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The long-term effects of families and educational provision on gifted children

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ABSTRACT

Why are some children identified as gifted while others of the same potential are not? To find out why and what the consequences might be, in 1974 I began in England with 70 children identified as gifted. I matched each one for age, sex and socio-economic level with two comparison children in the same school class (n=210). But while the first comparison child had an identical intelligence or talent, the second was chosen at random. 63 schools were involved. Investigation was by a battery of tests and deep questioning of pupils, teachers and parents in their schools and homes. A major difference was that those labelled gifted had significantly more emotional problems ($p < 1$) than either of the matched control groups - the unrecognised but identically gifted or those taken at random. Some of those emotional problems have remained after 35 years. For all the gifted, whether they were recognised or not, by their mid-40s their high scholastic achievements had not reliably delivered outstanding life success. Yet overall, the higher the intelligence the more successful the individuals were likely to be as adults. Although each individual had a unique (sometimes dramatic) life-path, the vital aspects of recognisable success for the entire sample whether gifted or not, have been hard work, emotional support and a positive personal outlook.

THE FREEMAN FOLLOW-UP STUDY

In 1974, when I started this study, the widespread image of gifted and talented children was of rare exotic creatures. It was considered almost impossible that there would be more than one in any school-class or even a school. They were expected to be mostly boys with short-sight and spectacles, suffering painful emotional problems, crushing they were incapable of making friends. A few would play the violin, all would dress in an old-fashioned way – 'little professors'. Some people still think of them in that way. But in my long involvement and comparisons of truly gifted individuals and the non-gifted in their daily lives, I have seen

a very different and much more complex picture. I believe that my work and that of others has changed the perception of the gifted and talented from the image of strangeness to that of normal people with something special to offer the world.

My study has remained distinct in two ways:

- It was set up with matched scientific comparisons from the start. If one only examines highly achieving individuals, there is no way of finding out what circumstances have helped or hindered high-level potential.
- It is unique because of the very long in-depth face-to-face interviews carried out in the normal environments of the children, with their teachers and their families over so many years. As each of the children negotiated the business of growing up, this investigation has searched well below the surface of commonly used postal, telephone and even researcher-given questionnaires to reach levels of understanding that no other study of the gifted and talented has yet managed to achieve.

Design of the study

This comparison study began in 1974 of labelled gifted, unlabelled gifted and random ability children in England. The initial concern was to find why some children were labelled as gifted while others – of identical measured ability and school achievement – were not so described. The investigation used a battery of psychological tests (e.g. intelligence, personality, creativity and music ability) and in-depth interviews with the subjects, their parents and their teachers in their school and home environments. This methodology was designed to bridge statistical and in-depth approaches to provide a richer picture than either on its own. Perhaps inevitably over the decades, the research has changed its nature to some extent, becoming less statistical to examine the deeper socio-psychological effects of the individual's experiences in life into middle age.

To start with, though, the Target experimental group (T) was 70 children aged between five and 14, described as gifted by their parents, almost entirely without testing, all of whom had joined the National Association for Gifted Children on behalf of their children (the UK association is made up mostly of parents). A search was then made across their 63 schools to find the control children, sometimes testing whole schools, rather than just one class, as a 'payment' to the head-teacher.

Each Target child was matched with two experimental Control children for sex, age and socio-economic level, sharing educational experience in the same school class. However, the first Control child (C1) was measured as having an identical intelligence with the Raven's Matrices intelligence test. The intelligence matching of each of the Target child with their First Control was within three raw score points in every case, rather than the less precise percentiles. No First Control child had been labelled as gifted although they had virtually identical abilities as their labelled Target child.

The Second Control child (C2) was taken at random from the class in respect of abilities. This brought into the sample a wide range from below average to gifted to depending on the school-class make-up. Some of the schools selected their pupils by ability so that in the triad matching there, the random Second Control group child would more likely to be gifted, whereas from other, non-selective schools the random Second Control group child might be below average intelligence. As there was no real difference in the measured abilities of the

Target and First Control children, their essential distinction was whether or not they had been labelled as gifted by their parents, who had demonstrated this by the simple criterion of joining the National Association for Gifted Children.

The battery of tests given to all the sample children included –

- 1) A Raven's Matrices test as appropriate for each child's age
- 2) A second individually-given intelligence test, the Stanford-Binet (L-M), which taps much learned material, such as vocabulary, knowledge and arithmetic problems, (not to mention received American morality, described in Freeman, 2005)
- 3) Cattell's personality tests
- 4) The Stott Behaviour Adjustment Guides for behaviour in school
- 5) Music and art specially constructed tests
- 6) Creativity test specially designed

Ratings were made of the class teachers' reports on the children's school achievements (no uniform measure was available) and the head teachers' descriptions of school ethos and the population it drew on. Children and their parents were interviewed independently, each with their own piloted and specially designed open-ended questionnaire. The audio-taped transcriptions were rated, and together with other data (e.g. on home circumstances) produced 229 variables, which were statistically analysed with orthogonal comparisons and non-parametric analyses. The interview transcriptions were also carefully scrutinised for further information which may not have been anticipated in the original ratings.

Table 1: The experimental groups: intelligence measures

THE EXPERIMENTAL GROUPS INTELLIGENCE MEASURES

Raven raw score

Groups	Mean	SD
Labelled Gifted (T)	34.53	12.85
Matched for Ability (C1)	34.60	11.45
Random Classmates (C2)	28.75	11.58

IQ (Stanford-Binet)

Groups	Mean	SD
Labelled Gifted (T)	147.10	17.41
Matched for Ability (C1)	134.34	17.13
Random Classmates (C2)	119.20	16.09

Groups matched for gender, age and SES

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Of the whole sample, 170 children were at the 99th percentile of the Raven's Matrices. The Stanford-Binet IQs ranged from 46 children with less than IQ120 to 18 children with above IQ160 – 13 children hit the Stanford-Binet test ceiling of 170 IQ. Calculations to increase the

IQ quotient were not considered to be either reliable or meaningful. Family finances ranged from very poor to very rich.

There has been attrition over the years, so that by 2009, the sample had 80 subjects. Fortunately, the original groupings retained the same proportions, so that outcomes are systematic and recognisable.

SOME FINDINGS FROM THE FREEMAN FOLLOW-UP STUDY

The label of gifted

As children, the labelled gifted (the Target children) were usually treated differently from the equally able non-labelled gifted by their parents and teachers, whether positively or negatively. Consciously or unconsciously, they were the recipients of adult attitudes and expectations, and because they were children, most did their best to comply. Pressures from school and parents urging the gifted to greater scholarly advancement could be strong. Several of the young people rose to the challenge, obtaining doctorates in their early twenties, though others simply refused.

Some, as they grew up, felt they could never live up to the expectations of giftedness in terms of making their marks on the big world and stayed in smaller and less demanding communities to become 'big fishes in small ponds' (Zeidner & Schleyer, 1999). In spite of free educational opportunity and teacher encouragement, some never managed to fit comfortably into the cut and thrust of intellectually challenging work, following their low socio-economic status parents into relatively mechanical work. As so many other researchers have found (e.g.: Bradt, 2006), it was not not precocity, extremely high IQ scores, high school achievements or grade-skipping which provided a reliable route to grown-up high achievements for my sample - except perhaps for those who continued in a similar path to become teachers at various levels.

Emotional development

Each teacher in the study had filled in a standardised British questionnaire (the Stott Behavioural Adjustment Guides, Stott, 1976) on the children's behaviour in school. The results accorded extremely well with the parental interview questionnaires ($p < 1\%$). It was clear that the Target (labelled gifted) had a far higher incidence of emotional problems when compared with their First Control (unlabelled but identically gifted). Although in each triad the labelled and unlabelled were in the same school class and thus experienced identical teaching, parents of the labelled children made significantly ($p < 1\%$) more complaints about school provision. The long parental interviews in their own homes disclosed that the labelled gifted children with emotional difficulties had significantly ($p < 1\%$) more problematic domestic circumstances, such as parental divorce or adverse experiences which would disturb most children.

Table 2: Results of the Stott Behavioural Adjustment Guides

ADJUSTMENT AT SCHOOL			
	T	C1	C2
Under-reaction			
Withdrawal	23	10	10
Non-specific	37	24	21
Over-reaction			
Inconsequence	50	26	34
Hostility	39	17	13
Peer maladaptiveness	29	14	9

Percentages for each group (n = 70)
 All differences significant at p < 0.1
 Bristol Social Adjustment Guides (Stott, 1976)

This in-depth investigation discovered more potentially disturbing features in the home lives of the more problematic gifted children when compared with those of the non-disturbed equally gifted children – at a highly significant level. This was mirrored in the parents' and teacher's reports of the children's physical health. As children, the labelled gifted has significantly more physical as well as emotional problems. Clumsiness and poor coordination were particularly notable in the Target children.

Table 3: Parents and teachers reports on the children's physical health

	T	C1	C2
Stomach complaints	5	1	3
Respiratory complaints	19	7	11
Speech defects	9	3	9
Poor eyesight	10	7	6
Poor coordination	16	3	2
Total	59	21	31

Using both the Stamford-Binet IQ and the Raven's scores, along with the rated data from the interviewing, it was possible to see that it was not intelligence as such that caused these disturbances, but other matters in the children's lives, (e.g. divorce, moving home frequently), and parental attitudes to their children's upbringing concerning, e.g. TV, homework, punishment, parental behaviour and beliefs. When asked why they had joined the NAGC

(UK) for their children, most parents cited the children's problems as being typical of giftedness. Over and over again, the children's gifts were given the blame for any problems with the children.

It is important to stress that as children, their emotional adjustment was *not* directly related to their measured level of intelligence. The common assumption that the intellectually gifted have more emotional problems than the non-gifted appears to be an unjustifiable and a dangerous stereotype. The negative stereotype of emotional disturbance as an aspect of giftedness has three possible outcomes:

1. It raises teachers' and parents' expectations of emotional disturbance in children identified as gifted. Young children may adapt to this as a way of pleasing which becomes a way of life for them. It certainly seemed so for some in my sample
2. The stereotype alters subjective approaches to identifying children as gifted by teachers and parents, by including their emotional state in the criteria for assessment.
3. Lists of characteristics for identifying the gifted often contain items relating to poor emotional balance, notably lack of friendships, tantrums and abnormal emotional reactions.

How other people reacted to the gifted and talented made a big difference to the way the children coped with their special abilities and developed their sense of self to adulthood. A few of the gifted children were exploited for adult benefit, whether school or home, while for others, their feelings of worth were squashed for being 'too clever'. It could either take just a chance remark to affect a child's life, or the slow grind of parental pressure which could eat away at a child's self-confidence. Even very early experiences could affect the adult expression of high-level potential.

Being gifted in a normal world means facing special challenges. I have found, for example, that those who were accelerated in school (by up to three years) and who therefore had to cope with learning among much older classmates, bigger and more mature than they were, found that they did not thrive emotionally or even intellectually as well as they might have done. Teenagers, especially boys, were at a disadvantage because of their smaller size and parental restrictions, typically that they could not stay out as late as their older classmates. What's more, when they had left school, they found it difficult to be friends with the other older students. Even in their thirties and forties, many who had been accelerated at school felt the loss of the ease and pleasure of friendships they did not have, as well as non-scholastic activities for which there was no time in the scramble to keep up with their academic work. Only 17 of the whole sample had been grade-skipped, as this is not a common practice in the UK; 16 of them, as adults, are determined that they would not allow this for their own children. As one of the fathers said of his adolescent son who had been accelerated by two years in an all-male school, "I felt very sorry for him; he was still a boy and they were men".

Pressure

A clear warning against too much academic pressure on high-IQ youngsters emerged from the research. Much of it came from schools aiming their pupils towards prestigious universities. Some youngsters seemed to subdue their personalities while striving for perfect grades, so that their healthy emotional development, including the freedom to play and be creative, was severely curtailed. Such pressure could have the opposite effect from what was

intended when school-leavers' lives took unexpected turns. The worst affected were the accelerated boys specialising in science - eyes on microscopes - who missed out on social relationships. This limited the healthy development of their social skills and relationships, often resulting in poor self-images. Several men, still lonely in their single lives, told me spontaneously how they deeply regretted the loss of what they saw as a normal childhood.

The social pressures which can diminish a growing youngster's feelings of worth were not much helped by the universities they attended. One of the unexpected outcomes of being gifted was that youngsters from modest homes could find themselves in esteemed universities which are still somewhat beset with problems of social class and snobbery.

The pressure to gain high marks could be severe, especially if the parents had incorrectly labelled a child gifted, which brought depression to one young boy. Unfortunately, teachers of younger children sometimes seem to feel a need to put the liveliest and more creative youngsters in their 'place' by being sarcastic or in one case, traumatically tearing up a boy's poem in front of the class because he had not stuck to the subject she'd set. There could be an emotional price to pay when parents and teachers placed unremitting pressure on youngsters to achieve brilliantly at all times. Even when they were small children, some told me explicitly how they felt they were not appreciated for themselves but were living out others peoples' dreams.

Influences on success in life

The most successful adults had been more robust and sociable as children, as seen in the group comparisons of the 1970s and 1980s. Werner & Smith (1992) coined the term "resilient children" to describe successful survivors in very poor conditions, but I found that those same personality factors seemed to benefit the individuals in my sample, gifted or not. This was notable with those who were 'engaging', who found supportive adults, responsive schools, sometimes sincerely felt religion and well above-average intelligence. In terms of conventional success in life, such as high examination marks, rising up the corporate ladder or making money, the primary building blocks were always keenness and hard work, allied with sufficient ability, formal educational opportunity and an emotionally supportive home.

High level creativity, as seen in adult careers, has demanded a particular type of personality which is relatively independent of other's opinions, and at times great courage. The successful gifted architect who was a regular school truant, for example, did not do well in his exams and did not show his talents until long after he left university with a modest degree.

Whether conventional and rule-abiding or enthusiastic for change, the children usually carried their personal style through to adulthood. In general, it was true that poverty disables while wealth enables. Many of the sample had accepted their parents' views that some of the good things in life, such as a professional career, were not for them, even though they had the ability to do almost anything they could imagine, and more besides. They called it, 'coming to terms with reality'. The 13 individuals who hit the top of the Stamford-Binet scale at IQ 170 have taken up a great variety of adult occupations, one became a professional gambler, another is a janitor for a sports club, one works in a book shop, another is a full-time mother, one died of cancer, one never uses his early PhD and works in IT. Some outcomes were largely predictable and some were not. I could never have imagined, when I met the physically handicapped boy in his educationally and financially poor background, that he

would become a millionaire banker at the age of 34 – who also managed to avoid being pulled down by the 2009 crisis.

SOME CONCLUSIONS FROM THIS LONG RESEARCH

In general (but not always), those with an exceptionally high IQs, say within the top 1%, did much better in life even than those with merely a very high score, say within the top 10%. The most successful had found ways of organising their powerful mental abilities: they were more aware and made more efficient use of their personal learning styles. This not only helped them in examinations, but they could elaborate on their learning and take it creatively into adult life. Most high achievers in adulthood enjoyed a mutually rewarding situation both at home and school, a feeling of comfort with their desire to learn, based on their parents' early pride and support as individuals. The less successful, even those with high IQs, had remained with less mature and less efficient, shorter-term techniques, like rote-memorising their lesson-notes.

A sense of self

Self-concept affects the take-up of opportunity. Youngsters may conform to what they perceive as their own level in society. Across the decades, I have seen many times how two people of the same high potential reacted to a similar obstacle in life. This could be, for example, getting a place at a prestigious university. Where one would see it as exciting and couldn't wait to get to grips with the challenge, another would see an overhanging North Face, take fright and give up.

Having tested and taken careful notes on their personalities from the beginning, I found that whether youngsters were modest, conventional and rule-abiding, or constantly straining to change the world, their personal style was recognisable in adulthood. Their individual differences were remarkably lasting. Life can throw terrible problems to youngsters, who will react according to their abilities and personalities.

Poor emotional home circumstances, such as a constant change of 'uncles' in their mother's bed, financial insecurity and fighting parents, did nothing but harm to the possibility of the children's adult excellence. In spite of considerable efforts by the school, some of the sample from difficult homes never did realise anything like their potential. Investigating children without reference to the psychological circumstances of their daily lives is like examining a fish out of water – the influencing environment is missing.

School influences, particularly the respect of teachers, was influential in the long-term. Teachers often set the outlook of youngsters. Some gifts were more encouraged in schools than others, particularly science and mathematics, possibly because easily recognisable outstanding results could be more readily achieved in those subjects. But far too many youngsters wasted time and energy following wrong channels because of generally poor educational and vocational guidance.

Ideas of giftedness

Overall, teachers described the gifted as more advanced in school achievements than their age-peers, as well as anticipating emotional complications. Some young people rose to the challenge of the label and thrived on it, while others felt they could never live up to the

image. Others simply ignored their potential, fitting in with the local culture which did not have a place for giftedness. The unlabelled but equally able gifted had less distress.

But being gifted as a child is very different from being gifted as an adult. Whatever obstacles the children had to overcome, these were small compared with what they had to accomplish as adults to be recognised as gifted achievers in the world. For every one of these gifted children, turning their childhood prodigiousness into adult excellence was always the most difficult challenge of all. Gifts sometimes had to be pushed aside for tiresome work to earn a living, and fate turned some lives upside down. High-level creativity, as seen in adult careers, demanded strength of personality to act independently, which had sometimes been noticeable in childhood.

This longitudinal research benefitted greatly from recording the childhood attributes of creativity as they happened rather than being imperfectly remembered years later. The police are very familiar with sincere distortions of memory, but psychologists seem more innocent in retrospective research. The audio-recordings demonstrated the unreliability of memory even shortly afterwards, such as when the same incident was described by children and parents separately, but especially in adults remembering their youth. For example, I had interviewed a student at Oxford University who had been grade-skipped by three years at school, and entered at 16. She was young and lonely, but 20 years later, remembered that time as blissful. I did not remind her of her long depression and copious tears.

The twists and turns of the lives of the people in my study show that it is extremely important to take a long view in the study of gifts and talents. The way children develop is not smooth nor can their progress be reliably predicted from research snap-shots in childhood or the teenage years. Some children emerged from poor prospects to become successful adults, while others are still unlikely to see their early gifts and talents realised.

After innumerable hours of interaction and investigation with the individuals in this sample, and their teachers and parents, I had to conclude that many influences on happiness and success are like love – it is possible to say how it feels and what happens because of it, but there is no sure recipe to apply to others. For the rest, we do have very clear information about what the gifted and talented need by way of support towards self-fulfilment– an education to suit their potential, opportunities to flourish and people who believe in them.

*Joan Freeman's fourth book on this work - **Gifted Lives** - is published by Psychology Press..*

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