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THE INTELLECTUALLY GIFTED

by

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INTRODUCTION

In the dialogue on the perfect society, Plato calls for the cultivation of the gifted to serve as leaders of men: leaders in the advancement of knowledge and the education of youth. His hope was that such men would be the germ of a dynamic and fruitful community. Thomas Jefferson, a man perhaps more celebrated in our democratic climate, proposed (9,p.148) to the Virginia Legislature a bill designed to seek out those of "worth and genius" among youth, and to educate them according to their abilities. His hope was that the gifted, adequately trained, would be "the key-stone of the arch of government." Thus two political philosophers widely separated in time place the able men in the most responsible positions as regards the flowering of a successful government. Interest in the intellectually gifted is, then, concomitant with the idea of efficient intellectual and political leadership, and by no means is it a new development. Yet, through the course of this paper, we shall see that such attitudes have not held sway to any degree universally and indeed many have seen them as out of place in our democracy and in its schools.

For reasons that may become apparent, it is difficult to talk of the gifted without putting the discussion in terms of potentiality and achievement since we may thus view the abler individual as a whole person, with abilities and obstacles to success or realization, and not see

him as simply a peculiar member of society or, worse yet, as a piece of statistical data. With this point of view, our discussion involves identification and description of the gifted, with discussion of the means of individual development. The remainder of the paper will deal with the problem of underdevelopment or underachievement and the measures being taken on the contemporary American scene to better insure the gifted the development of his talent for his own good and for the benefit of his fellows.

POTENTIALITY AND ACHIEVEMENT

Because of the success attained in correlating intelligence test scores with performance, scientists have come to describe the gifted partially, at least, by the intelligence quotient. With certain qualifications to be discussed, we may identify the intellectually gifted person on a statistical basis as one having an I.Q. of 140 or better on the Stanford-Binet Test. Since this fact alone is meaningless we add that the modal class fall between 90 and 100, again as regards the Stanford-Binet. If we consider 90-110 as "normal," then we must consider the gifted as "abnormal" or exceptional. With these facts we can say that the classification "gifted" includes, according to this test, only 1.33% of the population. These persons have been described as the "first order" of gifted. The "second order" gifted, or those in the top ten per-cent of the population, might include other abilities than the more or less purely intellectual, e.g. manual ability, creative ability, or musical ability. (2,p.2) However, we cannot say with any degree of certainty that these various abilities are not aspects of a more general talent. Perhaps they mirror motivation and environment more than they do actual ability. At any rate, we are dealing here with the "first order" of gifted and we consider them under the aspect of general intellectual superiority over the population.

We must say much more about the gifted other than the fact that approximately ninety-nine per-cent of the population is intellectually inferior to them. The most comprehensive study of this group of people has been done by Dr. Lewis Terman (14). His monumental work began in 1921, with the selection of a large random sample of primary school students; the standard for admission into the sample required that a subject be within the top one per-cent of the general school population. The total number of children selected for the study was 1,470 out of a school population of about a quarter-million. To each of them was administered, at various times and in a variety of methods, a battery of tests. Some of them concerned general intelligence (Stanford-Binet), others measured interests and character traits and such areas as social adjustment and special interests.

The results are most significant, both because of the careful selection of the sample and the excellent testing procedures used. Of course, the descriptions were made by way of comparisons with the control group: a random sample of average students studied in an identical manner. The gifted students' general intelligence, as has been explained, placed them in the first one per-cent of all children in the school systems studied. As regards attitudes, their teachers and parents were asked to rate these students as being above, at, or below the average student, i.e. the control, in certain emotional and motivational traits. Teachers' reports, compiled and interpreted, rated the gifted students above the control eighty-seven per-cent of the time in intellectual

traits and eighty-three per-cent of the time in volitional traits. Other significant differences included an average of sixty-seven per-cent of them better in emotional traits, e.g. sense of humor and optimism, sixty-five per-cent better in aesthetic traits, e.g. musical appreciation.

Interests and preoccupations were likewise studied. About ninety per-cent of the gifted were above the mean of the control group in intellectual interest. Approximately eighty-four per-cent were above the mean of control in social interests. In activity interests, e.g. recreation, there were few significant differences between the two groups.

Physique and health were studied by careful medical examinations. In general, the gifted were above the best standards for American students as regards height and weight; they exhibited better general physiological operation than the control. As a rule, they had better developed physiques and were, as a group, quite healthy-looking children. The gifted children were found to have superior sleep and dietary schedules and reported general "weakness" almost thirty per-cent less frequently than the control. This was apparently due to the better medical care the gifted students received, coming as they generally did from more financially secure homes.

It must be noted that even this incomplete view of Terman's basic findings does considerable damage to the stereotype of the precocious, even puny and withdrawn gifted child. Indeed, not only do they have the best of the physical, psychological and social traits of the average child but they have, as a group, more of each and in better coordination. Such a stereotype is of little factual significance. But it affects and has affected attitudes of society in general and parents in particular toward the gifted child, and such attitudes have a great deal of significance to the psychologist. They are perhaps elements involved with the lack of popular knowledge about the problem of the gifted to be discussed later, for where there is little comprehension at the outset, little understanding can be expected.

Despite the richness of his endowment, the gifted person has often been delineated from the genius category. There are two closely related reasons. What use a person makes of his potential involves his own individual actualization; if he can develop his abilities to a high degree, then the rewards of a high self-regard are his. Not only must he actualize himself, but he must at the same time assume a fuller, more responsible role in his society, for with endowment comes the expectation of society for leadership in knowledge. It has been stated rather concisely that, "General intelligence is only one of the factors which contributes to a child's success in life, for special aptitudes and the amount of drive for self-expression he

possesses will determine whether potential genius will earn the title of genius." (3,p.10) These factors include as well the emotional make-up and the adjusted capacity of the individual. Thus, for the sake of definition, we can view the gifted in terms of potential and the genius in terms of achievement. Therefore, "the mere fact that a child's I.Q. is high is no assurance that he will achieve success, for unless his potentialities are channelled constructively he may fail to develop in proportion to his mental capacity." (3,p.3)

The actualization of talent involves many factors and without any doubt motivation is primary among them. The significance of motivation has been widely studied; we shall describe here two rather interesting studies. In 1940, Terman (15) selected three-hundred and fifty out of the original 1921 group. One-hundred and fifty of them were considered lowest in the group of fourteen-hundred and fifty of them were considered lowest in the group of fourteen-hundred in terms of success. Likewise, he selected the two-hundred of them described as most successful. Note that the criterion for success was not necessarily financial; note also that most of them were at about age twenty-five to thirty-five, generally the most fruitful period of years in many fields, especially the sciences. The study must be considered well-controlled since the constant was an intelligence-level at or beyond the ninety-ninth per-centile of the population. The development of their talent was studied as it had been reported through the years. In addition, tests were given to determine the interests and aims of each subject.

The aim was to discover what factors had affected the development of the two groups and why the one group was more successful than the other in realizing talent. The results demonstrated that the reasons for comparative success or failure rested largely in the family background of each subject. In families where there was a lack of encouragement, where the home proved of little cultivating value, there was generally a corresponding loss of eventual success. However, where the home life was encouraging, where the individual was given the opportunity to express himself, success was much more frequently the product. Generally, with all things considered, the two groups differed greatest in their drive to achieve, and in general psychological and social adjustment. These findings do not coincide with the notion of the "suffering genius." A man may suffer at the hands of others because he is a genius, but his own will to succeed is the agent of the fructification of his talents and his own personality integration is the foundation of enduring success.

Another study, conducted by Knapp and Goodrich (8) dealt with the collegiate origins of eighteen-thousand scientists. To be considered, an individual had to have a Ph.D. or its equivalent in years of independent study. A rather elaborate research method produced data concerning the productivity of the scientists selected. Once a group of clearly valuable men had been delineated, the institutions where they received their undergraduate education were compared on a productivity

index. The results indicated that between 1924 and 1934 the small Liberal Arts colleges had generally higher levels of productivity as regards talented scientists. Only six of the nation's larger universities were in the first fifty according to the index computed. The question is, what factors in the smaller institutions led to the development of proportionally more successful scientists?

Probably the general intelligence level of students in the schools was a factor. But there were other important factors which became apparent to the researchers. They included, the quality of the intellectual climate in the smaller institutions, the proportion of able and inspiring teachers and, most important, the amount of conscious effort made to discover and motivate the highly gifted. Terman is obviously correct in stating that, "The importance of motivation cannot be exaggerated." (15,p.229)

The parents and the family in general are probably the most influential factors determining whether or not talent will be realized. Whatever attitudes the parents have toward college will most certainly be assimilated by the child; or, perhaps he will react with an opposing attitude if his home life does not foster close family relationships. Finances have several affects. Many times a student of real ability cannot go on to college for lack of funds. Or perhaps an able student will pursue his studies with more ardor considering the financially insecure position of his parents who may have had little formal education.

THE PROBLEM

We have described the genius: a gifted individual who, through the development of his potential, achieves success in his aims as an individual and thus fulfills his proper role as a superior member of his society. When considering individual endowments of gifted people and the forces affecting their development we come up against this significant problem: the correlation between intellect and achievement is far from perfect. Indeed, the divergence between them is such that when much talent is involved, its loss is considered a major flaw in the fruitful development of a free society. According to Terman (15,p.230) "To identify the external and internal factors that help or hinder the fruition of exceptional talent...is among the major problems of our time."

From the earliest times, wherever there was intellectual quickening, the gifted were prized. In the glory of Athens in the pre-Christian era, in the magnanimity of the Renaissance and in the great strides taken during the sixteenth century in Europe, we clearly see the development of a great deal of talent to its fullest. Yet there were a majority in the background through all these periods; a majority whose social status as peasants and farmers did not permit the development of potential that most certainly was there. (2-19) However, with the emergence of the middle-class and the more general dispersement of capital, there began the real activity of the people toward a more broad form of

government. Risking obvious oversimplifications, we can say that with democracy came a developing resentment towards any segregated group: all men were to be considered equal. They should be considered equal in rights as men, but they are not the same and they should not be considered as such; each has his own peculiar endowment and each must actualize his own potential in his own way. This distinction is not very widely held as yet by Americans and while there are exceptions, Americans have come to look with disfavor on any measures to insure the full development of the gifted individual since this would make him a person above the rest, or "odd" as it is sometimes expressed.

However, during the present century, interest in the abler people has increased in the United States to the point where in professional circles the problem of utilizing talent has come to the forefront and definite measures are being taken to deal with it. One prominent educator phrased this sense of urgency this way: "One major assumption (is that) democratic society, if it is to survive, must create a real leadership from within itself. It must recognize early those individuals within it who are well-endowed, recognize them for what they are: an 'elite'." (5,p.4) This "elite" is not viewed as a breed of supermen; it is seen as a group of productive men and women whose contributions to the democratic society are the measure of genius and whose development reflects the philosophy that each man must be given the opportunity to develop corresponding to his ability.

Other, perhaps more immediately pragmatic reasons for this renewed interest have been advanced by Sarnoff (12). According to him the main reasons involve man-power shortage. During the Second World War especially the lack of sufficient talent was quite noticeable. Also cited are the chronic and increasing shortages in such fields as medicine, nursing, teaching and engineering. Finally, the growing awareness of the United States' position as a World power has given rise to a great interest in the production of talented men and women in every field. The burst of interest that surrounded the orbiting of Sputnik I by the U.S.S.R. was immediately directed toward the colleges and universities. Although the public mind was again set at comparative ease with the successful launching in early 1958 of the Explorer, yet there has been a tremendous boost in the intensity of interest directed toward the gifted pupil. (9,p.18)

The necessity of having as much as possible of the socially necessary talent develop is only a part of the story. The primary consideration involves the problem of self-actualization: for our purposes, the fruition of individual ability. The most visible manifestation of a failure in this regard is underachievement. The underachiever may be defined as an individual who is significantly lower on a performance scale than he is on an aptitude scale. Due to the extremely high intelligence quotients of many gifted children, most of them are underachievers to some extent.(9,p.60) But as the children

nature, it is to be expected that performance level will remain reasonably close to aptitude level. It has been estimated that from fifteen to twenty-five per-cent of the gifted students in most schools are underachievers. In later follow-ups of his gifted children, Terman (14) found that while performance and aptitude followed reasonably simultaneous levels in the primary and early high school years, in college many of them received poor or average marks. Another report (13) suggests that the potential supply drains off all through high school, but that at graduation from high school, the greatest loss takes place. Some estimates are quoted to the effect that probably only six out of ten of the top five percent of high school students go to college. (9,p.60) Such underachievement involves many related personality difficulties. Achievement for a gifted person is closely bound up with ego-ideal and underachievement is thus a breakdown of ideals and goals and is an indication of lowered self-regarding attitudes. (9,p.61) We have cited studies which demonstrate some of the personal social pressures that can lead to poor performance. In so many words, failure to achieve is but one aspect of a larger problem of adjustment and we cannot, for lack of space, investigate all of its aspects. Suffice it to say that as a result of environmental pressures and a decrease in motivation, a potentially successful person fails to achieve to some significant degree.

PROGRAMS FOR THE GIFTED STUDENT

This final portion should begin by bringing together several things already discussed. The importance of motivation in the development of talent and the problem of underachievement are intimately related. A highly motivated person, despite his about average ability, can produce quite valuable work. Indeed, a very able person may come up to the level of his peers with comparatively little motivation. But a gifted person cannot be expected to adjust well if his performance does not excel that of his average fellows. Terman, our chief source, found that all of the children selected for the 1921 study were well ahead of the class in school in ability. Performance wise, they either were advancing to more independent work in certain subjects, or they were restless and bored with the course matter. It seems logical that a child who can do more advanced work should be provided with such material. The two most basic means that have been used to deal with the motivation and achievement problem will serve as a basis for discussing the contemporary measures being taken in high schools and colleges.

The first of these has been described as "grade jumping" or "double-promotion". This simply consists of advancing a student to a level to which he is more academically suited. The second is hinted at in the extra-curricular study of the students mentioned above.

Where the course of study is added to, that is made more difficult in terms of content and level of work, the process is generally called enrichment.

Acceleration, in its early "grade jumping days" and in more recent approaches, has been viewed with ambivalent attitudes. The cry went up early that an individual may be prepared academically for higher things, but his emotional and physical maturity remain at his own age level. The expected result of acceleration was maladjustment. Researchers have countered with results that show that one of the greatest sources of personal and social maladjustment for the gifted individual rests in his continual associations with students whose interests and abilities differed greatly from his own. (3,p.9) Further evidence exists in repeated observations of able students' association with older groups in school. It seems now that the individual child must be considered, and if his personal and social needs can be adequately filled in a more advanced class then by all means his years in school should be shortened.

A basic consideration in favor of acceleration is the amount of evidence supporting Terman's objection to the educational "lock-step": keeping age level and grade in school simultaneous throughout. Considerable information (11) indicates that students who enter college young are more likely to graduate and show better academic records than the average student. Even their participation in extra-curricular

activities is at least normal. In follow-ups on such studies, it is apparent that the accelerated students were more successful than the average in post graduate and career work. All of this is not to say that acceleration alone is the solution; it must be considered in relation to other factors to be discussed, considering always the individual involved.

The second basic approach is enrichment. Such a method consists essentially in providing a deeper and wider course for a gifted individual. One major advantage from the point of view of better social adjustment rests in its provision for adequate intellectual motivation without separating the individual from his age level. Enrichment is also provided to broaden interests into such diverse endeavors as creative writing, music and the arts. Since some students do not favor a broadened curriculum but respond better to a deeper investigation of a central study, e.g. science, some schools institute clubs and so on to concentrate on broader interests apart from an intensive curriculum. (8,pp.21-22)

A combination in some form of both acceleration and enrichment can be accomplished in special groupings. One reason for such a group arises from the fact that enrichment eventually leads to acceleration since to remain on one level in most subjects but delve into others more deeply leads to a general need for advancement of grade level. (2,p.98) It has been generally accepted that special groups for the

gifted are perhaps the best general means for providing a special program for them. In high schools it has been found unreasonable to have a student take all of his subjects in a special group; the peculiar interests of the individual student is considered in each case. (9,p.80) Perhaps some of the benefits of special grouping will become clearer in the discussion of collegiate programs.

The early identification essential in any program for the gifted indicates the necessity of beginning programs in primary or, at the latest, in high school. Evidence in favor of starting early comes from many sources. Screening the talent of school children by testing and observation will produce a workable sector of students with which the educator can work. Of particular interest are the individuating characteristics of each student to be included in the program, especially in view of the role played by the counselor in any such program. (2,pp.37-38) The importance of beginning early can be seen from the study by Harvey Lehman (quoted in Terman, 15). He found that maximum creativity was reached in the sciences between the ages of twenty-five and thirty-five. In other fields, e.g. literature, music, etc., five or ten years later seemed to be the period of greatest productivity. This would indicate that a person with high potential should be well trained for his life work before too many creative years have passed.

Much of the research we have quoted have centered around early school years. However, the great surge of interest today involves the gifted on a high school and college level. Most colleges and universities have special programs of one sort or another. Such interest is not new in American higher education. In 1873, a sort of Honors program was set up at Wesleyan. The association of American Universities reported in 1943 that one-hundred and fifty out of two-hundred institutions listed had some sort of special program. However, the majority appear to have been mainly paper programs; some included a handful of students and most of them were inconspicuous, understaffed programs. In the past ten years educators have become increasingly aware of the necessity for keeping the quality of education high despite the forecasted increases in enrollment.(5,pp.2-3) A more immediate view is expressed by Dr. P. Albert Duhamel, Chairman of the Department of Special Programs at Boston College. According to him, "An examination of the Honors program by a faculty committee made it obvious that the continual treatment of the academically talented students on campus with no thought of where they came from and where they are going was rather ridiculous." (6,p.19) The result has been a re-examination of the special programs idea and an investigation of new approaches to the Honors program.

Basic to all programs, in some degree, are the three components discussed above: acceleration, enrichment, and their combination, grouping. Intimately connected with any type program is counseling and some variety of Honors Center, or Honors Seminar: some sort of locus operandi.

The selection of students for an Honors program varies from institution to institution. Some frequently used criteria include: College Entrance Examination Board Test score, rank in high school class and recommendations from high school faculty. Usually there is a sort of "liaison" with the high school involving mainly acceleration. Either a high school junior is admitted to freshman year in college or a high school senior is allowed to start college on a sophomore level. Also, examinations are given and a student's position in college is fixed by his performance, regardless of his age. In regard to this type of acceleration, Terman feels that most high schools should accelerate students rapidly enough to permit college entrance by seventeen years of age, if not sixteen. He does not recommend any more rapid acceleration than this. (15,p.226)

Enrichment, on a college level, includes both the "depth" and "lateral" varieties. Students are urged, by way of intensive curriculum, to delve into their major field much more comprehensively than the average student. Besides this, they are motivated to broaden their interests into study-groups, seminars, individual reading and lectures of

all sorts. Here it is well to emphasize again that the aim is not to produce students with an intense but narrow education. Lateral enrichment demonstrates well that an Honors program can be the epitome of the aims of a Liberal Arts education. (5,p.12)

All of these approaches focus upon the motivation of potential discussed in previous sections. They aim at creating attitudes conducive to the active, vigorous pursuit of self-development. In the large universities a gifted student is likely to drift aimlessly among the flotsom. Despite all that is said about "talent will-out" and so forth, it is still necessary to provide an atmosphere wherein the abler person is motivated to seek more than the average, to precind from cramping restrictions on courses and excessive in-class schedules. (5,pp.5-6) According to William James, "...the Alpha and Omega in a university is the tone of it." (5,p.3) This "tone" or atmosphere is greatly enriched by a successful Honors program. Thus not only does the special student himself benefit, but all the worthwhile students are activated. Such special programs make formal education more meaningful and challenging for all the students. (7,p.14) The faculty is likewise motivated by the prospects of eager and willing students in major and minor fields.

The Honors program at Kansas University (6,pp.5-7) will perhaps serve as a substantiation of some of these findings. Here the entering

freshman class in 1955 was scrutinized and thirty-one promising students were selected. One criterion was an intelligence level at or beyond the ninety-eight per-centile of high school graduates according to national standards. These students were permitted to take courses not ordinarily open to freshmen and they were given more than the usual number of courses. At the end of three semesters the majority attained junior status. Four of them advanced to senior at the end of four semesters and in the summer session of 1957 were allowed to take advanced courses in mathematics and psychology. Ten of them graduated in 1958 after three years. Students in the program had better records than very able students had done before the program was instituted. In freshman and sophomore years the level of grades was close to a straight A.

A counseling service was intimately connected with the program. Each counselor was assigned a small group of the students, usually six or seven. They noticed in the special group a wide interest in any intellectual pursuit. The library staff noted that the Honors group made generally more use of their stack permits than many of the members of the faculty. In general, the morale of the group was high and the several departments in the College of Liberal Arts and Sciences reported an increase in student interest in what was described as intellectual pursuits.

Such a successful program has not as yet been attained in most Colleges and Universities. However, there is little reason to suspect that with the increase in motivation and the generally improved atmosphere, success will not be theirs. These programs are indicative of an increasing interest in closing the gap between potential and achievement and in providing a means to a fuller, more productive life for those of superior ability. The gifted have proven and will prove to be stimulation to all around them just as they are on the college campus. They are not a separated, withdrawn group; rather, their behavior is a source of inspiration to the less endowed, and they can lead others to develop their own ability to the fullest.

We should conclude with Dr. Terman's forecast of the future in the development of potential talent, for his work has been the foundation of much of the interest in this regard and the new directions he has pointed out have added greatly to the frame-work of that future.

"Within a couple of decades vastly more should be known than we know today about our resources of potential genius, the environmental circumstances that favor its expression, the emotional factors that give it dynamic quality and the personality distortions that make it dangerous." (15,p.230)

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