advancement, we have also avoided issues implied by the inclusion or exclusion of creativity as a requisite component of giftedness and by concepts such as "underachieving gifted," or "learning disabled gifted." In other words, we are willing to include children who perform well enough in some cognitive areas to be recognized as unusual, whether or not they are simultaneously "creative," and whether or not their school attainment is high. Because VanTassel-Baska discusses gifted students with low academic performance elsewhere in this volume we have omitted them from this chapter, but this omission should not be taken as a definitional statement.

We are, however, limited by the assumptions and practices of the investigators whose work we review. A third basic handicap to research in this area is that the subjects in most studies have been chosen because of their presence in school programs, with all the issues of selectivity which attend upon that fact. Those who are selected for programs tend to be children whose school achievement is high, whose classroom behavior is either exemplary or stereotypically "gifted," who may have shown special evidence of creativity, and whose parents are knowledgeable, assertive, and socioeconomically advantaged. The several studies conducted with summer program partici-

pants in the multicenter seventh-grade Talent Search (e.g., Sawyer, 1984) are, for example, of a highly select group; Olszewski-Kubilius and Kulieke (1989) report that more than 60% of their subjects came from homes with incomes exceeding \$50,000. Many of the questions about psychological adjustment have been directed at the effects of contrasting educational modalities where group membership acts as an independent variable, such as studies of acceleration and enrichment (see chapters by Benbow and Treffinger, respectively), or the effect of summer programs, but almost never is there random assignment which could diminish selective factors.

Still further handicap derives from the fact that investigators often have used control groups that are poorly matched on variables other than intelligence. Many studies have, for example, compared gifted students to the normative populations on whom a measure was standardized, or used convenience groups of children presumed to be "normal" but generally not of matched background.

In fact, there has been little funding for studies of issues related to giftedness, and investigators have often worked with very limited budgets. Unfortunately, in this field as in any other you get what you pay for. Well-designed and well-executed research takes money. Two principal avenues seem to hold out hope: increased federal funding targeted on issues relevant to giftedness, and incorporation of these issues into mainstream developmental psychology and education with their traditional funding sources. As we shall see, there is no dearth of worthy research questions with direct relevance to the well-being and development of gifted children and youth.

Questions Guiding the Research Review

It is often difficult to discern the issues actually motivating investigations of the social-emotional development and adjustment of gifted children. Among such issues are continuing concerns that cognitive precocity may somehow tend to be accompanied by structural flaws of personality; that precocity may be the result of distorted parenting; or, quite the opposite, that even those flaws which occur normally in all populations constitute demerits against the "specialness" of gifted children.

This chapter will address issues of comparative developmental maturity in gifted children (does intellectual precocity extend to social and affective domains?), as well as global and specific issues of adjustment and psychopathology. Vulnerable areas for specific groups such as very highly gifted children, females, members of minority groups, and children with disabilities will be addressed as well. Educational implications and implications for teacher and counselor training constitute the final topics of the chapter.

Information Base

Many of the topics pertinent to the questions posed here were reviewed five years earlier by Janos and Robinson (1985); as a result, our literature search focused on the intervening period. A bibliographic computer search was conducted of material published in psychological and educational journals. The most recent publications were gleaned from perusal of specialized journals and books. Of the 136 articles located by this search, only a fraction reported research results, the remainder mainly constituting case reports, impressionistic descriptions of very small populations, reviews, and position papers. It is primarily from the research reports and research reviews that we draw the information for this discussion. In most of the succeeding sections, information from the Janos and Robinson (1985) article will be summarized, with mention of only the most significant earlier publications, updated by the current review. Some segments not covered by Janos and Robinson, notably those on gender and ethnic issues, constitute succinct review focused on issues of psychosocial development, particularly during adolescence; for broader treatment, the reader is referred to the chapter by VanTassel-Baska in this volume.

The Environmental Context: Family Background

Converging evidence from many sources confirms strong advantages in both intellectual status and mental health for persons from favored environmental backgrounds (Gockenback, 1989; Olszewski, Kulieke, & Buescher, 1987). Although neither of these associations is an appropriate topic of the current chapter, neither can they be ignored in discussion of the psychosocial status of gifted children. Because of the strongly positive correlation between ability/achievement and socioeconomic status, any study of intellectually gifted children will deal with a population weighted toward middle-class membership, middle-class childrearing practices and values, and the advantages of economic resources, making it difficult to tease apart characteristics associated with high ability from those simply reflecting family background.

Terman's (1925-1959) monumental life-span study of individuals identified as gifted during childhood has often been criticized for not having taken this factor into account, for having focused on schools in advantaged neighborhoods, and having relied to a large extent on teacher nominations which would tend to pick up children socialized to middle-class norms. Were such a study to be undertaken today, no doubt the investigator would choose to oversample for disadvantaged populations and to treat background factors such as income, parental education, and ethnicity as major independent variables, but the fact is that no one is likely to embark on such an undertaking, given current funding conditions and priorities. Readers need to keep in mind that few investigators (notably those discussed in the section on minority popu-

lations) have tried to disentangle background and psychosocial functioning. The most successful have been those using control groups chosen from the same schools and/or classes as the gifted groups, although even with such efforts, background factors cannot be completely controlled.

In spite of these caveats, there is some information about the childrearing practices of parents of gifted children which is pertinent to the current discussion. In this section, we will describe only some of the general information available, leaving further discussion to subsequent sections dealing with specific topics. Note that we do not discuss family factors associated with high intelligence, *per se*, but rather those associated with psychosocial development. Even so, within the sizable literature, there is much that we must omit.

Family Factors Associated with High Achievement

Patterns of achievement, independence, and perseverance tend to be established early in life, and parents of gifted preschool children can be distinguished by childrearing patterns which promote these qualities (Chamrad & Robinson, 1986). Indeed, such attitudes may be inter-
nalized at an early age, making it more difficult to discern differences in parental behavior later on (Portes & Alsup, 1985).

Parents whose children achieve well in school have consistently been identified as active in their roles as parents, fostering achievement motivation, language development, and provisions for general learning (e.g., Trotman, 1977). Morrow and Wilson (1961), for example, reviewing the literature to that point, suggested that parents of high achievers praised and approved their children's behavior, felt close to them, and conveyed a strong sense of belongingness. Whatever their children's ability levels, parents who support their children's interests with their own time and the provision of opportunities as well as a warm, supportive base for intellectual exploration, are likely to facilitate achievement. On the other hand, parents with authoritarian (high control, high demand) patterns are likely to produce children with high achievement but also high degrees of conformity and lack of originality (Nichols, 1964; Olszewski et al., 1987).

A number of investigators have reported a high incidence of homemaking mothers and a high level of parental involvement with children (Kulicke & Olszewski-Kubilius, 1989; Olszewski et al., 1987; Silverman & Kearney, 1989), leaving one to ponder both the cost to the homemaking mothers' career goals and their emotional well-being, and the effect on other bright children of their mothers' increased participation in the work force. Other positive childrearing practices include encouragement of independence within the context of consistency of rules, discipline, structure and organization of home life, valuing creative and intellectual endeavors, and emotional and verbal expressiveness (Gockenback, 1989; Olszewski et al., 1987).

Aside from studies of the highly eminent, in whom there is a high rate of parental loss (see below), we found only one study examining the issue of the single-parent family for gifted children. Gelbrich and Hare (1989) reported a negative relationship between living in a single parent home and school achievement in gifted children ages 10-16 attending a summer program.

Family Factors Associated with Creativity

"Creativity" has many meanings (Sternberg, 1988) and, like giftedness, is defined somewhat differently for children and adults. Generally speaking, creativity in children is taken to mean fluidity in thinking processes, escape from the conventional, and ability to come up with original ideas and connections. The creative adult is, on the other hand, expected to have produced original work worthy of note.

With regard to children and youth who are regarded as creative, family backgrounds show an interesting contrast with the backgrounds of children identified as bright but conventional. There is, for example, evidence that the parents of creative children pursue their own interests and agendas (Albert, 1978), are less child-centered and more accepting of children's nonconventional behavior (Getzels & Jackson, 1961), and more likely to exhibit tense, distant, and less harmonious relationships with each other (Olszewski et al., 1987). Albert and Runco (1986), summarizing the origins of the creative personality, cite early independence training, a sense of discontent, a sense by one or both parents that the child is "special," and hostility or indifference between the parents, with the result that the children have a wider variety of models, or "heros," than those from more conventional families. Creativity for males also appears to relate to mothers' expectations of earlier independence attainment by their sons (Albert & Runco, 1989). Perhaps creativity, for some of these children, also reflects their attempts to cope with dysfunctional family systems and to channel the resulting emotional stress into more productive or rewarding activities.

The Path to Eminence

There is evidence of further family factors in the lives of persons who have achieved eminence in their fields. Among these factors are high expectations, parental commitment, and, perhaps surprisingly, stressful maturity demands of a kind usually thought negative, such as birth order (first or only) and early parental loss (Albert, 1978, 1980; Albert & Runco, 1986; VanTassel-Baska, 1989). Families of the eminent are characterized by stable homes in which tension is, nevertheless, high (Albert, 1978; Goertzel & Goertzel, 1962), and in which at least one parent (Bloom, 1985) or grandparent (Sheldon, 1954) devotes emotional resources to the child and maintains high expectations. Kerr's study of eminent women indicated that "many had at least one ineffectual, absent, deceased, or irresponsible parent," and that their

giftedness went "undiscovered and unnoticed as children" (1985, p. 63). In view of contemporary emphasis on school programs, it is disturbing to consider how high a proportion of eminent people in history were home tutored, with predominant exposure to adults rather than peers (Goertzel & Goertzel, 1962; McCurdy, 1960).

Bloom (1985) and his colleagues, in a provocative study of young adults who were world-class achievers as swimmers, tennis players, mathematicians, research neurologists, sculptors, or pianists, gathered extensive material from teachers and parents. Although their report unfortunately includes few details of their findings, the general picture is of a stable and generally cohesive family which centered its resources on the gifted child (or, among siblings with potential, the child with the highest motivation to succeed), which moved the child through appropriate educational paths and nurtured talents that were generally compatible with the interests of other family members.

Although Bloom's study included women, most investigators have examined the lives of gifted men, there being so many more of them. The path to eminence has been much more difficult for women, given society's and families' conflicting attitudes about what constitutes appropriate and inappropriate achievement for females. As Noble (1989a,b) reports, most gifted females are socialized to be dependent, to place attachment to others above attachment to self, to avoid entering a challenging world and competing with men, and to substitute protection from others for realization of potential. However Kerr (1985) found that eminent women managed to transcend these obstacles in large part by ignoring traditional sex role limitations and refusing to acknowledge that gender would in any way limit their aspirations.

While there are clearly other factors, including traditions, resources, and values in the greater environment and the family that determine the degree to which the promise of the child is translated into the eminence of the adult (Feldman & Goldsmith, 1986)—to say nothing of the child's own level of ability—the role of the family in the life of the gifted child is highlighted by the study of those who have attained eminence.

Social-Emotional Maturity

Although IQs are no longer expressions of the ratio of mental to chronological age, giftedness carries clear implications of accelerated rate of cognitive development. A recurring question of practical as well as theoretical interest is the extent to which cognitive precocity is accompanied by precocity in the psychosocial sphere. Research into psychosocial maturity is hampered by the lack of measures demonstrating clear age progressions which would permit calculations of developmental rate. Furthermore, most available measures reflect a heavy cognitive component and may not be reflected in actual behavior (Roedell, 1978). The psychosocial maturity dimension is of special relevance to gifted children because of school placement questions which often weigh

heavily the predicted ability of the child to function comfortably with older classmates. Indeed, school persons frequently assume that cognitive maturity is altogether unrelated to psychosocial maturity and for that reason they take a strong stand against accelerative options (Southern, Jones, & Fiscus, 1989). Yet, most of the evidence is to the contrary (see Southern & Jones, in press; Benbow, this volume).

The review by Janos and Robinson (1985) concludes that, while evidence is generally sketchy, most of what is known indicates greater maturity of intellectual gifted children than nongifted age mates in psychosocial spheres such as friendship patterns, play interests, social knowledge, and personality. No recent study has to date contradicted this conclusion.

Friendship patterns and play interests

Since Terman's classic study (1925), it has been known that gifted children prefer friends who are their intellectual peers, either by reason of being older or brighter. Reviewing the literature, Gross (1989) underscores this point, noting that mental age stands out as the preeminent factor determining friendship choices. Although the phenomenon can be seen from early childhood onward, the preference for older companions maintains even in college (Burks, Jensen, & Terman, 1930). Especially during adolescence, strong conflicts often come into play as the youngster attempts to resolve the demands of the social milieu with a need for intimate companionship with kindred spirits. Even though gifted teenagers tend to regard themselves as happy, they simultaneously tend to view themselves as unpopular (Coleman & Crockett, 1988; Kerr, Colangelo, & Gaeth, 1988; Tidwell, 1988) and girls, in particular, tend to see a social gap between themselves and their classmates. Buescher, Olszewski, and Higham (1987) observed that girls tended to handle this situation by giving up the equal-ability friends they had in early adolescence and shifting to more heterogeneous age mates, with "more risk for using strategies that lead to dismissing the reality of their talents" (1987, p. 4).

Play interests are a major difference between gifted children and their nongifted age mates. In this area normal age progression can be described. Terman (1925) prepared a checklist of activities which was administered to gifted children 9 to 10 years of age and a control group; the gifted children were considerably more mature, preferring activities such as puzzles and chess to guessing games or house or, as Gross (1989) described it, intellectual games "where ideas and strategies are matched against each other" (p. 192). Thorndike (1919, 1940) confirmed the maturity of gifted children's play interests as well as a number of interests convergent with age mates.

In one of the very few observational studies available, Lupkowski (1989) compared the play behavior of middle-class gifted and nongifted children in a laboratory preschool. Although their parents did not describe the

differently, the gifted preschoolers actually engaged in considerably more cooperative play than did the nongifted group. It should be noted, however, that Roedell (1978) did not observe socially more mature play in a group of middle-class gifted children than in nongifted children of similar backgrounds.

Another source of evidence for the social maturity of gifted children and youth comes indirectly from reports of their social adaptation to accelerative educational strategies (e.g., Benbow, this volume; Daurio, 1979; Janos et al., 1988; Southern & Jones, in press). So long as children are carefully selected, there is overwhelming evidence that their social adjustment is as positive as that of other students in their classes and/or of nonaccelerated students. Because this aspect is treated in Benbow's chapter, we omit discussion here, but we feel compelled to emphasize the social adaptive ability of gifted children in accelerative programs as a salient feature of their capability.

In contrast, parental perception measures tend not to reveal social precocity. In a study of linguistically precocious toddlers, Robinson, Dale, and Landesman (1990) asked parents to describe their children's skills, using the interview schedule of the Revised Vineland Social Maturity Scale. Only on the Communication Scale did gifted toddlers significantly exceed the scale's normative group, not in socialization, self-help, or motor skills. Similarly, in an unpublished study by Janos, Fung, and Robinson of the responses of parents to a questionnaire form of the same scale, the socialization and self-help skills of 8-10 year-old gifted children did not appear advanced over the normative sample. Just what these findings imply is puzzling in light of the children's preference for older playmates, and the consistent findings of social mastery in children who have been accelerated in grade placement. Whether parents fail to perceive the maturity of which their children are in fact capable, or whether indeed they tend to restrict their gifted children by adhering to norms determined by age or physical size (Brackbill & Nevill, 1981) is not clear. There seems ample reason to suspect, however, that a degree of infantilization is occurring in families and perhaps in schools that works to the detriment of gifted children, particularly gifted girls.

Social Knowledge and Social Reasoning

Studies which have employed social knowledge tasks and tasks of moral reasoning have, not surprisingly, discovered that gifted children show clear advancement on these measures. Such measures tend, in fact, to resemble the kinds of tasks of which intelligence tests are constituted. Janos and Robinson (1985) summarized studies of social problem solving; perceptual, conceptual, and affective perspective taking; social knowledge; gender awareness; and moral judgment, on all of which bright children did well.

For example, Janos, Robinson, and Lunneborg (1989) administered the Defining Issues Test (Rest, 1979), a

group form of the Kohlberg moral reasoning dilemmas, to two groups of gifted adolescents, one of them in an accelerated college entrance program, as well as to college-age National Merit Scholarship Finalists and other students who had entered a large state university at the ordinary age. The adolescent gifted students responded at a level similar to these and other college samples and a year later, scored at the level of graduate students in Rest's (1979) study.

To what extent this knowledge is put into practice is questionable (Roedell, 1989) but there appears the strong possibility that conceptual understanding will be put to use if children are given a chance to learn and practice the social skills to match their understanding.

Personality Variables

The lack of a developmental paradigm in the area of personality makes it very difficult to study maturity in this nebulous area. Because development is not a salient feature of personality theories, year-by-year age progressions are often ignored in developing objective personality measures.

One area in which age differences are relatively easy to recognize is that of children's fears, which have a significant cognitive component. Here the evidence is clear that gifted children's fears tend to resemble those of older children (Maurer, 1965; Thorndike, 1940). More recently, Derevensky and Coleman (1989) compared the responses of gifted children ages 8-13 with those of nongifted children to the question, "What are the things to be afraid of?" The gifted children's responses were similar to those of older children, were predominantly realistic, and revealed considerable frustration, helplessness, and pessimism. Similarly, Klene (1988), who surveyed parents of gifted children ages 5-13, found that the fears reported resembled those of older children and adults, with generally earlier onset and more mention of being criticized and making mistakes, as well as more fears of violence and natural disasters, than expected at the ages of onset. The worrisomeness of these fears is exacerbated by gifted children's greater involvement with media such as newspapers and television news and the consequent awareness of serious world problems (Clark & Hankins, 1985; Galbraith, 1985).

Another area in which maturity is reflected is that of locus of control, the tendency to view events and outcomes as under one's own control versus the product of circumstances or luck. Several studies with gifted elementary and junior-high age children (e.g., Collier, Jacobson, & Stahl, 1987; Milgram & Milgram, 1976) show a greater tendency toward internal locus of control than exhibited by age-mates. Brody and Benbow (1987) reported stronger internal locus of control in verbally and/or mathematically very bright teenagers than a comparison group who scored much lower on the Scholastic Aptitude Test (SAT). Davis and Connell (1985) with students in grades 4-6 in the United States, however, reported higher autonomous judgment in gifted children

but similar internal (effort) explanations for academic outcomes in gifted and average groups.

In the larger sphere of personality, evidence from objective questionnaires does suggest advanced maturity, at least among gifted adolescents, in comparison with norms (Janos & Robinson, 1985). Lessinger and Martinson (1961), in a widely cited study, used the California Psychological Inventory (CPI) with sizable samples of gifted and nongifted junior and senior high school students representative of the California pupil population. Gifted students of both sexes resembled older nongifted students and adults more closely than they resembled agemates. Janos et al. (1989), who administered the CPI to the gifted adolescents and college groups noted above, found no systematic group differences in the Social Maturity Index, which reflects dependability, foresightness, and capability.

Summary

Are, then, gifted children, on average, more mature than their agemates? Most of the evidence points in that direction; certainly in their choice of friends, play interests, social understanding, fears, and world view, gifted children consistently resemble older children. Evidence from personality questionnaires is generally unsatisfying, primarily because the dimensions of maturity are not clearly defined. In actual social and daily living skills, the evidence is equivocal, the suspicion being raised that too little is being expected, permitted, and taught by somewhat overprotective parents and by others who fail to recognize the capacities of the children.

Adjustment Issues: Global Assessments

As noted by Janos and Robinson (1985), the assessment of a global concept such as "adjustment" is fraught with conceptual problems about the nature of mental health, optimal lifestyles, gender roles, and age-related expectations. Moreover, as we have mentioned, there tends to be a confusion between giftedness and family background, reflecting the positive correlation between social status and life advantage.

Preadolescents

Perusal of a large group of studies of preadolescent children revealed not one in which a gifted group appeared globally less well-adjusted than nongifted comparison groups and, in most of the studies, the gifted subjects were superior in psychosocial adjustment. The measures used in such studies included self-report instruments, psychological scales, ratings by teachers and parents, checklists, and the like. As a group, gifted children were seen as more trustworthy, honest, socially competent, assured and comfortable with self, courteous, cooperative, stable, and humorous, while they were also seen as showing diminished tendencies to boast, to

engage in delinquent activity, to aggress or with to be domineering, and so on.

Collateral information of the same kind comes from follow-up studies of gifted children admitted early to school. Despite fears by teachers that such children experience failure in the social sphere, this has not proved to be the case (see Proctor, Black, & Feldhusen, 1989; Robinson & Weimer, in press, for reviews).

Indeed, these findings were so consistent and convincing that this kind of global investigation with preadolescents has virtually come to a halt. Our literature returned up very few studies of this nature since 1980. While continued research about specific issues is clearly warranted (for example, boys may be at greater risk in the 9-12 year range than girls [Loeb & Jay, 1989]), the verdict would seem to be that as a group, gifted children tend to be well-adjusted, especially during preadolescent years.

Adolescents

The adolescent era may be somewhat more vulnerable, however. Both the Janos and Robinson (1985) review and the more recent literature attest to the continuing general social competence and adjustment of gifted adolescents (e.g., Gallucci, 1988), but new factors appear. Although the scores on self-report measures tend to be well within the normal range for these groups, there are suggestions of stress from pressures to be like those of average ability when, in fact, the gifted adolescent is different in important dimensions, of which intellectual maturity may be only one. Piechowski (1989), for example, reported two distinct patterns of emotional development in a small group of adolescents. One pattern was characterized by responsibility, hard work, altruism, while the other (and more painful) was characterized by sensitivity, intensity, and self-scrutiny accompanied by behavior that was seemingly irrational and immature, but possibly destined for a more crucial role "in the greater scheme of the evolution of human potential" (1989, p. 99). Underscoring the greater intelligence experienced by gifted adolescents, Mayer, Callahan, Zigler, and Dryden (1989) report a high degree of ambition and pleasure, and a low degree of apathy, compared with nongifted agemates and undergraduates at a selective college.

Gifted adolescents face all the developmental issues faced by any young person in this transition period, with an added central issue which many define as a conflict between acceptance in the social group and fulfillment of their academic talents, a dilemma which Gross (1989) poses as "the pursuit of excellence or the search for conformity" (p. 189). Buescher et al. (1987) and Buescher and Higham (1989), on the basis of questionnaires administered to a large group of participants in special programs of the Midwest Talent Search, identified four coping strategies to cope with this dilemma: using their resources to help others, acquiring a second label besides "academically talented" in the school setting, cultivating a

relationships, and seeking opportunities to develop their talents outside of school. Sex differences were apparent, with girls more likely to give up their academic-talent identity in favor of relationships with a wide range of peers. (See later section of this chapter.) For both sexes, the strategy of friendships with others of similar ability weakened as the broader peer group became a higher priority, while both before age 13 and after 15, the gifted adolescents coped better with being seen as "different."

Young Adults

At college age, with increased autonomy and decreased peer pressure for conformity, as well as access to other bright classmates, the situation changes. As Janos and Robinson (1985) concluded, studies of groups of college-age students who are achieving at a high level all show evidence of favorable adjustment. For example, Janos et al. (1989) used two college-age comparison groups in a study of adolescents accelerated to the college level at a large state university. As a group, the National Merit Scholarship finalists had higher grades than an average college group and somewhat less conventional personalities but showed equally positive adjustment. A group at whom little to nothing is known but where high risk is suspected, is young adults of high ability who do not attend college, attend academically nonchallenging colleges, or otherwise fall out of the expected trajectory of high achievement.

Adjustment and the Label

There is some evidence that parents who use the label, "gifted," to describe their children tend to have children with somewhat more problems. Cornell (1989), for example, found that, within a sample of 482 gifted children, grades 5-11, enrolled in a summer program, the minority, whose parents refrained from actively using the term, were better adjusted on both self- and peer-report; the finding was replicated with a smaller, younger sample using self- and parent-report (Cornell & Grossberg, 1989). All the parents acknowledged thinking of their children as gifted; all the children were enrolled in special programs; and the groups did not differ in academic achievement or intellectual ability. Freeman (1979) had similarly reported that children whose parents had joined an organization for parents of gifted children, had more problems than a school control group (though the latter were not, on the average, quite as bright). Yet, Cornell (1983) previously had found that parents who thought of one of their children as gifted were closer to that child and viewed them more positively.

From the children's point of view, the label is sometimes burdensome, and adolescents will often go to great lengths to avoid recognition of their talent (Tidwell, 1960) or even school programs that would be appropriate and interesting for them (Buescher & Higham, 1989).

The origins of this paradoxical finding are not im-

mediately obvious. Why should appropriate labeling not help both children and adults to assess a situation realistically? Cornell (1989) suggests that use of the term is not noxious in itself but a marker variable. There may be several factors at work here. First of all, confusion about definitions of giftedness may make for confusing messages to the child, one parent perhaps defining giftedness as "being bright" while the other reserves the term for "world-class genius." It may also be that labels tend to deny the significant individual differences within the labeled group, and to create exaggerated expectations and inappropriate achievement pressures. They may also, depending on the circumstances, add to the child's feeling "different" from others, a feeling associated with higher risk for maladjustment (Freeman, 1979) even when the dimension of difference is positive (Janos, Fung, & Robinson, 1985). On the other hand, it may be that parents who join organizations and use labels are seeking ways to deal with problems they perceive, so that the labels and organizations are symptoms, not causes. At the other end of the intellectual scale, there is a large body of literature on the effects of labeling mentally retarded children which is equally unresolved. The available evidence suggests that sensitivity is called for, and that labels are better applied to behaviors (Jackson & Butterfield, 1986) and programs (A. Robinson, 1986) than children.

Specific Areas of Vulnerability

Within this generally positive context, there are some psychological areas worthy of specific attention. Most of those listed here are relevant to the issue of giftedness either because they potentially relate to questions of educational programming or because bright youngsters appear particularly at risk in these areas.

Self-Concept and Self-Esteem

GLOBAL SELF-ESTEEM

In a general sense, the notion of self-concept or self-esteem translates to self-estimation of adjustment or happiness as well as competence. The several studies reviewed by Janos and Robinson (1985) suggested that under most circumstances, groups of gifted children tended to give more positive responses to global scales measuring feelings of self-worth such as the Piers-Harris or Tennessee Self-Concept scales, especially when seen in comparison with normative groups (but not necessarily middle-class groups) (e.g., Janos, 1983; Lehman & Erdwins, 1981; Tidwell, 1980). When suitable comparison groups are included, however, most investigators have found gifted students not as much higher, but no lower, in global self-esteem (e.g., Coleman & Fults, 1982; Janos et al., 1989; Maddux, Scheiber, & Bass, 1982).

SCHOLASTIC SELF-CONCEPT

Investigators are now more interested in specific aspects of self-concept than in global measures. Of particular interest for a group of gifted individuals is their concept of themselves as scholars. Most investigators have found that the academic self-concept of intellectually gifted students is, of several possible factors (e.g., social self, physical self), typically highest. Tidwell (1980), for example, who surveyed nearly 1,600 10th graders including large numbers of minority subjects, found high self-concept scores in general, but particularly in the academic realm, despite general reluctance to acknowledge their abilities.

A number of investigators have looked at the academic self-concept of students in contrasting educational environments, raising a series of questions outside the scope of the current chapter. Most have found, not surprisingly, that gifted children in special programs do see themselves as academically more competent than norming groups (e.g., Olszewski-Kubilius & Kulieke, 1989) or nongifted samples (e.g., Brounstein & Holahan, 1987; Colangelo & Brower, 1987; Davis & Connell, 1985; Winne, Woodlands, & Wong, 1982), their academic self-concept tending to exceed other aspects of their self-perceptions such as the social self (Colangelo & Brower, 1987; Ross & Parker, 1980; Winne et al., 1982). Children's academic self-concept derives in large part from comparison with their classmates (see, e.g., Bourque & Li, 1987; Coleman & Fuitts, 1982; Kulik & Kulik, 1982; Marsh, 1984), with those in regular classes tending to have somewhat higher academic self-concepts than those in segregated classes. It has also been hypothesized that it is not the social milieu but achievement that is the major vehicle for judging academic competence (Franks & Dolan, 1982); presumably, a lower level of mastery of more challenging work might produce a weaker feeling of competence than full mastery of easier work.

It has been tacitly assumed that the higher the degree of self-confidence, the better, but that assumption may be worth challenging. If self-esteem is derived from being a big frog in a small pond, it may be fragile. Gifted students may be in for a rude awakening when they encounter unaccustomed challenges more appropriate to their level of ability, suffer undue loss of esteem, and/or employ defenses detrimental to their ultimate attainment. A feeling of confidence derived from having coped with the difficult rather than merely having excelled at the easy may be better preparation for life's challenges.

Attributes of achievement

It is not enough to be bright: as children mature, expectations of achievement become increasingly salient in conceptions of giftedness. In addition to opportunity and encouragement (Feldman & Goldsmith, 1986) (and some degree of luck), willingness for work and determination to do one's best (Bloom, 1982) largely determine the

extent to which ability will be translated into achievement of goals that are valued by the individual and by society.

ACHIEVEMENT MOTIVATION AND ITS DERIVATION

As Janos and Robinson (1985) pointed out, little connection has been made between theories of achievement motivation (McClelland, Atkinson, Clark, & Loewin, 1953) and achievement by gifted individuals. They suggest that parents who provide early opportunities for independent attainment encourage motivation for attainment and high standards of excellence. The evidence reviewed by Janos and Robinson confirmed that parents and teachers see intellectually gifted individuals as self-sufficient, independent, autonomous, dominant, individualistic, self-directed, and nonconforming. Early socialization practices of parents of gifted children do tend to encourage early attainment (Chambers & Robinson, 1986), but the evidence cited earlier in this chapter about a lack of advancement in daily living suggests caution in generalization.

THEORIES OF INTELLIGENCE AND ASSESSMENT OF COMPETENCE

Although very little has been done so far with gifted children within mainstream developmental psychology, recent research suggests important sources of individual differences in academic motivation and children's sense of their own abilities. Dweck and her colleagues (Dweck, 1986; Dweck & Elliott, 1983) have outlined a developmental progression in children's sense of their own abilities, with young children thinking of ability, like other skills, in an undifferentiated way as "instrumental-instrumental," subject to increase through practice and effort. As they grow older, and especially for the brighter children, a more differentiated concept of ability as an "entity" is thought to emerge. By upper elementary school age, there are stable individual differences in children's concepts of entity versus incremental theories of ability, dependent in part on ability level but also dependent on the educational context (Dweck & Leggett, 1988). Unfortunately, the more mature concept has pitfalls, for it carries with it the understanding that a task with a given level of difficulty, effort and ability are inversely related (Nicholls, 1978). The more able is, the less effort one should have to invest in attaining goals or earning grades. In the adolescent culture becomes important not to be a "nerd" or a "bookworm" but, rather, the person to whom academic attainment seems effortless. Although some bright adolescents continue to see giftedness not as a trait but as "performance" requiring sustained effort (Kerr, Colangelo, & Gilmore, 1988), to other bright students, ability as an entity translates into eschewing challenging opportunities such as honors or Advanced Placement classes in favor of those requiring minimal effort (Stipek, 1988).

Stipek and Mac Iver (1989) have reviewed the developmental literature on children's assessment of intelligence.

competence. They find a consistent decline with age in self-perceived level of competence, with a shift from an early stage in which children are most affected by praise for their own accomplishments, through a stage in which effort, social reinforcement, and mastery are the prominent criteria, to a final stage in which normative information and a wide set of objective criteria are employed. We expect that future research will show that gifted children show advancement in both their concepts of intelligence and their ability to use information to judge their own abilities, and that it will be particularly important that adults are sensitive in giving them both useful information and supportive feedback.

COMMITMENT AND PERSEVERANCE

Dedication and hard work are so necessary to high attainment that some theorists have included a sense of commitment in a definition of giftedness (e.g., Renzulli, 1978), probably beginning at an early age. There is evidence that gifted students show greater task persistence and choose more difficult tasks than do average students (Bogle & Buckhalt, 1987) and that they show high levels of energy and of persistence, perseverance, and striving from preschool through college age (Janos & Robinson, 1985).

Competitiveness is sometimes assumed to be a component of this picture, but there is evidence that gifted adolescents, even those who usually succeed in competitions, perceive competitive situations to breed less effective motivational and learning situations (Clinkenbeard, 1989). Even upper-elementary students report not liking competitions and feeling uncomfortable about competing with classmates who are less bright (Ford, 1989). This appears to be particularly true for gifted girls and Native Americans, who will often reject competition in favor of cooperation and preservation of relationships.

Performance Expectations: Perfectionism

Although perfectionism (very high standards for one's own attainment) has been described as a neurotic and negative factor in many maladaptive disorders, especially depression (Burns, 1980; Hamachek, 1978), it can have its positive aspects as well (Hamachek, 1978). Several investigators of gifted persons have called attention to the role of very high standards in groups such as successful architects (MacKinnon, 1964), Nobel laureates (Zuckerman, 1979), and world-class pianists, sculptors, tennis players, swimmers, mathematicians, and research neurologists (Bloom, 1985). Indeed, without high standards for one's own performance, attainment is very likely to suffer. Holding and attaining high standards leads to achievement, efficacy, and energy (Locke, Cartledge, & Koepfel, 1968), optimism and self-confirmation (Dweck & Elliott, 1983), high self-esteem (Bandura, 1977) and of course the positive effects of attaining the goal, be it a creative product, a new skill, or whatever. Much more attention has been given to negative con-

mitants of perfectionism, such as depression, shame and guilt, shyness and procrastination (Hamachek, 1978), as well as overemphasis on the future without appreciation for one's own progress, all-or-none thinking, and rigidity (Barrow & Moore, 1983).

Parents of gifted children do report a high incidence of "perfectionism" on scales such as the Child Behavior Checklist (Achenbach & Edelbrock, 1983). In 8- to 13-year-old children described by their mothers in a study currently under way by Chamrad, Robinson and Treder, a third of gifted and nongifted samples received ratings of 1 (on a scale of 0-2), but 13% of the gifted and only 3% of the nongifted received ratings of 2. Clinically, we have met gifted children exhibiting a broad spectrum of standard-setting. Some children seem not to evaluate their own performance very seriously, apparently assuming that they will do "well enough." Among those with very high standards, however, some are virtually paralyzed by those standards to the extent that they cannot bear to turn in imperfect papers and/or avoid trying out new skill areas. Others with equally high standards are able to take more reasonable risks, to gain real pleasure from their own successes and tolerate their misses.

While the literature in this area is sparse, there are several reasons to expect that gifted children would develop high standards. They are not only more capable than other children of meeting expected goals, but they are also used to doing so and therefore optimistic about future attainment. They are able to envision goals which are more complex, detailed, mature, complete, and perhaps more "creative" than those of their age peers, and are more likely to have older friends with a more mature and competent frame of reference. Whether the consequences of high standards are, on the whole, positive or negative for children probably depends in large part on the child's temperament, and on experience within the family. As yet, however, there is far too little research in this area to do more than guess. It is clear, however, that ultimate attainment is closely tied to goal-setting, and that this area is of considerable significance to gifted children.

Peer Relations

Most direct studies of peer relations have been carried out with preadolescents and most of these show gifted children generally enjoying more positive sociometric status as rated by peers, or at least, status which is not significantly different from nongifted controls (Czeschlik & Rost, 1988; Schneider, 1987), while ratings by teachers and parents tend to be more mixed (Schneider, 1987). The advantage gifted children have in their peer relationships during elementary school seems to disappear in the later grades (Martyn, 1957; Schneider, Clegg, Byrne, Ledingham, & Crombie, 1986), but not to reverse itself.

Yet when gifted children are asked about their relationships, a slightly different picture sometimes emerges, with gifted children reporting a sense of giftedness as a social handicap (Kerr et al., 1988), and social self-con-

cept scores lagging behind either reports of global self-concept or academic self-concept (Schneider, 1987). Even the ultimately most successful adults in the Terman sample, with high ratings of friendliness and social relationships, as young adolescents had rated themselves as having difficulty entering social activities and making friends (Monks & Ferguson, 1983). Here, too, an age factor may be at work. Janos, Marwood, and Robinson (1985), for example, found that children 6-10 years old with IQs 120-140, reported overwhelmingly that they had "just the right number" of friends (78% or too many (20%!), while their parents, in contrast, reported that only 25% of the 6-8 year olds, but 60% of the 8-10 year olds had fewer than two close friends, with a third of each age group having no close friends at all. An interesting study by Schneider, Ledingham, Crombie, and Clegg (1986) compared self-reports of gifted children in grades 5, 8, and 10 with their ratings by peers, and found a clear tendency for the gifted students to report lower social self-perceptions than predicted from peer ratings. Perhaps, as Roedell (1985) has suggested, gifted children have more mature and deeper concepts of friendship than their peers and are more disappointed at the reality of their relationships than truly unpopular.

Vulnerability to Depression or Suicide

MANIC-DEPRESSIVE PSYCHOSIS

Although there does seem to be a link between creativity and affective illness (particularly bipolar affective disorder) (Andreasen & Glick, 1988), the incidence and prevalence among the young gifted population is not known. Andreasen and Glick, having summarized the research on the relationship between creativity and affective illness, concluded that many creative men in different fields suffer from this disorder; unfortunately, no information about women or children is offered. They also suggest that the personality characteristics of creative individuals appear consistent across a variety of different studies and include nonconforming, adventuresome, sensitive, introspective, socially detached, self-assertive, intelligent and independent. There is also some evidence that mood disturbances, whether manic or depressive, enhance creativity, although not necessarily during the periods of depression or hypomania. Interestingly, there may also be a link between bipolar affective disorder and high achievement, or a higher socioeconomic status for families of patients with bipolar affective disorder than families of patients with other affective disorders (Coryell et al., 1989).

DEPRESSION AND SUICIDE

Suicide is the third leading cause of death among adolescents and young adults in the United States, and its incidence has risen steadily over the past 30 years. Suicide is generally underreported for all age groups, and conse-

quently there is no accurate assessment of the number of youth in the general population, or the gifted population, who attempt and/or complete the act. Some existing data, however, tend to confirm the suspicion (Lajo Shore, 1981) that young people who are gifted may be at greater risk for taking their own lives. According to Farrell's (1989) review, researchers at the University of California at Berkeley reported that 67% of all students who had committed suicide on that campus had all average grades, while 91% of undergraduates who committed suicide had above average grades. A 1984 study by Sargent of 1,500 suicide completions also indicated that "better students made the most severe attempt ending their lives" (p. 136).

Although the suicidal act is frequently an impulsive one for adolescents, multiple psychodynamic factors invariably precede a suicide attempt. The most powerful are the loss, through death, desertion, or separation, of a significant relationship with parents or peers, and destructive parental attitudes which convey to the child that she or he is unwanted and expendable (McAnarney, 1979; Rosenkrantz, 1978). Others include dysfunctional family relationships, inadequate social support, perceived inadequacy of self, diminished problem-solving capacity, perceptions of external rather than internal control, and self-rejection or self-derogation (Dulmus, Kausch, Blum, Reed, & Bush, 1989; Kaplan & Pokorny, 1976).

These factors might well be present in the history of gifted children who kill themselves, but there are personality characteristics associated with giftedness which could lead some young people to contemplate the act of suicide. Farrell (1989) and DeGroot (1986) argued that perfectionism, stressful parental and societal pressures to achieve, and the burden of multitalentedness are factors which seriously stress gifted adolescents' ability to cope, particularly when accompanied by distorted perceptions of failure and what Farrell (1989) describes as "success depression":

Success depression is associated with continual success and the stress of maintaining that continual success. Because their experience with failure is so slight or nonexistent, their ability to deal with failure is often below average and sometimes debilitating (p. 136).

Gifted young people may experience a discrepancy between their intellect and their maturity in certain domains. Some experience a severe conflict between doing well for parents and poorly for peers, and they may wrestle with their ability to understand adult situations and world events but their inability to affect the outcome of those events. Many feel lonely and isolated, and the social support and social skills crucial to coping with stressful life events. Popularity is an important component of most adolescents' perception of emotional

being, but, as we have seen, often diminishes after elementary school.

Leroux (1986) interviewed eight parents of gifted adolescent sons who had committed suicide, and found several other explanations offered. Some parents suggested that there was no room in their children's schools for individuality or nonconformity, while others indicated a disinterest in competitive sports, or proximity to a friend's suicide.

Gifted young people in an increasingly complex and disorganized society, perhaps more than other children, are clearly at risk for sliding into the cycle of depression, helplessness, and hopelessness which can all too easily result in suicidal ideation or completion. The reinforcement of family relationships and social support networks, particularly for highly gifted adolescents who are most vulnerable to social isolation, and resources to help young people cope with stress and strengthen their sense of self are strategies which all who work with gifted young people should be prepared to undertake.

Family Relations

As we have seen, gifted children's relationships with their parents tend, on the whole, to be more positive and child-centered than those seen in control groups, although there is evidence that creative people may come from homes characterized by somewhat more stress. There is no doubt, too, that in some families the focus (and pressure) on intellectual development can become excessive, with negative outcomes for children (Albert, 1978; Fowler, 1981; Montour, 1977).

The single relationship within the family that may be more vulnerable in families with gifted children is that with siblings. A number of studies have identified the nongifted member as vulnerable to maladjustment, through a less favored position with the parents (Cornell, 1983), lower self-esteem (Pfouts, 1976), competitiveness (Peterson, 1977), having an excess "third parent" in the gifted sibling (Hackney, 1981), violation of expectation that the older will be more competent (Pfouts, 1980), and overvaluing the gifted child (Ballering & Koch, 1984). In families with two gifted children, the sibling relationships may, in fact, be most negative, possibly because of competition (Ballering & Koch, 1984). On a more positive note, Colangelo and Brower (1987) report that the effect on the non-identified sibling's self-concept was not apparent in a group in which the gifted sibling had entered a program at least five years earlier.

An in-process study by Chamrad, Robinson and Treder suggests that the situation is far from simple. There appear to be some advantages to having a gifted sibling, and some disadvantages, with sex differences, birth order, and the cohesiveness of family relations playing critical roles. Moreover, many more effects of siblings' giftedness are apparent when parental perception rather than school identification is the independent variable.

Summary

As we have seen in this section on vulnerabilities, even within the overall positive framework observed in gifted children and their families, some characteristic pressure points exist. Giftedness, while in many ways a "blessing," sometimes has its liabilities as well. School personnel need to be aware of these issues—not afraid of them—in order to assist bright young people and their families to attain the high levels of competence and satisfaction which are potentially theirs.

Psychosocial Vulnerability of Special Populations

The last several years have witnessed a growing concern about the needs of young gifted members of special populations: children who are highly gifted, children from racial minorities, and children who have disabilities, or are economically disadvantaged. Although Van-Tassel-Baska explores the characteristics and educational needs of these youth in her chapter, there are a number of psychosocial issues which deserve special attention in this section.

The Highly Gifted

Within the gifted population is a small subgroup of extraordinarily advanced individuals with IQs more than 4 standard deviations above the mean (Wechsler IQ 160+ or Stanford—Binet 164+), although with a potential IQ spread of 50 points or more (Kline & Meckstroth, 1985). Since Terman's time, professionals (but not necessarily the lay public) have discarded their negative stereotypes of gifted children as a group, indeed, perhaps going too far in expecting outstanding mental health to characterize every child of high intelligence. The question is whether the brighter the child, the more positive the adjustment, or whether there is some form of nonlinear relationship, with the very brightest at risk for adjustment problems.

Grossberg and Cornell (1988) encapsulate the issue as "Terman versus Hollingworth," citing landmark investigators whose research seemed to identify positive versus negative consequences for the brightest individuals. Both investigators knew their subjects very well. Hollingworth (1931, 1942) had seen negative consequences in general for the small group of children she studied with IQs above 180, largely because of social isolation; Terman (1925–1959) had seen high intelligence as an asset to adjustment, although he frequently cautioned parents not to neglect the social aspect of life (Janos, 1986).

It has proved very difficult to draw a profile of this population because these children and their families "... are as likely to violate stereotypes as they are to perpetuate them" (McGuffog, Feiring, & Lewis, 1987, p. 84). The objective evidence about the adjustment of such groups is equivocal. Most reports of highly gifted individuals (e.g., Feldman, 1984; Gallagher, 1958; Grossberg

& Cornell, 1988; Janos, 1983; Janos et al., 1989) suggest that highly intelligent individuals during and after school show adjustment as positive as that of moderately intelligent subjects and normative samples. A minority of studies show somewhat lower self-esteem or adjustment in highly gifted than moderately gifted samples (e.g., Brounstein & Holahan, 1987). A careful examination of the reported data conducted by Janos and Robinson (1985) concluded, however, that within a generally positive context, there tends to exist in most samples a subgroup of perhaps 20-25% with serious maladjustment, a proportion perhaps double that found in the "normal" population. This is a subset which tends to be overlooked in group comparisons.

A number of stressors complicate life for highly gifted children, even those who cope well. Hollingworth (1931, 1942) suggested that some were bullied by older classmates, had play interests that age-mates could not share, and were required to tolerate unreasonable restrictions. The social stressors are likely to be acute with children whose maturity differs so markedly from that of age-mates. Albert and Runco (1987), reporting an in-depth study of 12-13 year-old boys with IQs of more than 150, or exceptionally high math SAT scores ($M = 635$), or nongifted scores, found both gifted groups to be socially more isolated than the controls, the high-math group the more so. Janos et al. (1985), comparing self-reports of highly gifted (IQ 163+) and moderately gifted (IQs 120-140) children ages 6-10, found significantly more of the very bright children reporting older but "too few" friends, a report confirmed by their parents (20% of the group had no friends at all). Highly gifted children tend to value close, intimate relationships yet have few peers with whom they can share their interests, their level of understanding, and their intense awareness, resulting in feelings of isolation, alienation, and loneliness (Brody & Benbow, 1987; Kerr, 1985; Kline & Meckstroth, 1985) and greater dependence on their parents for companionship (Silverman & Kearney, 1989).

The lack of an appropriate school environment is also most acutely felt by these children, whose rate of intellectual development so far outpaces the usual curriculum (Ford, 1989). (See Benbow, this volume, for a discussion of appropriate alternatives for children who need educational acceleration.)

Also potentially stressful is the expectation highly gifted individuals experience, on their own or from others, that they will live up to the promise of their high potential. As Kline and Meckstroth comment, "... adults ... often respond with increased measures of control and management to gratify their perception of what the child should be" (1985, p. 126). Most highly gifted children fail, in fact, to fulfill their potential, whether because of unreasonable adult expectations, because without challenge they have learned to coast along without investment or commitment, because their abilities do not translate easily into measurable achievement, or because opportunities are unavailable (Janos & Robinson, 1985). This dilemma is particularly germane to highly gifted

females, whose expression of ability is severely compromised by limited cultural opportunities and sex-role stereotyping (Noble, 1987). (See discussion below.)

Silverman and Kearney (1989) interviewed parents of 38 children with IQs above 170 who participated in support groups in Maine and Colorado. These parents reported extraordinary stresses involving overwhelming feelings of responsibility for their children, often coupled with feelings of their own inadequacy to deal with the situation, extra costs which start sooner and are higher than those for other children, and frustration with schools which do not begin to meet their children's needs. Most of the parents were closely involved with their children, with many of the mothers having opted to become "gifted nurturers" rather than to pursue their own goals.

Is there, then, such a thing as too much ability, a cut-off point beyond which risks of maladjustment increase? The empirical evidence is, as we have seen, contradictory but when problems do appear, they probably lie primarily in the lack of match between the child and the environment. Grossberg and Cornell (1988), whose own evidence from children with IQs 120-168 did not support Hollingworth's concerns, still concluded:

Although high IQ appears to be associated with better adjustment, it clearly does not render the child invulnerable to adjustment problems ... The child's high IQ is such a remarkable attribute that it may be falsely perceived as associated with any adjustment problems the child develops ... High IQ may place some children at risk due to others' jealousy, fear, negative attitudes, absence of appropriate school program, lack of intellectual peers ... No high intelligence, but rather (its) consequences ... may have a negative effect ... (pp. 270-271).

Females

The majority of gifted females are at great risk of not fulfilling their high potential. That is the conclusion reached by several researchers who have investigated both the causes and consequences of gifted females underachievement and underrepresentation in elementary and secondary gifted programs, in postsecondary educational and organizational environments and in higher-paying jobs (Ben-Dor, 1979; Clark, 1988; Kellian, 1983; Kerr, 1985; Noble, 1987, 1989b; Reis & Callahan, 1989; Silverman, 1986; Subotnik, Karp & Morgan, 1989). Silverman (1986) described a decrease in the number of girls in gifted programs from over 50% at the K-3 level to less than 30% by junior high school, while Reis and Callahan (1989) documented a continual erosion in the aspirations, ambitions, and attainment of bright females during and after secondary school despite consistently higher grades than males in school and college, and a shrinking gender gap in standardized achievement test scores. Discriminatory identification practices, sex-role socialization, lower adult expectations for female achievement, and fewer educational and occupational

opportunities certainly contribute to the erosion of female talent, but are insufficient to fully explain this phenomenon. Noble (1989a) suggested that some girls and women reject the challenge of being gifted because they perceive that developing their abilities may endanger their relationships with parents or friends, or compromise their sense of femininity and belonging, or their emotional well-being.

Clearly, a complex interplay of interpersonal, familial, sociocultural, and intrapersonal factors contribute to the erosion of gifted girls' development and enjoyment of their abilities. Families and teachers from childhood through adulthood expect far less from females than they do from males, especially in regard to achievement in math and science, an attitude which girls absorb very early in life. Cramer (1989), for example, interviewing 4th grade gifted girls, reported that "... most of the reasons found in the literature to explain the male/female disparity—conflicting expectations, lack of confidence, lack of female role models, and especially sex role stereotyping—came to the surface" (p. 128). Campbell, Connolly, Lacattiva and Pizzo (1985) collected data from 751 gifted white, black, Asian, and Hispanic 5th and 6th grade students and their parents, with particular attention to student perceptions of adult attitudes and expectations. Although distinct differences were found among families in each ethnic group, and each group appeared to exert far more pressure on their sons to achieve, white parents exerted significantly less pressure on their daughters than did any other ethnic group, socialized them away from more difficult technical fields, and held significantly lower expectations for their daughters' productivity than did Asian parents.

Many gifted females are taught early in life that competence and achievement will be accompanied by loneliness and ostracism. Teachers appear to like gifted males better, consider them more capable, and negatively perceive in gifted females qualities that they positively perceive in gifted males, qualities such as assertiveness, originality, nontraditional approaches to learning and problem solving, and analytical skills (Bell, 1989; Blaubergs, 1980; Cooley, Chauvin, & Karnes, 1984; Fox, 1981). According to Reis and Callahan (1989), gifted girls receive the least amount of attention in classes, whereas gifted boys are more often called upon, praised, and given opportunities to participate in "hands-on" activities crucial to future success in the sciences. In contrast, girls are called upon if they sit in the front row, and their work is rewarded for neatness and form rather than for ideas and creativity. Most of the 109 gifted women who participated in Noble's (1989b) study recalled painful experiences of being isolated or punished as children for "not being like everyone else," and the majority hid their abilities at some point to be accepted socially.

Although gifted females are often drawn to nontraditional fields, many teachers and counselors, mirroring societal attitudes, view such careers as inappropriate for females. Young gifted women often express doubt that

they can achieve their intellectual potential while maintaining relationships with partners and raising children (Rodenstein, Pfeiffer, & Colangelo, 1977). There is some evidence that this conflict is dissolving, at least for females. Dolny (1985), for example, with 228 gifted students in grades 10-12, found no significant differences between males' and females' aspirations to professional careers or their plans for marriage and children. However, although female students foresaw no future work/family conflict for themselves, half of the males expected such conflict for their spouses. Leroux (1988) interviewing 12th graders and their teachers and guidance counselors, reported that although girls were more academically oriented than boys, they selected service careers more often, perceived males to be more successful in math and science, and thought themselves more likely to remain single in the interest of pursuing careers. (Interestingly, these young women described themselves as "aggressive" and as leaders more often than did the boys, and scored higher in self-perception of ego strength and ability to cope and adapt.)

Beginning in elementary school and continuing through college and graduate school, gifted females lose self-confidence (Arnold & Denny, 1985; Noble, 1989a,b), doubt their intellectual competence (Stipek & Mac Iver, 1989) perceive themselves as less capable than they actually are (Bell, 1989; Cramer, 1989), and believe that boys have ability while they only work hard (Bell, 1989; Cramer, 1989; Kramer, 1985; Reis & Callahan, 1989; Subotnik, 1988). As previously mentioned, girls often believe that achievement and affiliation are mutually exclusive, and that competition should be eschewed to preserve relationships, even if that means sacrificing or underutilizing their skills (Bell, 1989). They choose more often to work in groups, are more concerned about teacher reactions, more likely to adapt to adult expectations, and less likely than boys to describe themselves or be described as autonomous and independent (Leroux, 1988). But gifted girls also use affiliation to assess their level of ability, and to achieve at a higher level, knowing that their grades will be higher if their teachers like them (Bell, 1989; Kramer, 1985).

Finally, the label of "giftedness" is especially problematic for females because of its adverse social consequences. Kerr et al. (1988) reported that the majority of the gifted female adolescents in their study felt giftedness to be socially disadvantageous because it had a negative or ambiguous effect upon others. Kramer's (1985) young students deliberately underestimated their abilities to avoid being seen as physically unattractive or lacking in social competence. And Buescher et al. (1987) found gifted boys and girls more like each other than like peers not identified as gifted except in one critical area: the recognition and acceptance of their own level of ability.

Gifted boys show a greater tendency to cope with feeling different by acquiring additional recognized "labels" and staying in a set of equally talented friends. Gifted girls ... (tend) to minimize the

importance of their recognized talents, keep their accomplishments less visible, and move away from equally capable peers as they proceed through adolescence (1987, p. 5).

Clearly an area of special vulnerability for gifted girls is their fear of being rejected for being gifted, and their tendency to hide, deny, or underdevelop their abilities in order to be accepted by parents, teachers, and friends. But they do not do this in a sociocultural vacuum. One of the most tragic messages many gifted young women receive is that society does not need or want their gifts and abilities, that the real work of the world is accomplished by men, and that any contribution they might make is peripheral or ancillary. It is little wonder that so few females reach maturity with their giftedness intact.

Children from Minority Backgrounds

Unfortunately very little research addresses the psychosocial issues faced by gifted black, Hispanic, Asian, and Native American children. Most of the existing literature examines the reasons for the disproportionately low representation of most ethnic minority children in gifted programs, rather than how those children who are identified as gifted experience and cope with their giftedness. Two studies, however, suggest that there are issues common among gifted minority children regardless of their ethnic background (Baldwin, 1987; Lindstrom & Van Sant, 1986). According to these investigators, many ethnic minority communities consider gifted programs to be elitist, and consider it pretentious for children, especially females, to acknowledge their special abilities. Some hold low cultural expectations for achievement and consequently offer gifted children little encouragement to pursue nontraditional goals. These highly able minority students risk rejection if they develop their cognitive abilities and succeed in the majority culture. This is especially problematic for inner-city black students, who often feel they must hide their grades from peers and distract attention away from their ability or achievement orientation by "acting out" in classes in a variety of ways (Fordham & Ogbu, 1986). Minority children from low socioeconomic homes may not know how to make long-range career and life plans because of their families' focus on the immediate present rather than on future planning, or because, as McIntosh and Greenlaw (1986) observed, these students receive achievement messages which devalue education and stress the acquisition of a job rather than a career.

Racism certainly plays a role in minority students' aspirations. Bell (1989) found that 8-10 year old female students equated success with physical appearance, but black and Hispanic girls frequently perceived "being white" to be a major criterion of success. Further, black or Hispanic gifted girls felt uncertain about competing with males for teacher attention; while Hispanic girls tended to withdraw, black girls preferred to fight back,

risking teacher hostility and disciplinary action. Withdrawal had its own costs in lost opportunities for class participation, for self-determination, and for having needs met.

Finally, some gifted minority youth express their giftedness in forms for which appropriate educational programs do not exist because they are not valued by the majority culture. Daniels (1988) and Tonemah (1987) argued that fundamental differences in values between white and Indian cultures work against Native American students in the majority educational setting. Preference for cooperative rather than competitive activities, discomfort with destroying life for the purpose of scientific investigation, a high regard for the explanatory value of cultural legends and folklore, and disregard for rigid time schedules leave many Native American students at a distinct disadvantage in majority classrooms. In addition, a substantial number of Native American, Hispanic, and Asian or Pacific American children are not native English speakers; their difficulty in using the English language can result in lower test scores, lower self-esteem and lower self-confidence in relation to non-ESL gifted students, and further compromise their ability to utilize their high potential (de Bernard, 1985; Daniels, 1988).

Yet, there are gifted students from low-income and/or minority backgrounds, and some of these are doing well. VanTassel-Baska (1987), who studied intensively a few such promising young people, found in each case that despite adversity, the student could count on encouragement and close monitoring from an intact family. These high-achieving youngsters were also somewhat distant from their neighborhood peers and more focused on school-related interactions, in a pattern likely to reinforce their achievement.

Underserved Populations

We found only a very small number of studies focusing on the psychosocial experiences of gifted children with learning disabilities or physical handicaps, and none which addressed those who are economically disadvantaged; thus, we can offer only a brief summary of the issues which have been identified as salient for some of these youth. Whitmore (1986) placed the needs of these youth in an important context:

Historically the common practice has been to identify and serve ... only the high academic achievers ... (due to widely held beliefs that) the "truly gifted" students excel academically in school and on tests ... The principal consequence of these beliefs about giftedness was the exclusion from programs of all but the highest and most mature academic achievers fitting the stereotype shaped out of Terman's findings (pp. 143-144).

Because of these beliefs, teachers appear reluctant to identify as gifted students who deviate from this stereo-

type, particularly those who are learning disabled. A recent study by Minner, Prater, Bloodworth, and Walker (1987) found that teachers' perceptions of students' giftedness were significantly and negatively influenced by the label "learning disabled," though not by the label "physically disabled." The effect of such negative adult perceptions on learning disabled children's psychosocial well-being can be devastating. Low self-esteem, passivity, isolation, poor self-concept, and a sense of having disappointed parents were some of the feelings which differentiated gifted learning disabled from nonlearning disabled 8-12 year old girls and boys in a study by Waldron, Saphire, and Rosenblum (1987). Learning disabled children were described by teachers as more asocial and less popular, and by themselves as more anxious, less personally satisfied, and having significantly less intelligence and social standing than their nonlabeled peers.

Finally, some mention must be made of the critical nature of socioeconomic status on the recognition of a child's giftedness, and, by extension, on his or her experience and expression of giftedness. Willis and Olszewski (1988) investigated the demographic characteristics of 22,428 participants in the 1986-87 Midwest Talent Search Program, a group which consisted of roughly equal numbers of females and males, a very small number of black and Hispanic students, and a proportional over-representation of Asian students. Of the 17,322 students who took the SAT, 94% came from middle to high-income families. Willis and Olszewski's major finding was that income determined both participation in the program and SAT scores, independent of race, family size, and the number of parents in the household.

Unfortunately, we could find no studies which explored the psychosocial ramifications of economic disadvantage for this population. Thus we can only suspect that the majority of children who come from poor and lower-middle-class families will not see themselves or be recognized by parents or teachers as capable of high achievement. Those who do may have little idea how to create opportunities to develop and utilize their talents. As one respondent in Noble's (1989b) study explained, "much of the privilege of high potential recognition and development lies in the ability to pay for the nurturance of that development—in time, in attention, and in education" (p. 72). The movie "Stand and Deliver" poignantly examines this underserved group of youth, and illustrates their critical need for encouragement by teachers and mentors. Without such support, these children are at high risk for anger, frustration, hopelessness, despair, and even delinquency.

Summary

There are, then, a number of special populations within the gifted group who need special attention from professionals. Highly gifted children, while on the whole they do well, may be at somewhat increased risk of maladjustment. Girls, who constitute half the gifted

group in the early years, tend to disappear from the ranks and to reduce their achievement levels. And gifted groups such as minority members, handicapped individuals, and those from low-income families are not immune to the barriers imposed by those factors, despite the advantage of high intelligence.

Implications for Teachers and Counselors

Although there is much we still do not know about the best ways to promote psychosocial adjustment in gifted children, the research summarized in this chapter does hold some lessons for teachers and counselors as well as parents.

1. One insight which often escapes notice of both investigators and reviewers is the very wide range of individual differences in gifted children and their families, the variance in the data as opposed to the means. In our search for commonalities and guidelines, it is very easy to forget how greatly these children differ among themselves. Indeed, it is probably not inaccurate to expect that the more an individual differs from the mean in intelligence (or any other characteristic), the less our common expectations apply. Schools are not generally well-prepared to deal with individuals, particularly those who are "different," so that the sensitivity of teachers, counselors, and parents to this issue becomes even more critical.

2. Because of the heavy emphasis on programmatic responses to the needs of gifted children, we are prone to forget how school-oriented our definitions of giftedness tend to be. In a school with a special program beginning at fourth grade, there may be no identified gifted third-grade gifted children! We run the risk of meeting institutional needs, not children's needs.

3. In working with families of gifted children, school personnel are likely to encounter parents who are themselves bright, verbal, highly child-centered, and vocal advocates for their children. Establishing a relationship with parents as partners rather than as adversaries is essential. Equally essential is the need to reach out to parents of gifted children from underserved populations who may be less accustomed to working with the educational system and often less effective in doing so.

4. Within the context of family relations that, on the whole, are positive, educators will encounter some families of gifted children which are conflictful or even dysfunctional. It is important to remember that children can be helped to cope with such situations and that, in the long run, these children may turn out to be the more creative and exceptional.

5. Educators and parents need to be aware of the gifted child's potential for maturity in many realms aside from the academic. Of course there will be differences in levels of maturity within a given child, but unless we give children the room to grow we run the risk of infantilizing them. Many—certainly not all—gifted children will profit from some form of acceleration in their educational careers because this will enhance their match with true peers in social as well as intellectual domains. Recogniz-

ing this possibility expands the options available and enhances flexibility of the system to provide an "optional match."

6. After a satisfying social adjustment in elementary school, many children—especially girls—are headed for a more difficult time during adolescence. The support of adults to help maintain integrity in the face of peer pressure can be an important asset to the gifted youngster who risks hiding or combatting his or her own developmental thrust in order to be accepted. Providing help in understanding and mastering conflicting pressures, models, and mentors who have coped successfully, and the promise of a better future in college, can perhaps mitigate an otherwise risky time.

7. We need to begin early to help children meet and master real academic challenges so that they develop a strong sense that true achievement comes only with effort. Children who make a normal developmental shift from an "incremental" to an "entity" theory of intelligence without that kind of experience and commitment are likely to avoid challenges such as honors or Advanced Placement classes. Rather than "laziness," it is more likely that the student has adopted the prevailing view that one is "truly intelligent" only if one accomplishes one's goals with ease. An early pattern of satisfying investment is probably the best insurance.

8. Girls, particularly adolescent girls, need strong encouragement to maintain their autonomy and optimism, to respect their own talents and insights, and pursue their goals however nontraditional they may be.

9. In one sense, special populations at risk for psychosocial maladjustment include the majority of gifted children and youth, if one includes females, those from minority and/or socioeconomically disadvantaged families, those with specific problems in reading or mathematics and those who are highly creative! Each of these groups has its specific vulnerabilities but at the same time, each can enormously enrich the mix of children and youth whom we term "gifted."

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