

"Play Partner" or "Sure Shelter"? Why gifted children prefer older friends..

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Paper presented at 4th Australasian International Conference on the Education of Gifted Students

August, 2001: Melbourne

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"When gifted children are asked what they most desire, the answer is often 'a friend'. The children's experience of school is completely colored by the presence or absence of relationships with peers." (Silverman, 1993, p. 72).

The need for friendship and, even more, for emotional intimacy, is a driving force in both children and adults. This presentation explores the nature of friendship as it is conceived by primary school students and young adolescents, and how perceptions and expectations of friendship differ among children at different age levels, at different levels of ability, and between boys and girls.

The *Encyclopedic World Dictionary* (1971, p. 642) defines friendship somewhat hierarchically:

1. one attached to another by feelings of affection or personal regard.
2. a well-wisher, patron or supporter.
3. one who is on good terms with another; one not hostile
4. a member of the same nation, party, etc.
5. a member of the Society of Friends: Quaker

The dictionary then explains that the word "friend" has its origin in an Old English (prior to 1100AD) verb *freogan* meaning "to love".

Clearly then, there are gradations within the concept of friendship, as indeed there are within the concept of love. One partner in a relationship may define the relationship as friendship while the other views it as acquaintance; one may experience it as love while the other perceives it as friendship.

The findings of the present study suggest that, particularly in the early and middle years of primary school, the friendship expectations of intellectually gifted students differ significantly from those of their age-peers of average ability, while the conceptions of friendship held by very highly gifted students bear little resemblance to those held by the considerable majority of children with whom they are likely to be grouped for purposes of instruction and, ironically, for purposes of socialization.

Both in Australia and in the United States, policy documents developed by primary schools list not only cognitive objectives for the student population, but also desirable affective outcomes including high self-esteem, self-reliance, positive attitudes towards schooling, and healthy "socialization". Few policies acknowledge that the development of warm and facilitative friendships is a necessary precursor to the achievement of any of these four goals. Indeed, the majority of teachers assume that children form friendships naturally and without assistance, and that if an individual child displays difficulties in socialization,

the fault must lie within the child.

By contrast, research on social relationships in childhood and adulthood suggests that problems in forming friendships may originate not so much from within the individual as from differences between the individual and other members of the groups with whom he or she is required to learn, work or socialize.

"Loneliness does not come from having no people about one, but from being unable to communicate to others the things that seem important to oneself, or from holding certain views which others find inadmissible . . . If a man knows more than others, he becomes lonely." (Jung, 1989, p. 356).

Fromm (1957), Sullivan (1953), Erickson (1963) and Selman (1981) have outlined the several functions of friendship.

- companionship
- stimulation
- physical support
- ego support
- affection
- intimacy
- social comparison

The "social comparison" theory developed by Festinger (1954) suggests that people actively seek to compare themselves with others in their social or academic environment as an aid to self-evaluation, and that, given the choice of relatively similar or dissimilar "others", we are more likely to select people similar to ourselves as bases for this comparison. "The tendency to compare (one)self with some other specific person decreases as the difference between his ability and one's own increases" (Festinger, 1954, p. 120).

Indeed, it seems that we consciously seek and choose friends on the basis of similarities (Rubin, 1980). Friendships grow into relationships of intimacy through the discovery of similar interests, similar beliefs and similar values. Children tend to choose friends who are at similar *stages* of intellectual and emotional development.

The implications of this for intellectually gifted children are profound.

Socio-affective adjustment in intellectually gifted children.

Reviews of the psychosocial development of intellectually gifted children and adolescents undertaken over the last 15 years have concluded that the highly positive view of these students' personal and social adjustment proclaimed by Terman and his colleagues more than 70 years ago (Terman, 1925; Burks, Jensen and Terman, 1930) has been validated by many subsequent studies. For example, comprehensive overviews conducted by Austin and Draper (1981), Schneider (1987), Janos and Robinson (1985), and Robinson and Noble (1992) have concluded that, in general, intellectually gifted children:

- are superior to age-peers of average ability in social cognition (e.g. Shantz, 1975|)
- are more popular with age-peers (e.g. Gallagher and Crowder, 1957; Grace and Booth, 1958)
- are more pro-social, act more cooperatively, and exhibit more "sharing" behavior in their play (e.g. Barnett and Fiscella, 198523); Lupkowski, 1989)
- display higher levels of moral reasoning (e.g. Kohlberg, 1964; Janos, Robinson and Lunneborg, 1989)
- have a stronger internal locus of control (e.g. Milgram and Milgram, 1976; Collier, Jacobsen and Stahl, 1987).

It should be noted, however, that despite the generally positive findings on socio-affective development, the authors of all four of these research reviews caution that the considerable

majority of the findings they have reported originate from studies of moderately gifted children, and that the picture may be very different for children of very superior intelligence. Schneider, for example, reports that his own study of peer acceptance of gifted students (Schneider, et al, 1986) found significant negative correlations between IQ and peer nomination, and cautions: "There is considerable reason to believe that the social status of the very highly gifted is not as consistently elevated as that of the moderately gifted" (p. 33). Janos and Robinson (1985, p. 182) warn: "The most highly talented are the most vulnerable, probably because they are exceedingly "out of sync" with school, friends and even family. . . They may become superficially adjusted but sacrifice possibilities for outstanding fulfillment and significant, socially valued, contributions. These are, in our opinion, problems of clinical proportions, but research devoted to exploring them pales in comparison with that devoted to virtually any other maladaptive set of behaviors."

Peer relationships of moderately and highly gifted children.

Hollingworth (1926, 1942) was the first psychologist to undertake a systematic study of peer relationships of children scoring at different levels of intellectual giftedness. She defined the IQ range 125-155 as "socially optimal intelligence" (Hollingworth, 1926). She found that children scoring within this range were well-balanced, self-confident and outgoing individuals who were able to win the confidence and friendship of age-peers. She claimed, however, that above the level of IQ 160 the difference between the exceptionally gifted child and his or her age-mates is so great that it leads to special problems of development which are correlated with social isolation, and that these difficulties appear particularly acute between the ages of four and nine (Hollingworth, 1931).

Hollingworth made clear her conviction that the difficulties in peer relationships experienced by highly gifted children did not arise from deficiencies within the children themselves but through the unlikelihood of their easily finding others who share their abilities and interests.

"This difficulty of the gifted child in forming friendships is largely a result of the infrequency of persons who are like-minded. The more intelligent a person is, regardless of age, the less often can he find a truly congenial companion. The average child finds playmates in plenty who can think and act on a level congenial to him, because there are so many average children." (Hollingworth, 1936, p. 79.)

Three studies have compared the peer relationships of moderately gifted and exceptionally gifted children. Gallagher (1958 comparing the friendship patterns of gifted children scoring below and above IQ 165, noted that the very high scoring group tended to have greater problems of social acceptance than did children scoring between IQ 150 and 164. DeHaan and Havighurst (1961) examined the differences between what they termed "second-order" (IQ 125-159) and "first-order" (IQ 160+) gifted children. They believed that second-order gifted children achieve good social adjustment because they have sufficient intelligence to overcome minor social difficulties, but are not "different" enough to induce the severe problems of salience encountered by the exceptionally gifted. However Barbe (1964) comparing moderately gifted children (IQ 120-134) with highly and exceptionally gifted age-peers (IQ 148-174) found little difference in the emotional adjustment of the two groups, with the exception of a significant difference in "freedom from nervous habits" in favour of the moderately gifted (Barbe, 1964, p. 66). Unlike the work of Hollingworth and Terman, however, these studies were of short duration; no attempt was made to trace the emotional development of the subjects through their school careers.

A small number of studies has investigated aspects of the social and emotional development of groups of exceptionally and profoundly gifted children. Gallagher and Crowder (1957) investigated a group of 36 very highly gifted students in primary school, and found that one quarter of them had considerable emotional difficulties. Selig (1959) studied the personality structure of 27 New York elementary school students of mean IQ 180, as

revealed by the Rorshach technique, to test a hypothesis of association between emotional instability and exceptional intellectual giftedness. In this group the incidence of emotional/social maladjustment was five times the estimated incidence among school children generally. Sheldon (1959) found that 15 of his sample of 28 children of IQ 170+ reported feelings of isolation and rejection, but concluded that an extremely high IQ is not in itself a sufficient cause for perceptions of isolation; like Hollingworth, he believed that the negative self-perceptions of his subjects arose in part from factors such as the reactions of classmates.

A significant contribution to the research on extremely gifted students was made in the early 1980's by Janos, who compared the psychosocial development of 32 children aged 6-9 with IQs in excess of 164, with that of 49 age-peers of moderately superior intellectual ability (Janos, 1983). Although the exceptionally gifted were generally rated higher in terms of their academic performance, they were more isolated than their age peers, had greater problems of social development, and, in the case of a substantial minority, seemed to lack the motivation to develop their intellectual talents. Janos emphasized, however, that the social isolation experienced by these children was not the clinical isolation of emotional disturbance, but was caused by the absence of a suitable peer group with whom to relate. There are virtually no points of common experience and common interest between a 6-year-old with a mental age of 6 and a 6-year-old with a mental age of 12. Hollingworth would have agreed; she emphasized that when exceptionally gifted children who have been rejected by age-peers are removed from the inappropriate grade-placement, and are permitted to work and play with intellectual peers, the loneliness and social isolation disappear and the child is accepted as a valued classmate and friend (Hollingworth, 1942).

A study by Janos, Marwood and Robinson (1985) compared two groups of children centering on age 8, an exceptionally gifted group of IQ 163+ (mean IQ 167.9) and a group of age-peers of IQ 125-140 (mean IQ 131.2). Exceptionally gifted children were significantly more likely to report that most of their friends were older. Interestingly, very few children stated that they had difficulties in making friends; however, the exceptionally gifted were significantly more likely to say that they had too few friends, and that being smart made making friends harder. Parents of the exceptionally gifted children were more likely to report that their child had only one close friend, or no close friends at all.

Gross's longitudinal study of (now) 60 Australian children of IQ 160+, commenced in 1983, has found that those children who were retained in the inclusion classroom with age-peers, or permitted a "token" grade advancement of a single year, experienced significant and ongoing difficulties with peer relationships. Many reported that they had few friends, or no friends at all, despite deliberate and prolonged academic underachievement in efforts to gain acceptance, or at least tolerance, from age-peers. "Some cannot recall a time in their lives when (deliberate masking of their abilities) has not been an automatic survival mechanism, accepted as a painful but necessary part of living" (Gross, 1993, p. 275-276). By contrast, the 16 students who were radically accelerated, and who entered university aged between 11 and 15, reported warm and fulfilling friendships with the older students with whom they learned and socialized through their childhood and adolescence (Gross, 1993, 1994, 1998).

In a study of students selected not on IQ but on mathematical or verbal aptitude, Dauber and Benbow (1990/12) compared the popularity, peer acceptance and peer interaction of extremely gifted students who had scored 700 or more on the Scholastic Aptitude Test (Mathematical) or 630 or more on the Scholastic Aptitude Test (Verbal) before age 13 (an achievement placing them at the top 1 in 10,000 among their age-peers) with those of moderately gifted students who scored at the 97th percentile on a grade-level math or verbal achievement test. Moderately gifted students were viewed both by themselves and by their age-peers as being more popular, more socially active and more socially valued than were the extremely gifted students. Students with extreme verbal talent rated themselves as having the lowest social standing of the four groups, a finding which Dauber and Benbow

perceptively attribute both to society's higher valuing of mathematical talent than verbal talent, and to the fact that while extreme mathematical ability may be less obvious on social occasions, students who are extremely talented verbally may be conspicuous due to their sophisticated vocabulary. It could also be noted that students who wish to mask or partly conceal their exceptional mathematical ability for peer acceptance need to moderate their achievements principally in math classes, while students who wish to conceal extreme linguistic precocity have to be much more consistently on guard against "breaking cover".

The strain of keeping up a false front to one's peers is hardly conducive to the establishment of the openness and trust which are necessary precursors to the development of an intimate friendship (Gross, 1998). Many highly gifted students find themselves in a "forced choice dilemma" (Gross, 1989). If they wish to satisfy their drive for excellence, they must risk sacrificing the attainment of intimacy with their age peers. If the pursuit of intimacy is their primary need, they must moderate their standards of achievement, conceal, to some extent at least, their intellectual interests, and conform to a value system that may be seriously at variance with their own level of moral development, to retain the approval of the group into they wish to be accepted.

Here Anna Westbrook, then 12 years old, a member of Gross's study of children of IQ 160, describes her anguished decision to "fall", denying her abilities, rather than "climb" to achieve the standards she knows are within her reach.

I fall

I fall . . .
For I have nowhere to go,
I see . . .
For the masks have fallen.

Clouded before
Now harshly real
Searing with truth
I do not want to know.

Will you fall
and taste the sweetness?
Will you climb
And taste the bile?

I fall
because I want to.
Life has played me
All too long!

(Anna Westbrook, 1998)

The ease with which intellectually or academically gifted students find or form friendships is in large part a function of their levels of giftedness. Moderately gifted students enjoy popularity with their age-peers; for the highly gifted the situation seems more problematic.

Grossberg and Cornell (1988) described this dichotomy as "Terman versus Hollingworth" alluding, and unfortunately adding, to the common perception that Terman's and Hollingworth's findings regarding the psychosocial adjustment of gifted children differed significantly. In fact, their findings were highly congruent. Hollingworth repeatedly argued that, in general, intellectually gifted children are more emotionally stable, display less undesirable behavior and have more positive social adjustment than their age-peers of average ability; she emphasized that it was for highly gifted children, rather than the more moderately gifted, that social difficulties and, particularly, social isolation, become

problematic (Hollingworth, 1926, 1931, 1936, 1940, 1942).

Similarly, discussing the social and personality traits of Terman's gifted group, Terman and his colleagues made very specific distinctions between children at different levels of intellectual giftedness (Burks, Jensen and Terman, 1930). They argued that while one might naturally expect a child of IQ 170 or 180 to be superior in school achievement to an age-peer of IQ 140 or 150, one should not make a parallel assumption in the case of social traits. They argued:

"The distribution curve of intelligence implies that a child of 140 or 150 IQ may find a fairly large group of associates whose mental development and range of interests are not hopelessly far behind his own, and who react to him as to a congenial playfellow, perhaps elevating him to a position of real leadership. The child of 170 or 180 IQ, on the other hand, stands in an extremely sparsely populated region of intelligence. Only one child in thousands makes so high a score and only one child in two hundred or more come even with such a long distance range as 140 IQ . . .

In her book on gifted children Professor Hollingworth presents case studies of a dozen children whose IQ's equal or surpass 180. The data amassed in these studies would appear to fully justify her generalization that the majority of children testing above IQ 180 "play little with other children unless special conditions such as those found in a special class for the gifted are provided. They have great difficulty in finding playmates in the ordinary course of events who are congenial both in size and in mental ability. Thus they are thrown back upon themselves to work out forms of solitary intellectual play."

The children in our gifted group whose IQs are over 180 tend to fall into the social pattern described by Hollingworth. We have therefore thought it worth while to summarise certain facts concerning the social traits of our subjects with the highest IQs. Instead of limiting the cases to children of IQ 180, we have placed the boundary at IQ 170 to provide a larger group." (Burks, Jensen and Terman 1930, p. 173-174)

The authors then went on to acknowledge that the 35 members of Terman's gifted group whose IQs were at or in excess of 170 tended to have "considerably more difficulty in making social adjustments" than did the more typical members of the group, with 60 per cent of the boys and 73 per cent of the girls being reported by the teachers and parents as being definitely solitary or "poor mixers" (Burks, Jensen and Terman, 1930, p. 175).

Oram, Cornell and Rutemiller (1995) tested a hypothesized curvilinear model of adjustment which would propose that "psychosocial adjustment and academic aptitude are positively related from the average range to some point in the high ability range beyond which adjustment begins to decline with increasing academic ability" (p. 236). Their results produced little evidence to support this hypothesis. Unfortunately the instruments used to measure academic aptitude in two of the three studies were group tests which generated a ceiling effect and did not permit identification of exceptionally gifted students; as the researchers themselves acknowledge "further research, using larger samples of exceptionally gifted children, is needed to explore the adjustment of those few students at the upper limits of measured aptitude" (p. 243).

Freeman (1979), in a somewhat problematic study, compared 70 "children who were labelled (sic) gifted" (intellectually gifted children whose parents belonged to Britain's National Association for Gifted Children) with two control groups, one of which purported to be children "who were not so labelled but of equal ability" and the other of which purported to be "a group of normal children".

This study, however, has serious flaws. The mean IQ of the "target group" (NAGC children) was 147 while the mean IQ of the "equal ability" control group was 134, a difference of 13

points and therefore (on the Stanford-Binet L-M) .8 of a standard deviation. These two groups are decidedly not equal in ability. Furthermore, the mean IQ of the second control group of "normal children" was 119, fully 1.2 standard deviations above the population mean. If by "normal", Freeman means average, this control group is very far from conforming to that description.

The children in the "target" group differ significantly from the gifted control group both in intellectual ability and in the probability of their easily finding other children of similar abilities to whom they can relate. Children scoring at IQ 147 on the Stanford-Binet L-M, which has a standard deviation of 16, appear in the population at a ratio of fewer than 1 in 500. Children of IQ 134 appear at a ratio of almost 1:50.

Not surprisingly, children in Freeman's "target" group said they felt "different" from other children 17 times more often than children in the gifted control group. This is a rational and accurate assessment. "Target" group children also reported having very many fewer friends than did the moderately gifted group; 83 per cent reported having few friends compared to 30 per cent in the control groups while 7 per cent said they had no friends at all, compared to 1 per cent in the control groups. The friends that the target group did have were described, more often than the friends of the control children, as being older, rather than the same age or younger. Freeman, however, seems uncertain of the validity of this finding and notes that, "In spite of this preference for older friends, only two children of the target sample had been pushed up (sic) a year at school. Had more of the target sample mixed with older children at school their older friendships would have been understandable. As it was, either they were at a loss among their own age-group at school, or there were other reasons for having older friends at home, such as rising to parental expectations (*my italics*)" (Freeman, 1979, p. 157).

Freeman's findings that highly gifted children prefer older friends, and that highly children who have been retained with age-peers have significantly greater difficulty in finding friends, are highly congruent with earlier research literature on the highly gifted. Perhaps their parents had joined the NAGC so that their children could have access to other gifted children through the Association's weekend enrichment programs. However, her failure to address the critical issue of her "target group" and gifted control group being drawn from two different sub-populations among the gifted, which previous research has found to influence many of the psychosocial variables she was investigating, seriously limits the generalizability of many of her conclusions.

There seems little doubt that highly gifted children experience difficulties in peer relationships which appear less frequently, and with less severity, among children of average ability and among the moderately gifted. An examination of the developmental influences powering friendship choices in children helps to explain this.

Developmental influences on children's friendship choices.

(1) Mental age.

Through much of the 1980s and 1990s "political correctness" required that limited attention be paid to the concept of mental age. The publishers of the Stanford-Binet Revision 1V eliminated the provision for mental age calculation which had made the Stanford-Binet L-M the most effective instrument for measuring the cognitive ability of exceptionally and profoundly gifted children, although it appears that the Revision V, currently under construction, will return to a developmental age-scale format (Wasserman, 1999).

Nonetheless, a substantial amount of research support exists for the proposal that mental age significantly effects the age and pace at which children traverse the Piagetian stages of cognitive development: specifically, that while all children experience the stages of cognitive development in the same order, the gifted progress through the stages at significantly

accelerated rates, thus reaching the formal operation stage much earlier than their age-peers.

In a study of 25 children of IQ 160+, aged 6-11, Webb (1974) found that the entire group had mastered the most complex or advanced tasks at the concrete and (for the older children) formal operations stages significantly in advance of their age-peers. Keating (1975) studying gifted 11-year-olds, found a level of developmental precocity within the Piagetian framework which led him to suggest that it may be more important to think in terms of IQ, rather than age, in predicting children's developmental stages - thus echoing the advice of Hollingworth who advised that mental age, rather than chronological age, should serve as a predictor of children's success in cognitively mediated school subjects (Hollingworth, 1926, 1930).

Nor is the effect of mental age limited to cognitive factors. Holahan and Sears (1995), in the most recent volume reporting the results of Terman's longitudinal study, strongly endorse the validity of mental age as a determinant not only of academic achievement but also of vocational interests, recreational interests and affective development in childhood and adolescence.

"Through the school years and into adolescence these children's interests, attitudes and knowledge developed in correspondence with their mental age rather than with their chronological age. Their academic achievement as measured by tests, their interest and liking for various future occupational careers, their knowledge about and interest in games, their choice of recreational reading materials, and their moral judgments about hypothetical conduct were all characteristic of older non-gifted children whose mental age-range was approximated by this much younger and brighter group. Even the intellectual level of their collections was more mature than that of their chronological age-mates."
(Holahan and Sears, 1995, p. 16)

Children form friendships not primarily on the basis of chronological age, but on the basis of similarities in developmental stages (Selman, 1981), with mental age presenting as an important determinant. Intellectually disabled children seek out, as friends, either age-peers of similar ability, or children two or more years younger than themselves (Jones, 1992). Similarly, intellectually gifted children seek out, as friends, either age-peers of similar ability or children two or more years older than themselves (Hubbard, 1929; Burks, Jensen and Terman, 1930; Hollingworth, 1942; O'Shea, 1960; Janos, 1985; Janos and Robinson, 1985; Gross, 1993).

O'Shea (1960) noted that in several studies conducted over a number of years no variable correlated more highly with friendship choices in a wide range of children than mental age, and that this stood considerably above any other factor. The search appears to begin in very early childhood. Hubbard observed a heterogeneous group of three year olds at nursery school, measuring the children both in terms of the number of times the children chose each other as spontaneous play companions and in terms of the length of time they spent together as a group. When she calculated the correlation between the mental age and spontaneous group participation, Hubbard found that those children who played together most often showed a correlation of .41 in mental age, while for those who played together longest the mental age correlation was a remarkable .62 (Hubbard, 1929).

O'Shea had little time for the recommendation, as common in her time as in ours, that the best way to "socialize" gifted children was to place them with chronological peers. She understood that it is only when one has experienced the security of social acceptance and the joy of friendship that one can give these to others.

"The concept of making the intellectually gifted child 'get along' with the child of the same chronological age in the center of the distribution of intelligence "because the world is full of such people and you have to get along with everyone" seems to

this writer to be a thoroughly bankrupt concept. The contrary hypothesis is that it is only those persons who have experienced closeness and trust, and have thus achieved understanding of others, who can display sympathy and understanding and can achieve closeness to anyone as adults.” (O’Shea, 1960, p. 28.)

O’Shea’s “contrary hypothesis” has since been validated in a number of research studies which show that children who enjoy close, intimate and stable friendships are more likely to display frankness, spontaneity, altruism, sensitivity, sharing, and the capacity to empathize with the feelings of others (see, for example, Mannarino, 1978; McGuire and Weisz, 1982).

(2) Onset of social comparisons

As children move through the pre-school and primary years, the self-centeredness of early childhood gradually gives place to an awareness of the opinions, abilities and attitudes of others. The child moves from an egocentric, self-referenced perspective from which she compares her achievements, ideas or interests with those she had previously (“I liked these books last year but now they’re so stupid”) to a more norm-referenced perspective from which she compares her achievements, ideas and interests with those of other children (“Lynne and I like the same books but Delia still likes really babyish books”) She has begun to engage in social comparisons (Festinger, 1954). This shift in perspective is more closely linked to mental age than to chronological age; thus a highly gifted child of four or five may have already reached a stage of norm-referenced behavior which her age-peers of average ability may not reach till the age of seven or eight.

The move to viewing friends as people with whom one can develop reciprocal relationships depends on the capacity to view the potential friend as an individual with her own characteristics, ideas and interests (Fine, 1981). Intellectually gifted children, through the earlier onset of social comparisons, become aware, rather earlier than their age-peers, of both the individuality of other children and the differences between their own attitudes and values and those of their classmates (Gross, 1993, 1998, 1999).

“Last week Jenny was telling me that the children in her class tell her to be serious and that they do not find her “funny” and she asked when the children in her class would have a sense of humor, and she asked why she doesn’t fit in.

Jenny then said, “Just think how it feels, one lima bean in a funny jar and all the other lima beans in the not so funny jar. It’s horrible being funny all on my own - I will just have to change my personality because I am always on my own and it’s no fun being the only lima bean in the funny jar.

I have no choice - I’ll have to be just like them, although I don’t want to - until they catch up and then I can be me again.”

Mother of Jenny, aged 8.

(3) Similarity of play preferences

The importance of play as an aid to socialization is widely documented. A major difficulty for gifted children, however, is that their play interests often differ quite radically from those of their age-peers. Even in the early years of school the play interests of the gifted centre on games of intellectual skill, while those of the child of average ability involve predominantly simple sensori-motor activity (Hollingworth, 1931; Gross, 1993; Harrison, 1999).

In their research on the very highly gifted Hollingworth (1942) and Gross (1993) found that while physical competition tends to be disliked, intellectual competition is enjoyed (Gross, 1993). Gifted children prefer games where ideas and strategies are matched against each other and where new proposals can be trialled, whereas the average child prefers games where such rules as exist are clearly defined and closely adhered to. This can cause

conflict when the highly able child, who may see the illogicality or irrelevance of the rules, seeks to overturn them, either to improve the game or simply for the intellectual stimulation of the ensuing argument!

Because of these factors, the play of the highly intelligent tends to be an uneasy compromise between their own interests and abilities and their desire to be accepted into a social group (Gross, 1989; Silverman, 1993). Children who are less willing or less able to make such a compromise often become 'loners', preferring to invent solitary intellectual games which often centre on fantasy and imagined adventure. Interestingly, however, Hollingworth found that gifted girls may reject doll play because of its illogicality, noting that "baby" dolls are usually considerably larger than dolls intended to represent adults (Hollingworth, 1926). It is ironic that even such a powerful agent of socialization as play can serve to underscore the differences between the gifted child and his age-peers, rather than acting as a link between them.

Children's play interests are strongly determined by their stage of cognitive development. The play preferences of intellectually gifted children tend to resemble those of children some years older (Terman, 1925; Hollingworth, 1942; O'Shea, 1960; Silverman, 1989; Gross, 1993). Teachers, however, should be aware that they may not observe the true play preferences of gifted children if they are not provided with companions who share their play interests. Furthermore, solitary play in gifted children, rather than indicating social maladjustment or peer rejection, can simply signal the unavailability of children who share their interests.

(4) Similarity of reading interests

Both the early development of reading which is characteristic of many intellectually gifted children, and the intellectual precocity (developmental advancement) itself affect these children's reading interests. Intellectually gifted children choose to read, and enjoy, books and genres of fiction that are commonly written for children some years older (Terman, 1925; VanTassel-Baska, 1983; Gross, 1993; Silverman, 1993).

The strong preference for "the classics", for example, the historical novels of Scott, Stevenson, and Dumas, which was demonstrated by the gifted children in Terman's and Hollingworth's studies (see, for example, the fascinating accounts of gifted young writers in Burks, Jensen and Terman, 1930) has been replaced by a strong preference for "high fantasy" (VanTassel-Baska, 1983; Kolloff, 1985; Gross, 1993). Gifted children enjoy and seek out books which portray intellectual, emotional or moral striving on the part of the protagonist, for examples, "chronicles" which follow a character's growth to moral maturity or "quests" which portray a conflict between good and evil.

Many highly gifted children who display the sensual and imaginational overexcitabilities noted by Dabrowski (1937) are attracted to certain literature because of the poetic beauty of the language. For example, at age 11, Christopher Otway, in Gross's study of children of IQ 160, developed a special devotion to the Old Testament, particularly the books of Ecclesiastes, Proverbs and Psalms while, at age 6½, Adam, of the same study, became enthralled with Charles Kingsley's *The Water Babies* because of the lyricism of the language.

Children with such unusual and advanced reading interests can experience extreme difficulty in finding age-peers with whom they can discuss their joy in reading. Indeed, some conceal their unusual interests for fear of derision. When the teacher of 7-year-old Anastasia, of IQ 172 asked her, in class, what she was reading at home, the child answered; "A book about bunnies". It was *Watership Down*!

Gifted children may spend remarkable (sometimes excessive) amounts of time in reading (e.g. Gross, 1993). Here Taryn, aged 13, describes her own passion for reading. It is almost as if, rather than Taryn choosing to read, reading chooses *her*!

"Whenever I possibly can, I read. I read everything around me. Books, letters, newspapers, magazines, signs, labels, logos, titles, advertisements, text, things that were not meant as text - anything that catches my eye - nothing goes unnoticed. Words are pouring into my mind whenever I see them - whenever there are words or letters within my line of vision, in whatever language, I am either reading them or trying to decipher them. I am often distracted as I notice something funny, something strange or something intended to catch the eye."
(Gross, in press)

(5) Capacity to distinguish between popularity and friendship

Gifted children seem to leave behind, rather earlier than their age-peers, the social behaviours which characterise a desire for popularity - the deliberate acquisition of a wide circle of playmates; peer dependency; conformity to peer rules and routines - and seem to seek, rather earlier than their peers, relationships with a smaller circle of playmates, which seem to display have more of the functions of friendship - companionship, stimulation, intimacy and affirmation (Gottman and Parker, 1986).

Sayler (1997) points out that a key issue in friendship is the quality, rather than the quantity of one's friends. Intimate friendships centre on an exchange of feelings, insights and confidences. Friendship offers support, closeness, warmth, trust, enjoyment and kindness; indeed, true friendship seeks the good of the other. The relative social and emotional maturity of intellectually gifted children allows them to appreciate, at earlier ages than is customary, the difference between friendship and popularity. Popularity is a competitive distortion of friendship in which importance is placed on the *quantity*, rather than the quality, of "followers" (or dates, or invitations to parties) one can attract, and which seeks self-affirmation rather than the affirmation of the friendship bond.

Swiatek (1995) in a study of highly gifted 7th -10th grade students, found that many of her subjects who were actively acknowledging and using their high abilities "discount(ed) the importance of popularity as it is traditionally understood in schools" (p.156) as they believed that many gifted students who had achieved popularity had done so by compromising their values so that others would like them.

The five variables discussed above serve as powerful, interacting influences on the friendship choices exercised by gifted children. However, there seems to be something more. Over the 27 years I have now spent teaching, working with and studying intellectually gifted children, I have become increasingly convinced that, even in the early childhood years, these young people have different expectations of friendship from those held by the majority of their age-peers; they seem to view the nature of friendship, and the obligations of friendship, in a different light.

The following incident is only one of many which have brought home to me, over the last few years, the distress experienced by gifted children who think, rapturously, that they have found a friend, only to discover they have simply made an acquaintance.

The Gifted Education Research, Resource and Information Centre (GERRIC) at the University of New South Wales, of which I am Director, runs accelerative enrichment workshops for academically gifted students during each summer and winter school vacation period. Our *Small Poppies* program provides a range of two-day workshops for gifted children in school Years 1 and 2. The work is pitched at Year 3-4 level. The workshops are led by teachers who have completed postgraduate study in gifted education and each workshop has, as a course assistant, a second teacher who is currently engaged in such study.

Jarrad, aged 6, had thoroughly enjoyed the maths/science workshop in which he participated. The children, working in pairs, had created load-bearing bridges and Jarrad

had worked with Daniel whom he had met for the first time. At the close of the program Jarrad dissolved in a traumatic, tearful display of intense emotion which lasted for 20 minutes. His mother was powerless to console him, but, as she explained to the course assistant, this was not a unique situation. He was devastated by the fact that at the end of the session Daniel had left with his mother, and had taken their model with him. It was a superbly structured bridge and the two boys had worked long and hard, cooperating, negotiating and revising their ideas. Jarrad had never before experienced such a harmonious relationship with another child. He thought Daniel and he had become friends.

Initially, Helen, the course assistant, thought that Jarrad's distress was because Daniel had the model and he did not, but she swiftly became aware that the issues went much deeper. Between sobs, Jarrad asserted that he did not want the model back, because that would mean that Daniel would be upset. From his point of view, an injustice had been done to his sense of fairness *and friendship*. He felt that Daniel and he should have discussed the situation about who would take the model home - *as friends would*; in fact he would have been happy to have his new "good" friend keep the model. The model was infinitely less important than what had seemed to be the beginning of friendship.

Previous studies of children's expectations of friendship

Studies of children's expectations of friendship universally find that conceptions of friendship are developmental and strongly influenced by age.

Bigelow and LaGaipa (1975) asked randomly selected children in Grades 1-8 to write an essay on what they expected of their best friend that was different from their expectations of people who were not their best friends. Analysis of the texts identified 21 dimensions. Two dimensions prevalent in the responses of younger children were the conception of sharing (with the friend as receiver) and general play. Three dimensions which appeared at about the same level across age groups were sharing (with the friend as giver), reciprocated liking, and ego reinforcement. However, dimensions which were used increasingly by older children were help (with the friend as giver), aid to self-evaluation, acceptance, loyalty and commitment, genuineness, intimacy, and similarity in attitudes and values.

Problems with this study, however, included ambiguous scoring procedures, low inter-rater reliability, and lower reliabilities in dimensions which appeared least often - those noted in older children.

Berndt (1978), cited in Selman (1981) studied children in kindergarten, 3rd grade and 6th grade using open-ended questions about best friends, nonfriends, and friends breaking up. Children's responses about best friends were assigned to 7 substantive categories:

- a. defining features (someone says s/he is your friend)
- b. psychological attributes (has a good personality)
- c. shared activity (we play football)
- d. quality of interaction (s/he doesn't fight with me)
- e. intimacy and trust (I can share problems with her/him)
- f. faithfulness (s/he won't leave me)
- g. loyal support (will stick up for me in a fight)

Older children mentioned quality of interaction, psychological attributes and intimacy/trust more than younger children. A major limitation of this study, however, was the quality of the responses obtained from the kindergarten children. Very young children are unlikely to make meaningful responses to questions about relationships as the majority are not yet norm-referencing

Gamer (1978) studied children's expectations of prosocial behaviour among friends. Children aged 6-13 were presented with hypothetical stories and were asked to decide whether the children in the stories were friends or not. The older children showed

significantly higher expectations of reliability and supportiveness in friends, but it was the 12-13 year olds who conceptualized close friendships (relationships of intimacy) as being different from more casual friendships and requiring obligations and commitment. The 6- and 7-year-olds were more likely to describe friends as "someone who helps you" or "someone who defends you".

Selman (1981) studied 93 child and adolescent subjects who were required to view one of a series of 10 minute videos, each of which presented a dilemma in which a child or adolescent of about the subject's age was asked, by a newcomer, to go into town to a special event, at a time which conflicted with a previous engagement with a longterm friend. The subjects were then interviewed individually to ascertain their view on a range of issues relating to their feelings about friendship and the situation portrayed in the video.

The researchers then undertook a descriptive analysis of the children's levels of conception of several issues, including the nature of friendship, obligations of friendship, conflict, and conflict resolution in casual or close friendships. As with the other studies reported here, younger children tended to view friendship in a strongly egocentric or subjective light; the capacity to step outside one's own needs and perceptions, and see one's friend as an individual with her own needs and values, did not develop till around the age of 9. The perception of friendship as an intimate and mutually rewarding relationship which allowed friends to draw strength from each other and contribute to each other's emotional growth did not, in general, develop until around age 12.

From this study, Selman constructed a developmental model of friendship based on chronological age and the child's stages of reflective understanding of close dyadic friendships. Note the wide age-range, and the overlapping of the stages, in the model.

Momentary; physicalistic	Conceptions of friendship are based in proximity; - a friend is someone who lives near or someone with whom one engages in physical play. Friendship is more generally conceived as playmateship.	"Jenny lives in my street." "Marco and me play ball in the lunchbreak"	Chronological ages 3-7
One-way assistance	Friendship conceptions are one-way in the sense that a friend is seen as important because he or she performs specific activities that the self wants accomplished. "Knowledge" means accurate knowledge of the other's likes and dislikes.	"Marie's cat has kittens and she lets me play with them. She really likes cats too." "Marie and I really like cats. But I like dogs too, and she doesn't!"	Chronological age 4-9
Two-way "fair- weather" friendship	Interpersonal relationships are now perceived as reciprocal. Friendships exist for what each partner can get from them. Friends will	"Jane and I like the same books and we used to lend books to each other but last week she scribbled in my new book and we're not friends any	Chronological ages 6-12

	accommodate to each other's needs. However, friendships at this stage can be determined by the particular activity the children are engaged in, and the friendship is difficult to sustain during a period of conflict or adjustment.	more."	
Intimate and mutually shared relationships.	At this stage there is an awareness both of a continuity of relationships and of an affective bonding between friends. Friendships are seen as a means of developing mutual intimacy and support. The emergence of conflict does not necessarily signal the end of the friendship because the underlying continuity of affection is seen as a means of transcending conflict. However, children at this stage, can be over-possessive of their friends.	"Marco is my best friend; I can tell him anything. When we quarrel I know he'll still keep on being my friend." "Donna is my very best friend. She doesn't need anyone else and I don't need anyone else and we're going to be friends for ever."	Chronological ages 9-15
Autonomous independent relationships	The child becomes aware that friends must depend on each other for psychological support. However, this is balanced by an acceptance of the other's need to establish relationships with others and to grow through such experiences.	"Donna is a really close friend and I can trust her absolutely. She and I both have other friends too and that's okay; we are always there for each other."	Chronological age 12 to adulthood.

Several researchers noted significant gender differences in friendship expectations and expressions of friendship. During the pre-adolescent years, having the esteem of a close friend is important to feelings of self-worth. The self-disclosure which characterizes close friendships leads to affirmation that one's values and ideas are valid and accepted (Parker and Gottman, 1989). However, Buhrmester and Furman (1987)) found that the process by which boys and girls validate their feelings of self-worth seem to differ; for girls this process occurs through an exchange of thoughts and feelings, while boys appear to achieve it through actions and deeds. In a study of friendship expectations in children aged 6-13, Gamer (1978), found that at all ages girls were more likely than boys to distinguish "best friends" from "regular friends" and were more likely to feel that "positive interaction" was an important element in a friendship. Tietjen (1982), studying elementary school children in Sweden, also noted that girls were more likely than boys to report having a special

friendship, and added that boys were significantly more likely than girls to play with several friends at one time and to play in larger groups - behavior which is substantially less likely to encourage intimacy than the modes of play preferred by girls. Sharabany, Gershoni and Hoffman (1981), studying Israeli children and adolescents, found that at all ages girls in same-sex best-friendships reported higher levels of intimacy, trust and loyalty than did boys in same-sex best-friendships.

It is important to note however, without exception, the friendship studies reported in this section focussed on students' chronological age or grade placement; the children's level of intellectual capacity or mental age were not taken into consideration. This ignores the influence, on friendship choice, of the factors which have been considered earlier - mental age, the early onset of social comparisons, the unusually mature play and reading interests, and the preference for friendship over popularity, which are characteristic of gifted students. A further problem is that, in several studies, dimensions which might appear in friendship descriptors developed by secondary school students (and therefore perhaps by gifted or highly gifted middle or upper primary students) were not included. These instruments may have had, in effect, a ceiling effect for intellectually gifted students.

Selman's (1981) developmental model of friendship, with its higher ceiling and its progression from play-partnership to intimate autonomous relationships, was used as the theoretical model underpinning the first phase of the present study. The following research questions powered the study.

- Do intellectually gifted children function at higher stages of Selman's developmental hierarchy of friendship conceptions than do their age-peers of average ability?
- Does this developmental advancement, if it exists, vary as a function of level of giftedness? (i.e. do highly gifted children function at a higher developmental level than their moderately gifted age-peers?).
- If developmental differences do exist, are they more noticeable at particular ages?
- Do any gender differences appear and, if so, are these differences related to level of ability?

Pilot study

Instrumentation

A pilot study was conducted in 1998 to compare the conceptions of friendship held by elementary school-age children of average intellectual ability with those held by moderately gifted and highly gifted age-peers.

Selection of subjects

As I have discussed on several previous occasions (see, for example, Gross, 1993) Australia is not a test-oriented society, and the majority of teachers assess the academic ability of their students purely on the quality of their classroom performance. A wealth of international research suggests that teachers without training or inservice in gifted education are likely to misidentify academically gifted underachievers, assuming them to be of average intellectual ability. I felt it would be unwise, therefore, to ask teachers who did not have significant inservice in gifted education to nominate "students of average ability" for participation in this study, as the resulting sample might well contain children who were intellectually gifted.

However, from 1997 through 1999 I conducted, for a number of primary schools in Sydney, a program of teacher inservice which involved the entire teaching staff in a 28 hour program of lectures, seminars and workshops on identifying and responding to the needs of gifted and talented students. The teachers were introduced to a range of identification procedures including above-level testing, the use of standardized achievement tests, and a range of teacher and parent nomination checklists.

At the conclusion of this training procedures, which was conducted over four months of the school year, I asked several teachers of Years 4, 5 and 6 to nominate children whom they now believed to be of average intellectual ability. (They were instructed not to include in this sample those students whom they now believed to be in the upper 25% and the lower 25% of their classes in terms of intellectual ability.)

This resulted in a sample of 324 students identified as of average ability

Although, as indicated above, Australia is not generally a test-oriented society, GERRIC runs each year, in conjunction with the Belin-Blank Center, the Australian Primary Talent Search (APTS). Each year more than 1000 academically gifted Australian children in 4th - 6th grade are assessed on EXPLORE, an above-level test which measures aptitude in four academic areas: math, English, reading and science reasoning. EXPLORE, which is normed on 8th grade students, is well-suited to assess the abilities of gifted 4th - 6th graders for whom grade-level testing generates a significant ceiling effect (Assouline and Lupkowski-Shoplik, 1997).

For the purposes of this study, Year 4, 5 and 6 students who scored at, or just below, the mean for 8th grade students on EXPLORE were classed as moderately gifted students. This resulted in a sample of 137 students meeting this criterion.

Similarly, Year 4, 5 and 6 students who scored at or above the 80th percentile of 8th grade students on EXPLORE were classed as highly gifted students. This resulted in a sample of 162 students meeting this criterion.

The three groups were thus constructed as follows.

	Average ability	Moderately gifted	Highly gifted
Year 4:	113	41	58
Year 5:	89	44	55
Year 6:	122	52	49

Instrumentation

Construction

Using Selman's five-stage hierarchy of friendship conceptions, a self-report questionnaire was designed consisting of 20 statements each of which illustrated a specific characteristic of "a friend". It is not proposed to describe here, the full content or structure of this pilot study instrument, as the instrument subsequently developed and used for the major study is fully described later. Sample items, however, were:

- Someone who will share their toys and games with you
- Someone who likes the same TV programs as you.
- Someone you can talk to about your deepest feelings.
- Someone who will understand if you want to have other friends as well.

Items received a weighting of from 1 to 5 according to their hypothesized placement on one of the five developmental levels of Selman's model, with items at the lowest level receiving a weighting of 1 and those at the highest level a weighting of 5.

Students were asked firstly to choose, from the 20 items, the 10 which would be most important to them in choosing a friend, and then, to rank their 10 chosen items in order of importance.

Scoring

Responses were scored item by item, with the item which the student ranked highest receiving a score of 10, the next highest a score of 9 and so on, resulting in the lowest item receiving a score of 1. For each item, the number achieved through ranking was then multiplied by the weighting which had already been accorded to that item from its placement on Selman's hierarchy of stages of friendship conception. The resulting scores for the 10 items selected by the student were summed to acquire a total score for the given questionnaire.

Through this procedure, higher scores were obtained by students who accorded greater importance to items which represented the higher stages of Selman's developmental model.

Results

Interestingly, significant differences appeared by gender, with girls at each Year level and each ability level making higher scores than boys. Significant differences were also noted between the scores of the average ability and moderately gifted students, with the moderately gifted scoring at levels which suggested that they had progressed further through Selman's hierarchy of friendship conceptions than had their average ability age-peers. However, no significant difference was noted between moderately gifted and highly gifted students.

Two possibilities were immediately evident; firstly that the instrument might have a ceiling effect for highly gifted students; secondly that student selection procedures might be flawed. The second possibility was swiftly confirmed when, on reflection, it became obvious that similar scores on EXPLORE indicate substantial differences in ability for students at different Year levels! A Year 4 student scoring at the mean for 8th grade students cannot readily be equated with a Year 6 student making the same score. The former may well be highly gifted while the latter is more moderately gifted, yet both had been placed in the moderately gifted group. Similarly, there may be substantial differences between a Year 4 student and a Year 6 student who score at the 80th percentile on EXPLORE; the Year 6 student may be moderately gifted while the Year 4 student is almost certainly highly gifted.

A further difficulty attending the analysis of the results of the pilot study was that the nature of the scoring procedure made it extremely difficult to undertake a confirmatory factor analysis to assess whether the items did cluster as hypothesized at different levels of Selman's model.

Clearly, students had to be more precisely selected for placement in the moderately gifted or highly gifted samples. Clearly also, it was necessary to develop an instrument with a different scoring format which would allow the hypothesized structure to be tested through factor analysis. Importantly, it was also necessary to consider whether the friendship conceptions of gifted preadolescents might contain elements which had not been discussed by Selman or other researchers on conceptions of friendship.

Revision of the instrument: Stage 1.

Between March and June 1999 the instrument was restructured on a Likert scale, a format which required students to indicate, for each item, whether that item represented something which was (1) not at all important, (2) generally not important; (3) important; (4) very important or (5) extremely important to them in choosing a friend. To ensure that the instrument included several items representing each hypothesized factor, it was decided to double, at least, the original number of items.

During this period I experienced three remarkable occurrences which profoundly influenced the development of my own conception of friendship, and which consequently influenced the development of additional items.

(1) During early 1999 I was able to assist a dear friend who was in need and distress. She wrote me a letter of thanks, and included in it a quotation with which I was not then familiar. It comes from Ecclesiasticus, one of the apocryphal books of the Old Testament.

“A faithful friend is a sure shelter; whoever finds one has found a rare treasure.” (Ecclesiasticus, 6:14.)

I was very moved by this image of a friend as a shelter, or refuge.

(2) Shortly afterwards, on a visit to the United States, I was able to spend a few days with a dear friend whom I see seldom but with whom I share a precious closeness of mind. One evening, over dinner, we were discussing issues which are important to both of us and I suddenly and inexplicably became "tongue-tied" and found myself unable to express my feelings.

When I returned to Australia, our very regular email correspondence resumed and I found I was able to explain, in writing, what had happened, much more easily than I had been able to face to face. My friend responded immediately in a message which moved me deeply.

“The issue is not so much what you were feeling as why you didn’t feel able to tell me about it. Know that here you have a safe space where you can be who you are. You can tell me anything, any time - and take it back - and edit it - because I am always here for you and I will never judge you, ever.”

For the second time in a very few weeks, a friend had described friendship as a *place*, a safe space, or shelter.

(3) A few weeks later, I had a phone call from Darren, a highly gifted young man whose educational progress I have been following for some years (see, for example, Gross, 1998). Darren formerly attended an inner-city primary school notorious for playground violence, truancy and low achievement. To retain membership of the peer culture he had to conceal, from his classmates, his extremely high intellectual ability and his passion for learning. He wove for himself a false persona, a mask which combined the roles of street tough and class clown. He was a brilliant actor, and his classmates were taken in completely by the effectiveness of his camouflage. In Year 5, however, he confided in me his misgivings as to how long he could keep up the pretence.

“It’s getting to the stage that I’m beginning to dislike myself,” he said despairingly. “I don’t really approve of telling lies and I’m having to tell them all the time. I’m even telling lies about myself *to myself*. I’m going to end up not knowing who I really am.”

Australian primary schools serve students from kindergarten to Year 6; students then enroll in high schools which serve Year 7 to Year 12 students. In Year 6 Darren was persuaded to confide in a trusted teacher who encouraged and assisted him to apply for enrolment for the following year in a gifted and talented class in a high school just outside his district. He was accepted for the program and this physical and emotional move to an environment in which his abilities were a passport to social acceptance, rather than a barrier to it, changed Darren's life profoundly.

However, it took several months in the more accepting environment of the gifted class before Darren felt able to take the risks implicit in lowering his mask and allowing the other gifted students to see him as he was. He phoned me regularly over this period, using me as a sounding board for the ideas he was debating with himself. For the first time he was embracing the quite radical idea that other students might possibly want *him* as a friend - the real Darren rather than the fake persona.

The phone call I referred to earlier came in the middle of the school year, when Darren had finally been able to develop warm and supportive friendships with two other boys in the

gifted program. In the course of the conversation, I said to him, "Darren, we've been talking a lot recently about making friends. I'm actually doing some research on people's ideas about friendship. How would *you* define 'friend'?"

There was a thoughtful pause and then he said:

"Well, a *real* friend is a place you go to when you need to take off the masks. You can say what you want to your friend because you *know* that your friend will really listen and even if he doesn't like what you say he will still like *you*. You can take off your camouflage with a friend and still feel safe."

In the space of a few weeks three of my friends had described friendship to me as a sure shelter, a safe space where one can be oneself without being judged, and a place where one can reveal one's true nature and receive unconditional acceptance. This had a significant influence on my thinking, and I built into the revised questionnaire several items which I hoped would tap these conceptions of friendship.

The new questionnaire had 45 items, including the 20 items which had comprised the first version. This questionnaire was administered during the second half of 1999 to 370 students in third through seventh grade. This sample included students of a wide range of ability; no attempt was made on this occasion to screen out students of below average ability as on this occasion no comparisons by ability were to be undertaken.

Confirmatory factor analysis identified five factors. The four items which loaded more strongly on each factor were identified and these 20 items were collated to form the final version of the questionnaire. Because, through the Likert scale format, the students had been required to rank each item in terms of its importance to them in choosing a friend, it was possible to determine the chronological ages at which children tended to view various aspects of friendship as important. A clear and definite age-choice relationship appeared between the five factors, which was somewhat analogous to the hierarchy of conceptions of friendship developed by Selman.

The five factors, represented by their highest loading items, are listed below.

Factor 1: Play partner

Someone who will lend you their toys and books.
Someone who will share their toys and games with you.
Someone who enjoys the same games as you.
Someone who always includes you in their games.

Factor 2: People to chat to.

Someone who has a lot of friends.
Someone who likes the same TV programs as you.
Someone who has all the latest CDs.
Someone who is very popular with other kids.

Factor 3: Help and encouragement

Someone who shares your sense of humour.
Someone who will help you if you get into trouble.
Someone you can talk to about things that worry you.
Someone who encourages you to do your best.

Factor 4: Intimacy/empathy

Someone who shares your hopes and dreams.
Someone who understands your deepest feelings.

Someone who feels the same as you about things that are important.
 Someone who would want to be with you if they were feeling lonely or unhappy.

Fidelity. The sure shelter

Someone who accepts you for what you are.
 Someone who will tell you honestly what they think about you.
 Someone who will keep on being your friend even if you quarrel.
 Someone who won't talk about you behind your back.

Factor 1 represents the earliest stage of friendship, where the relationship is based on a play-partnership. A friend is seen as someone who engages the child in play opportunities and willingly permits the child to share his or her playthings.

Factor 2 heralds the sharing of similar interests as an element in the relationship. The interests, however, are general and social - television and music - rather than specific. The child sees it as an advantage if the friend has a wide social network in which he or she can share. Implicit in these items is the opportunity for conversation about issues other than the activity in which the child is immediately engaged. This stage may be thought of as seeking out people to talk to, and represents an important advance from the play-oriented stage represented by Factor 1.

Factor 3 introduces elements of intimacy, with the friend being seen as someone who will provide support and encouragement. The advantages of friendship, however, flow in one direction; the child does not perceive himself as providing a reciprocal degree of support. Conversation at this stage can touch on personal, rather than purely social, concerns.

Factor 4 represents a deepening of intimacy, an emotional sharing and bonding. The child now realizes that in friendship the capacity to give support and comfort flows both ways.

Factor 5 provides the highest conceptions of friendship as a relationship of fidelity and unconditional acceptance. A friend accepts you for what you are, will provide clear and honest feedback, and will not betray your friendship. The friendship will persist through trial; as Darren phrased it, "Even if he doesn't like what you say, he will still like *you*." A friend is someone you can trust completely. The faithful friend is a sure shelter.

Revision of the instrument: Stage 2.

As stated earlier, the four items which loaded most highly on each of the five factors were collated to form the final version of the questionnaire. The decision was made, however, to return to the ranking format of the original questionnaire, as it was noticed that in the Likert scale version, a significant number of gifted students tended to record a 5, indicating that the item was seen as extremely important, for virtually every item which loaded on Factors 4 and 5! It was deemed necessary, therefore, to include an element of ranking to increase the discriminating power of the instrument for gifted students.

An additional element of the questionnaire was a separate set of questions designed to access information about the status of students' current friendships. These questions were influenced by Janos, Marwood and Robinson's 1985 study which investigated the friendship *preferences* of intellectually gifted children. The question format is reproduced below.

Here are some statements about you and your friends.

Read each statement carefully.

Tick your answer in the correct bracket.

(1) I prefer playing

- with other children ()
 with adults ()
 by myself ()
- (2) Most of my friends are
 the same age as me ()
 older than me ()
 younger than me ()
- (3) Finding friends is
 very easy for me ()
 quite easy for me ()
 quite hard for me ()
 very hard for me ()
- (4) Most of my friends are
 brighter than me ()
 just as bright as me ()
 not so bright as me ()

Selection of subjects

As has already been discussed, the pilot study identified problems in the selection of subjects for the moderately gifted and highly gifted groups, as, for example, a Year 4 student scoring at the mean for 8th grade students cannot readily be equated with a Year 6 student making the same score. The former may well be highly gifted while the latter is more moderately gifted, yet in the pilot study both had been placed in the moderately gifted group.

Accordingly, in the major study greater care was taken in the selection of moderately and highly gifted subjects, with APTS cut-off points being differentiated for students at different grade levels. As the numbers of students scoring in the very high ranges of APTS were, naturally, significantly smaller than those scoring in the mid and low ranges, the sample size was expanded by the inclusion of highly gifted students who had been tested at GERRIC's clinic, which specializes in the assessment of intellectually gifted children and adolescents. Similarly, because few Year 3 students take EXPLORE, the Year 3 numbers were boosted by moderately gifted students who had been psychometrically assessed.

Subjects consisted of three groups of students from Years 3 - 7, as follows:

Group 1: Children identified by their classroom teachers (who had completed the inservice program in gifted education) as being of average intellectual ability.

Year 3: 54
 Year 4: 70
 Year 5: 54
 Year 6: 51
 Year 7: 75

Total number in Group 1: 304

Group 2: Children estimated as being moderately gifted, as follows:

Year 3: (1) Children scoring at 15th - 25th percentile of 8th Graders on EXPLORE.

(2) Children of IQ 125-140 (n = 32)

Year 4: (1) Children scoring at 39th percentile of 8th Graders on EXPLORE.

(2) Children of IQ 125-140 (38)

Year 5: (1) Children scoring at 54th percentile of 8th Graders on EXPLORE.
(2) Children of IQ 125-140. (49)

Year 6: (1) Children scoring at 61st percentile of 8th Graders on EXPLORE.
(2) Children of IQ 125-140 (46)

Year 7: (1) Children who when in Year 6 scored at 61st percentile of 8th Graders on EXPLORE.
(2) Children of IQ 125-140 (31)

Total number in Group 2: 196

Group 3: Children estimated as being highly gifted, as follows:

Year 3: (1) Children scoring at or above 54th percentile of 8th Graders on EXPLORE.
(2) Children of IQ 150+ (16)

Year 4: (1) Children scoring at or above 75th percentile of 8th Graders on EXPLORE.
(2) Children of IQ 150+ (15)

Year 5: (1) Children scoring at or above 92nd percentile of 8th Graders on EXPLORE
(2) Children of IQ 150+ (28)

Year 6: (1) Children scoring at or above 98th percentile of 8th Graders on EXPLORE
(2) Children of IQ 150+ (36)

Year 7: (1) Children who when in Year 6 had scored at or above the 98th percentile of 8th Graders on EXPLORE.
(2) Children of IQ 150+ (45)

Total number in group: Group 3: 140

Total number in study: 640

As indicated above, the revised questionnaire was composed of two parts. The first part contained four items which investigated children's friendship preferences. The second part contained 20 items which investigated children's conceptions of friendship. The questionnaire was administered to the three groups in the first half of 2000.

Results

Part 1: Children's friendship preferences.

Item 1 asked children to indicate whether they preferred playing with other children, with adults, or by themselves. A statistically significant relationship appeared between preference and ability level [$C^2(4) = 12.36$, $p < .01$]. Although the majority of children in all three ability groups stated that they preferred to play with other children, children of average ability were even more likely to assert this than would be expected, while highly gifted children were significantly more likely to say that they preferred to play alone.

Item 2 asked children whether their friends were the same age as themselves, or whether they were younger or older. A significant relationship appeared between age of friends and ability level [$C^2(4) = 14.62$, $p < .006$]. Interestingly, children of average ability were more

likely than might be expected to say that their friends were younger than they, while moderately and highly gifted children were less likely to say that their friends were younger and, as might be expected, highly gifted children were more likely to say that their friends were older.

Item 4 asked children whether their friends were brighter than they, just as bright or not so bright. This was also significantly related to ability level [$C^2(4) = 115.90$, $p. < .0001$]. Children of average ability were very much less likely than expected to say that their friends were less bright, and very much more likely to say that their friends were brighter. It is interesting to speculate whether these responses might have been influenced by a desire to give a socially acceptable answer, or, alternatively, a wish to claim association with able students. In egalitarian Australia, the former is more likely! Moderately gifted children were much less likely to say that their friends were brighter, and *no* highly gifted child said this. Both moderately and highly gifted children were significantly more likely to say that their friends were not so bright - a realistic and probably factual response, given these students' lack of access to ability peers.

Interestingly, a statistically significant relationship also appeared between age of friends and gender [$C^2(4) = 7.02$, $p. < .03$] Boys were less likely to say that their friends were brighter than they, and more likely to say that their friends were less bright, while girls showed the opposite tendency. This certainly merits further exploration.

Item 3 caused some difficulties. This item asked students to state whether finding friends was very easy, easy, hard, or very hard. Interestingly, when responses were compared for level of ability, although highly gifted children were somewhat less likely to say that finding friends was very easy and somewhat more likely to say that it was very hard, no statistically significant difference appeared [$C^2(6) = 6.90$, $p. = .30$]. I found this surprising given that, as reported earlier, the research literature suggests strongly that highly gifted children experience substantial difficulties in finding friends. For example, as reported earlier, Janos, Marwood and Robinson (1985) found that exceptionally gifted children were significantly more likely than the moderately gifted to report that they had too few friends, while parents of the exceptionally gifted tended to report that their child had only one close friend, or no friends at all.

I must acknowledge, however, that I have a concern about the veracity of gifted children's responses to this item. Many of the moderately and highly gifted children who were selected through their scores on EXPLORE live at significant distances from Sydney and their questionnaires were mailed to them for completion. Parents of these students, therefore, were able to read their children's responses, and in the weeks after the questionnaire was sent out I had more than 20 letters and phone calls from parents who, while indicating strong support for the study, shared their concern either that responding to Item 3 was so painful that the child did not feel able to complete the item, or that they felt that their child had given an invalid answer. This letter from the mother of a highly gifted eight-year-old boy was typical of those I received.

"My son André was quite happy to fill in your questionnaire. I was amazed at how clear he was about it. He is not usually so emotionally communicative (except for rage and frustration!).

However, I was a bit disturbed by how he answered Question 3. He does not find it "quite easy". He has had great difficulty in making friends. His interests are so different intellectually and his emotional capabilities are so imbalanced for his age because he is very into sharing/ give and take/ doing it someone else's way and he is just not tuned in to the social norms for his age. He is usually the one picked on, left out of games, etc.

Yet he still said finding friends was easy for him. I worry that this is an avoidance of a truth that is emotionally too hard to bear. . . .

(In the second part of the questionnaire) he put 15 as his second choice: "Someone who has lots of friends" - he said that if he was friends with them, then he might make more friends that way.

Thanks for opening up a small window on my little boy."

Mother of Andre, aged 8

My correspondence also included some quite heartrending letters from children, including this from Natasha, aged 10.

Dear Dr Gross,

I received your letter and filled in your form. However I find it easier to express things in my own words. I must say I understand if you are busy but please write back.

I like to feel involved and wanted. I want people to know I am no threat to them because I'm smart. All the time people say being smart is a gift but sometimes it makes you feel as though you are being punished. I spend most of my time reading as though I am not there. I know this sounds cowardly but I am scared that people will hurt me. (People hurt my feelings more than physically.)

I hope you write back because I want someone who understands other than family.

Natasha did indicate in Item 3 that it was very hard for her to find friends. I wonder, however, given the phone calls and letters from parents such as André's mother, how many other highly gifted children simply could *not* bring themselves to acknowledge on paper their extreme difficulty in finding friends, and who chose an alternative response in "avoidance of a truth that is emotionally too hard to bear."

I should mention, at this stage, that the numbers given above for children in the three groups are numbers for questionnaires returned, rather than numbers of children surveyed. The response rate for children of average ability, who completed the questionnaire in class time, supervised by their teachers, was 98%. The response rate for gifted children, whose questionnaires were mailed to them, was 74%. This lower response rate is almost certainly explained, at least in part, by the concerns expressed by their parents.

Part 2: Children's conceptions of friendship

Part 2 of the questionnaire consisted of the 20 items representing the five factors identified and described above. As in the pilot study, children were asked to choose, from the 20 items, the 10 which would be most important to them in choosing a friend, and then, to rank their 10 chosen items in order of importance.

Responses were scored item by item, with the item which the student ranked highest receiving a score of 10, the next highest a score of 9 and so on, resulting in the lowest item receiving a score of 1. For each item, the number achieved through ranking was then multiplied by the weighting, from 1 through 5, accorded to that item from its placement within the ascending stages of friendship conception, with items in Factor 1, *Play Partner* receiving a weighting of 1, and items in Factor 5: *Sure Shelter* receiving a weighting of 5. The resulting scores for the 10 items selected by the student were summed to acquire a total score for the questionnaire.

Through this procedure, higher scores were obtained by students who accorded greater importance to items within the higher stages of this developmental model of friendship. The mean for the total sample of 640 students was 205.46.

Table 1: Comparison by gender

	Boys	Girls
x =	197.47	215.05
	(349)	(291)

Significant differences appeared for gender, with girls presenting, on average, at substantially higher levels on the developmental scale of friendship conceptions [$F(1) = 85.74$, $p < .0001$]. This comparison produced a substantial effect size of .69.

This study therefore supports the findings of Buhrmester and Furman (1987) and Sharabany, Gershoni and Hoffman (1981), discussed earlier, which found that elementary school girls were more likely than boys to seek emotional intimacy, trust and loyalty in friendship.

Table 2: Comparison by School Year level

	3	4	5	6	7
x =	188.41	204.06	208.83	210.86	210.44
	(102)	(123)	(131)	(133)	(151)

Significant differences in children's conceptions of friendship did appear by school Year level [$F(4) = 13.55$, $p < .0001$] but these applied to students in the earlier Years surveyed by this study. The comparison of scores between Years 3 and 4 generated an effect size of .50. The gap between Years 4 and 5 was narrower and there was very little difference in the friendship conceptions of students in the three upper Years. Either the instrument generates an effect size for children older than age 10, or there is little change in children's conceptions of friendship beyond that age.

Table 3: Comparison by ability level.

	Average	Moderately gifted	Highly gifted
x =	200.14	210.86	209.46
	(304)	(196)	(140)

Average Moderately gifted Highly gifted

x =	200.14	210.86	209.46
	(304)	(196)	(140)

Significant differences in friendship conceptions did appear between children of average ability and gifted children [$F(2) = 15.52$, $p < .0001$] with gifted children scoring more highly,

and the comparison of average with moderately gifted children generated an effect size of .38, but no significant difference appeared in the friendship conceptions of moderately and highly gifted children. An additional comparison was undertaken as a result of this, which is described later in this paper.

Table 4: Comparison of School Year by gender

by SCHOOL YEAR		3	4	5	6	7
by GENDER						
Boys	x =	175.73	200.55	201.27	201.95	203.45
		(59)	(71)	(60)	(77)	(82)
Girls	x =	205.81	208.85	215.23	223.11	218.75
		(43)	(52)	(71)	(56)	(69)

Significant interactions appeared in the comparison of Year by gender [$F(4,1) = 2.89$, $p. < .05$] with girls making substantially higher scores than boys at all Year levels, but with the difference being particularly striking in Year 3.

Table 5: Comparison of ability by gender

by ABILITY		Average	Moderately gifted	Highly gifted
by GENDER				
Boys	x =	188.59	203.57	204.91
		(151)	(99)	(99)
Girls	x =	211.54	218.30	220.44
		(153)	(97)	(41)

No significant interaction appeared between ability level and gender [$F(2,1) = 1.46$, $p. = .234$] with girls scoring significantly higher than boys at all levels of ability.

Table 6: Comparison of ability by School Year level

by ABILITY	Average	Moderately gifted	Highly gifted
by SCHOOL YEAR			
3	174.96	206.28	198.06
	(54)	(32)	(16)
4	198.69	212.76	207.07
	(70)	(38)	(15)
5	205.76	210.92	211.11
	(54)	(49)	(28)
6	212.65	212.00	206.86
	(51)	(46)	(36)

7	207.08	211.45	215.36
	(75)	(31)	(45)

A statistically significant interaction appeared between ability and Year level [$F(2,4) = 2.73$, $p < .006$] with the superiority of the moderately and highly gifted students over the students of average ability disappearing in Year 6 and reappearing in Year 7.

An additional comparison.

Although no significant difference in conceptions of friendship appeared between moderately and highly gifted students, an additional comparison has recently been undertaken using the friendship scores of 34 exceptionally or profoundly gifted children who have been assessed by GERRIC or by other psychologists and whose IQ scores on the *Stanford-Binet Intelligence Scale L-M* were equal to or greater than 160. This comparison produced fascinating results.

Until the mid 1980s, the *Stanford-Binet L-M* was generally regarded as the most reliable measure of determining very high levels of intellectual giftedness (Hagen, 1980). The current version, the *Revision IV*, is much less suitable for use with highly, exceptionally or profoundly gifted children, as it generates a punitive depression of scores for students in the entire gifted range, much greater than can be accounted for by the mean shift downwards on the new test to accommodate the higher performance standards of the 1980s. Silverman (1995) points out that the same raw score yields an IQ for average ability children approximately 8 points lower in 1991 than in 1960, whereas for gifted children the average downward shift is 31 points - a loss of one point per year.

An additional problem in the construction of the *Revision IV* is that it has eliminated the mental age which, in its predecessor, could be used to calculate a ratio IQ score for exceptionally and profoundly gifted children. The many problems with this instrument have led psychologists with a special interest in the highly gifted to recommend that the *Stanford-Binet L-M* should be retained for use with children who are suspected of being very highly able (Vernon, 1987, Silverman and Kearney, 1992) and this practice has been endorsed by Riverside Press, the publisher of the Binet series of tests (Wasserman, 1997). Silverman and Kearney recommend that in cases where a child obtains three subtest scores at or near the ceiling of any current IQ test, he or she should be retested on the *Stanford-Binet L-M*, and ratio IQ scores computed for any child who scores beyond the test norms. This practice has been adopted by GERRIC's psychologists.

As discussed earlier, Hollingworth believed that the majority of intellectually gifted students achieved positive peer relationships with age-mates. She defined the IQ range 125 - 155 "socially optimal intelligence" and claimed that, in general, it was only above the level of IQ 160 that the differences between the exceptionally gifted child and his or her age-mates became so acute as to lead to social isolation. She further believed that these difficulties appear particularly acute between the ages of four and nine (Hollingworth, 1931).

Children of IQ 160+ appear in the population at a ratio of less than 1:10,000. The theoretical population of children scoring at this level in primary schools in Australia (a nation of fewer than 19 million people) is less than 200.

It would not be appropriate to compare, statistically, the small sample of 34 children of IQ 160+ with the very much larger samples of children of average ability and moderately gifted children. Accordingly, six samples of 40 children were randomly generated by computer from each of the average ability and moderately gifted groups, and each sample's scores on the Conceptions of Friendship questionnaire were compared through analysis of variance with the scores of the 34 exceptionally and profoundly gifted children. Because of the small size of the exceptionally/profoundly gifted sample it was not possible to undertake comparisons by gender or School Year level. In any case, to boost the sample size for the

exceptionally/profoundly gifted sample, children as young as five years of age, whose reading ages were nine years or above, were included.

Table 7: Comparison by ability level.

	Average	Moderately gifted	Exceptionally/profoundly gifted	
n =	(40)	(40)	(34)	
x(1) =	202.33	209.45	219.03	F(2) = 6.71, p < .002
x(2) =	201.00	210.65	219.03	F(2) = 7.28, p < .001
x(3) =	198.65	213.33	219.03	F(2) = 7.49, p < .001
x(4) =	208.55	209.73	219.03	F(2) = 5.23, p < .007
x(5) =	204.55	216.35	219.03	F(2) = 6.32, p < .003
x(6) =	197.38	204.43	219.03	F(2) = 7.34, p < .001

As can be seen, statistically significant differences were found in all six samples, with highly significant differences appearing between the average ability groups and the exceptionally/profoundly gifted groups. Additionally, in Samples 1, 2, 3, 4 and 6 significant differences appeared between the moderately gifted groups and the exceptionally/profoundly gifted groups

No firm conclusions can be drawn from these comparisons. However, it will certainly be worthwhile to attempt to expand the pool of children scoring at or above IQ 160 so that more reliable comparisons can be undertaken using larger samples of the average and moderately gifted groups.

The chronological ages of the 34 exceptionally and profoundly children ranged from 5 years 6 months through 12 years 10 months. All boys older than 7 years 11 months scored above the mean score for 7th grade boys. All girls older than 6 years 9 months scored above the mean score for 7th grade girls.

It is difficult to justify, either educationally or socially, the inclusion of these children in classes comprised of age-peers whose conceptions of friendship are so radically different from theirs.

Summary of findings

This study investigated issues pertaining to friendship in three groups of children from Year 3 through Year 7, the first group being of average ability and the second and third comprising children at different levels of intellectual giftedness. Part 1 of the friendship questionnaire sought to ascertain the status of children's friendships and their friendship preferences, while Part 2 assessed children's conceptions of friendship. This is believed to be the first empirical study conducted of the conceptions of friendship held by intellectually gifted children.

While the majority of children in all three groups stated that they preferred to play with other children, and that their friends were the same age or younger, highly gifted children were significantly more likely than the other groups to say that they preferred to play alone and that their friends were older. This conforms to the findings of previous studies of the highly gifted, including that of Freeman (1979) who doubted the authenticity of her highly gifted subjects' preference for older friends.

While children of average ability tended to state that their friends were brighter than they (perhaps influenced by a desire to give a socially acceptable answer) both moderately and

highly gifted children were significantly more likely to say that their friends were not so bright. This probably reflects these children's lack of opportunity to socialize with children of similar abilities and interests.

Although the chi-square statistic for Item 3 by ability level did not reach significance, moderately gifted and highly gifted children were more likely to say that finding friends was quite difficult or very difficult than were children of average ability, and several phone calls and letters from parents indicated that they believed their children had not answered this question frankly.

A hierarchical structure of conceptions of friendship was identified, somewhat analogous to the Selman model, with children progressing through five developmental stages from viewing friendship as a play partnership, through to seeking a relationship of fidelity, authenticity and emotional security. Gifted children pass through the same developmental stages as do children of average ability, but at significantly earlier ages.

Large gender differences were observed at all age levels with girls presenting at significantly higher developmental levels than did boys of the same age. Significant gender/School Year interactions were noted, with gender differences being much larger in Year 3 than at any other Year level. Significant Year level/ability level interactions were noted with the difference being largest in Year 3. In Years 3 and 4, gifted children have the conceptions of friendship which characterize average ability children at least two years older.

Significant differences in developmental level were observed between average and gifted children but there was no significant difference between the moderately and highly gifted. However, when comparisons were made between children of average ability, moderately gifted children, and exceptionally/profoundly gifted children, significant differences between levels of giftedness were found on five of six samples, and this certainly provides encouragement for the exceptionally/profoundly gifted sample to be expanded and further comparisons undertaken.

The premises proposed by Leta Stetter Hollingworth 70 years ago are validated yet again in this Australian study. Such are the differences in the friendship conceptions held by average and gifted students in the earlier years of school (up to age 9) that it is at this level that gifted children are most likely to have difficulty in finding other children who have similar expectations of friendship. As Hollingworth further proposed, the difficulties are likely to be particularly acute for children outside the range of "socially optimal intelligence" - in this study, children of IQ 160. As gender differences in friendship conceptions are also most acute in Year 3, the situation is even more problematic for gifted students of this age who have access only to age-peers.

The results of this study raise, once again, the question as to why schools both in Australia and the United States so often reserve programs of ability grouping for students in the upper years of primary school, and why teachers are so reluctant to allow young gifted children to grade advance. This study suggests that it is in the earlier, later than the later, years of primary school that placement with chronological peers is more likely to result in the gifted child experiencing loneliness or social isolation.

A recently conducted study of the reactions of intellectually gifted Year 5 students to being placed in a fulltime self-contained class affirms the feelings of acceptance, and intellectual and emotional security, that these children experience.

- I don't feel so different in this class; I have other people like me.
- I get respected for who I am. We all seem to think the same, as if we're on the same wavelength.
- Being in a class with other bright people is different because you seem to fit in more.
- You can learn lots of different things from them and you can have more complex conversations without confusing them.

- Being in a class with lots of bright people has meant that I have stronger friendships, and it has improved my quality of work.

Ability grouping and grade advancement can be of invaluable assistance in the early years of school to young gifted children whose accelerated conceptions of friendship are urging them to seek the sure shelter of a relationship of trust, fidelity and authenticity, at ages when their age-peers are seeking play partners or casual conversation.

“A faithful friend is a sure shelter; whoever finds one has found a rare treasure.” (Ecclesiasticus, 6:14.)

The word “rare” has several meanings. The writer of the book of Ecclesiasticus used it in the sense of “exceptional” or “incomparable”.

However, “rare” also means “scarce”. Grouping gifted children by chronological age ensures that the treasure of a sure shelter is rare indeed.

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