
ACCELERATION AND ENRICHMENT: DRAWING THE BASE LINES FOR FURTHER STUDY

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THE CONTROVERSY IN PERSPECTIVE

For nearly forty years prior to 1970, the acceleration versus enrichment argument lay dormant as far as the public was concerned. The Great Depression had eliminated the prerogative for public-interested disagreement for all but a few educational and psychological investigators. Before that time, however, there had been proponents of educational acceleration and others who favored enrichment. Each group considered its own a singularly appropriate underlying strategy for educating intellectually gifted youngsters. But with few jobs waiting for graduates after 1929, there seemed to be no reason or purpose even for brilliant students to finish their formal schooling. In the ensuing absence of public debate, the unrivaled assumptions implied, and even voiced, by advocates for enrichment became entrenched firmly in the nation's public consciousness. Some of these assumptions were clear expressions of the mythology that had developed in regard to great intellectual talent and precocity. "Early ripe, early rot" was but one epigram that encouraged educators of the mid-1900s to suppress actively the rapid intellectual development experienced by some youths. Parents of such children were counseled to avoid even considering accelerative educational plans for their children. The price one "surely" would have to pay for moving more rapidly through the educational lock step than did one's age mates was his or her "social and emotional adjustment." Counselors predicted lives characterized by loneliness and despair for these children if they chose to skip a grade in school or even to move ahead more quickly in certain subjects. Montour (1977b) has explored this theme expertly.

We cannot doubt that these counselors were acting in good faith by voicing their professional concerns, inasmuch as similar feelings were voiced by many other professionals throughout the hierarchy of educational practitioners. After all, America of the early 1900s was considered a "melting pot" culture. Social

pressure to conform added to the depression's economic realities. Sameness and assimilation were thought to lead to social acceptance and therefore to be basic among the attitudes needed by the many then-recent immigrants to the United States. Counseling intellectually gifted children toward programs that would "enrich" or broaden their cultural assimilation (via academic experiences) was consistent with these outlooks. Enrichment seemed to offer less conspicuous methods for teachers and administrators to deal with the special educational needs of these children. Accusations of "elitism" thereby could be avoided.

The year 1971 saw a resurgence of public debate about the relative merits of enrichment over acceleration. In that year Julian C. Stanley, a noted educational measurement specialist, formed his actively interventional Study of Mathematically Precocious Youth (SMPY) at The Johns Hopkins University with substantial support from the Spencer Foundation of Chicago. Stanley chose to continue the empirical study of strategies for educating gifted youths that had been begun implicitly by Lewis M. Terman in his *Genetic Studies of Genius* series and carried out more explicitly by Leta S. Hollingworth (1942) in her studies and counseling efforts based at Teachers College of Columbia University. The empirical evidence gathered by SMPY since its inception has formed the basis of outspoken advocacy by Stanley and his associates for educationally accelerative techniques to help those mathematically brilliant youngsters who are eager to proceed quickly and to excel in high-level mathematics curricula.

Not only has SMPY worked with thousands of youths who reason extremely well mathematically, but also it has served as a training ground for a number of educational and developmental psychologists under the mentorship of its founder. New programs for studying specific issues concerning educationally accelerative techniques have been created by these and other SMPY-trained personnel. (Once such methods are developed, they are validated first; only then are they applied to the education of mathematically gifted youths.) Lynn H. Fox's Intellectually Gifted Child Study Group, for example, directs its energies primarily toward the study of sex differences among mathematically talented youths and of ways to minimize their effects among gifted girls.

In less than a decade a small but vociferous group of professionals has become the national advocate for educational acceleration. Practitioners and other investigators who either actively or quietly support the use of accelerative techniques have rallied to join forces with this group. Still, champions of acceleration represent a tiny minority among educational specialists interested in gifted students. Because many of these advocates come from the tradition of empirical study in education and psychology, they have made an effort to substantiate their claims with fairly rigorously determined evidence. Professionals at SMPY and at projects stimulated by it have published numerous books and articles. They and their former prodigies have received considerable attention in the press and electronic communications media, even to the extent that several states, counties, regional units, and localities, to say nothing of one South American country, have begun programs using the SMPY strategies as their

model. Such projects, which replicate the continuing string of SMPY pilot studies, eventually will serve to help the public assess the value of accelerative techniques for mathematically brilliant youths, and perhaps for children with other talents as well.

The major point of this brief perspective is that a controversy presently exists—perhaps even rages! Even a naïve spectator attending one of the national association conferences for the gifted would notice the incipient, but growing, dialogue.

The purpose of this book, the fifth volume in the SMPY *Studies of Intellectual Precocity* series, is to set forth clearly the positions of the partisans in the acceleration-enrichment debate. In order to accomplish this end, the editors have chosen, first, to place the argument in historical perspective by tracing it through the educational and psychological literature; second, to provide the reader with several glimpses or highlights of relevant literature espousing each viewpoint; and third, to recapitulate the present status of the dialogue as expressed in an eighteen-member symposium. Since SMPY is intended as a series of longitudinal investigations into the effects of accelerative intervention in the education of mathematically brilliant youths, we hope that this volume will serve to mark the base lines against which the results of these long-term efforts eventually will be judged.

THE STRUCTURE OF THIS VOLUME

In his review of 182 books and articles (chapter 2), Stephen P. Daurio identifies four sources of problems that enter into the acceleration-enrichment controversy: (1) the tradition of the age-grade lock step in the American educational system; (2) resistance among the populace to the use of standardized tests that are appropriate for identifying talented youths; (3) practitioners' selective recall of social adjustment problems among those children who have accelerated through the formal schooling process; and (4) confusion over the definitions of the terms enrichment and acceleration. Daurio treats each of the first three issues in turn. First, he reviews the history of chronological age grading in America. Second, he discusses the use of tests in identifying intellectually talented youths. And third, he offers an analysis of educators' "selective" versus "representative" biases against acceleration. The major portion of his paper, however, traces the development of and conclusions drawn from observations of programs and reports on studies that favor either enrichment or acceleration as an appropriate strategy for educating intellectually gifted students. It is in this section that Daurio addresses the definitional problems regarding the terms *enrichment* and *acceleration*.

Daurio delineates two kinds of enrichment. The first type, called "lateral, nonaccelerative enrichment," is traced chronologically via programs developed in school systems throughout the country. Little empirical evidence exists that

substantiates the appropriateness of such programs. Then Daurio differentiates a second type of enrichment, "relevant academic enrichment," into three sub-classifications: special schools, special programs within schools, and fast-paced classes.

Daurio's treatment of relevant enrichment techniques in chapter 2 makes special note of two inherent problems. First, "relevant" enrichment generally exposes students to curricula they typically would encounter later in their educational careers; hence it often results only in postponing boredom. Second, enrichment programs proved beneficial not only for intellectually gifted students but also for students of more average ability. Consequently, such strategies could not be described as "qualitatively differentiated" for gifted students, an important evaluative criterion suggested in guidelines provided by national legislation (Federal Register 1976).

Chapter 3 of this volume is a reprint of the 1951 article by Meister and Odell entitled "What Provisions for the Education of Gifted Students?" It appeared originally in the *National Association of Secondary School Principals (NASSP) Bulletin*. Meister and Odell provide a glimpse of educators' arguments that offer social and emotional maladjustment as justification for counseling students to avoid breaking the educational lock step.

A more up-to-date definition of enrichment is provided in chapter 4, which is excerpted from Joseph S. Renzulli's *The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented*, published in 1977. In this brief article *enrichment* is defined, assumptions underlying its utility are outlined, and several specific enrichment activities are introduced.

In chapter 5, "Career Education for Gifted Preadolescents," Lynn H. Fox offers an example of relevant academic enrichment that avoids both of the problems mentioned above. In the programs that Fox describes the student is provided with information relevant to planning his or her educational future. Such information generally is not offered elsewhere in the typical schooling process. As a result boredom in the class or at some later point in time is an unlikely consequence. Moreover, the types of careers discussed are geared to the completion of a considerable amount of formal education. Most of her procedures involve accelerative strategies to complete such schooling rapidly and well. Since only persons of exceptionally high ability are advised to consider these strategies, such programs do offer "qualitatively differentiated" training for gifted youngsters.

The problems that enrichment strategies seek to avoid (especially social and/or emotional maladjustment due to displacement from one's age peers) must be considered in the light of the problems such methods create (e.g., the stigma of segregated age grouping by ability without subsequent programs that are appropriately challenging).

Empirical evaluation of these techniques has advanced little since Dean Worcester addressed them in his 1956 monograph, *The Education of Children of Above-Average Mentality*. (The section of that monograph entitled "Enrich-

ment” has been reprinted as chapter 6 in this volume.) Worcester examined the practical issues relevant to enrichment programs: the time during which they should be given; their advantages and disadvantages; and variables such as class size for segregated groups and the social adjustment of students in these highly differentiated situations. In his summary he compared acceleration and enrichment. He maintained that through 1956 “no good studies” had been conducted that compared the relative merits of the two strategies. It appeared that *any* method aimed at meeting the special needs of the gifted had value. However, Worcester concluded that “We do know that the accelerated students have saved time.”

Since 1956 only one substantial study has been made (Goldberg, Passow, Camm, and Neill 1966) that compares the respective techniques. Although it is not reprinted in this volume, its method and conclusions are summarized below. In brief, enriched and accelerated programs were wedded with specific curricula for mathematics instruction (contemporary versus standard) for seventh-grade students chosen on the basis of high general intelligence (IQ over 120). Fifty-one classes (about 1,500 pupils) comprised the initial population sample. After the three-year duration of the study, however, only thirty-seven classes remained (868 pupils). Although a number of other problems involved with longitudinal field research were encountered in addition to loss of subjects, several conclusions were suggested. In simplified form they were as follows: (1) contemporary mathematics appeared to produce better results than did standard mathematics; (2) accelerated programs were better than enriched ones; and (3) contemporary-accelerated programs produced the best results of all.

In his literature survey Daurio found a considerable number of studies that offered empirical evidence supporting claims for the relative benefits of educational acceleration. Inasmuch as concern for the gifted student’s social and emotional development forms the justification for caution against accelerative options, Daurio traces the evolution of this argument carefully. The practice of past educators, and even present ones, has been to exercise extraordinary restraint in applying accelerative techniques. Such caution was offered in spite of considerable evidence reported by Terman and his associates that there was a positive relationship between mental development and social and emotional adjustment.

In volume 4 of the *Genetic Studies of Genius* Lewis M. Terman and Melita H. Oden address directly “The Problem of School Acceleration.” Their essay is reprinted as chapter 7 of this volume. The evidence provided is encouraging and the conclusions drawn support the use of accelerative techniques. The authors argue that conservative applications of accelerative strategies such as skipping a single grade often were insufficient to meet the actual needs of brilliant youngsters. In their opinion several grade skips might be more appropriate if spaced properly throughout a youth’s educational years (e.g., fifth to seventh grade, eighth to tenth grade, or eleventh grade to college, in a kindergarten through six, seven through nine, and ten through twelve grade setting, respectively).

Daurio breaks down evidence regarding accelerative techniques into three

broad categories: studies of early entrance to college, rapid completion of the bachelor's degree, and acceleration prior to college entrance. Within the first class, he cites the importance of biographical case histories. An early associate of Terman, Catharine M. Cox, based the second volume of the *Genetic Studies of Genius* series (1926) on a review of biographical data concerning the early lives of 300 "geniuses." About the same time Leta S. Hollingworth employed case history techniques in gathering evidence to support her development of special schools for the gifted and counseling strategies for intellectually prodigious youngsters. More recently, Kathleen Montour, a former SMPY project associate who received her baccalaureate from The Johns Hopkins University in 1976, traced the lives of a rather large number of prodigies, many of them still living. She emphasizes the necessity for excellent detective work and discusses some secrets of her research techniques (Montour 1978a). In an impressively detailed article about the tragic case of William James Sidis (Montour 1975a, 1977b), she traces the well-publicized decline of this once famous mathematical prodigy and compares his sad circumstances with those of the magnificently successful Norbert Wiener. She also has scrutinized the later lives of a number of prodigies identified in the past. Leta S. Hollingworth served as the source of some case studies (Montour 1976d, 1977c), as did the famous 1940s radio show "Quiz Kids" (Montour 1975b). Montour used a more nearly pure retrospective method (similar to Cox's technique) in tracking down the early experiences of a number of more modern intellectual *Wunderkinder*, including Merrill Kenneth Wolf, who earned his bachelor's degree at age 14 (Montour 1976a), and Charles Louis Fefferman, who at age 22 became the youngest American full professor (Montour 1976b). She also performed retrospective analyses of such outstanding present-day scientific personalities as Wernher von Braun, Harold Brown, and Robert Burns Woodward (Montour 1977d). Several historically eminent prodigies who lived in prerevolutionary America (Paul Dudley, Cotton Mather, and John Trumbull) underwent her detective-like scrutiny as well (Montour 1976c). Computational skill was contrasted with mathematical reasoning ability in her comparative study of the early lives of Zerah Colburn and Carl Friedrich Gauss (Montour 1976g). A problematic literary genius, Thomas Chatterton, was studied against the backdrop of a socially manipulated mathematical prodigy, Evariste Galois (Montour 1978b). Montour has carried her passionate interest in ferreting out early facts about prodigious children into areas other than the intellectual, among them talent in the drama (1976e), in the opera (1978c), in the world of finance (1976f), and even in gymnastics (1978d).

With the exceptions of Sidis and Colburn, whose childhoods were exploited ruthlessly by their parents, the early and rapid educational development experienced by these prodigies demonstrated no consistent relationship to social maladjustment or emotional problems. Family dynamics were found to be at the root of the serious problems and maladjustments that have occurred in a few prodigies, even in the extremely morbid case of the brilliant youthful murderers, Leopold and

Loeb (Montour 1977a). For those whose lives were problematic, possessing extraordinary intellectual abilities served to help them survive.

These glimpses into the past have been corroborated in a preliminary fashion by recent prospective evidence gathered among SMPY's hundreds of early entrants to college, as well as from The Johns Hopkins University's own experience in this area (Eisenberg and George 1979). Most of these youngsters appear remarkably well adjusted and successful, both academically and socially. But anecdotal evidence cannot stand alone. Daurio also reviews a number of data-based studies of younger-than-average-aged college entrants. Among these studies, the 1949 monograph entitled *Educational Acceleration: Appraisals and Basic Problems* by Sidney L. Pressey has become a classic work on investigating the relationship between entrance age and pace through college and the effects such variables have on subsequent academic and personal success. Chapter 4 of that monograph, "Outcomes and Concomitants of Acceleration in College," has been reprinted as chapter 8 of this volume.

Other social experiments focusing on early entrants to twelve major U.S. colleges or universities were performed during the early 1950s. Sponsored by the Ford Foundation's Fund for the Advancement of Education, these studies were distinguished not only by their attention to the social and emotional adjustments of the participants, but also by the fact that they represented the first *prospective* studies of acceleration. Results from the follow-ups of the younger-than-average-aged college entrants overwhelmingly supported the use of early entrance as a viable technique for meeting the educational needs of intellectually brilliant youngsters. This support was based on the observation that the social and/or emotional maladjustment predicted for the early entrants occurred no more frequently than it did among college students of typical age. This observation and other conclusions have been recapitulated in detail in chapter 9, "A Summing Up." The essay is taken from *They Went to College Early*, the second evaluation report issued in April 1957 by the fund.

In his classification of studies on accelerative techniques, Daurio includes "acceleration prior to college" last. Several methods for bridging the transition from high school to college are discussed. Besides the retrospective assessment of acceleration conducted by Terman and Oden as part of their 40-year follow-up of high-IQ youths, several other investigations into the use of accelerative methods at the secondary level are reviewed. Included in this section is the extensive evidence gathered by SMPY in implementing its "smorgasbord" of educationally accelerative options for the intellectually talented, especially for youths of junior high school age.

Similar techniques for early entrance and rapid transit through elementary school form the substance of the final category of evidence regarding acceleration that Daurio offers. A particularly outstanding example of longitudinal research concerning accelerative methods employed among children of elementary school age is James R. Hobson's 1963 article from *Educational and Psychologi-*

cal Measurement entitled "High School Performance of Underage Pupils Initially Admitted to Kindergarten on the Basis of Physical and Psychological Examinations." The conclusions that Hobson draws from his data form a bulwark of support for the use of these strategies among young children. This article is reprinted as chapter 10 of this volume.

Daurio made no attempt to evaluate the relative balance of evidence supporting enrichment as opposed to accelerative strategies for educating gifted youngsters. The excerpts and articles, their number and content, speak for themselves. The present status of the enrichment/acceleration controversy is summarized well and the case for acceleration is articulated clearly in Julian C. Stanley's 1976 article from the *Phi Delta Kappan* entitled "Identifying and Nurturing the Intellectually Gifted." The article appears as chapter 11 of this volume.

THE CONTROVERSY TODAY

The controversy today stands approximately as follows: accelerative strategies have achieved maximal support from the results of experimental and quasi-experimental studies but only minimal acceptance among educational practitioners. That the debate continues is illustrated adequately in the final chapter of this volume, "Educational Acceleration of Intellectually Talented Youths: Prolonged Discussion by a Varied Group of Professionals." Position statements in the debate are offered here by eighteen professionals: program directors, practitioners, and educational psychologists. These discussions among symposium participants were designed to clarify or amplify specific points, as were the interactions with the audience attending the symposium held at the 1977 annual meeting of the American Educational Research Association in New York City.

Although she was unable to attend the symposium, Dr. Dorothy A. Sisk, then director of the National Office of Gifted and Talented, U.S. Office of Education, was asked to add her comments. Her statement closes the discussion and the volume. In it she warns of the dangers of enrichment alone, as well as the dangers of inadequately planned and unbridled acceleration. She suggests instead sensible plans that stress meeting the needs of individual students, both in terms of timing their identification and pacing their facilitation in terms of instructional style and curricular content for enrichment. She concludes that a rapprochement between acceleration and enrichment may be the solution.

It is interesting that the single experimental study (Goldberg, Passow, Camm, and Neill 1966) comparing enrichment with accelerative options for mathematics instruction provided results that indicated a combination of strategies as the most effective technique. In a sense, this three-year study sets the stage for a number of multigenerational longitudinal studies, only some of which have begun. Following the example set by exponents of controversial issues in psychology and education, perhaps we need to look at the more complex interactions. How might the type of strategy be varied to achieve the most

appropriate program for a gifted youngster according to his or her ability, age, or sex? The base lines have been drawn for several studies that address but a few of these specific questions, namely talent in mathematical and verbal reasoning. The ground is broken, but the field barely has been touched.

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