

Educational Trajectories

Radical Accelerates Provide Insights

by Julian C. Stanley, Ed.D.



Far too little is known about ways in which academically talented children and their parents create the special, supplemental, accelerative educational opportunities these intellectually talented boys and girls sorely need. Gifted-child specialists talk much to each other about this, write articles, construct flow charts, etc. Seldom, however, do they ask the very students personally involved to talk or write about their life experiences. Entire national meetings of gifted-child organizations are conducted without a single highly intellectual youth testifying. Perhaps one or more young people play the piano or the violin or dance, but academic fast-movers are seldom featured. In order to motivate these busy young men and women to share their thoughts, orally and in writing, we must offer them a forum. In my opinion, no major meeting of gifted-child specialists should be without such a symposium and follow-up publication.

From time to time over the years, I have tried to help remedy this omission (e.g., Stark and Stanley, 1978), always to enthusiastic audiences. Recently (Charlton, Marolf, Stanley &

Ng, 1994), at the November 1993 annual meeting of the National Association for Gifted Children, I featured two "radical accelerates." They spoke eloquently and humorously about their distinctive, positively accelerated educational trajectories.

Then, on April 6, 1994, Lenny Ng, one of the two most mathematically advanced youths my Study of Mathematically Precocious Youth (SMPY) has ever found during 23 years of constant searching spoke at a colloquium I conducted at Harvard University (Charlton, Marolf, Stanley & Ng, 1994).

That, too, was so successful that on June 17-19, 1994, at the Conference on Adolescence, Acceleration, and National Excellence conducted at Simon's Rock College of Bard, Great Barrington, MA, I organized a third such session, involving Jane Charlton (from the first symposium) plus three other radical accelerates. Reports by two of the three new, young presenters follow this introduction.

By studying these six remarkable young people, one can make a number of tentative generalizations, subject to

refinement as more highly able youths tell about themselves.

- Intellectual ability far above the average is a crucial prerequisite for radical educational acceleration. As Charlton pointed out (Charlton, Marolf, Stanley & Ng, 1994), a well-motivated, research-oriented student does not need the intellectual level of Einstein in order to obtain a bachelor's degree in physics from an outstanding university at age 17 and a doctorate degree in astrophysics from another top school at barely age 22. Marolf was even faster: bachelor's degree in physics from a liberal-arts college at age 15, and Ph.D. degree in physics at 20.
- The student must be eager to accelerate in ways he or she thinks best. Early in schooling, he or she must become a strong partner in educational decision-making with parents and teachers.
- Pushy parents who drive a youth much faster than his or her abilities and/or interests warrant often encounter negative reactions from their child sometime later.

- *Laissez-faire*, hands-off fathers and mothers can be just as detrimental. Parents must steer a careful course between too little or too much stimulating, motivating, and encouraging. The parents of these six seemed to have a good feel for this balance.
- Each accelerate's educational trajectory differs, often considerably, from that of others. Local circumstances and educational opportunities play a large part, but are not determining. The parents and accelerates constantly search for ways to move ahead faster and better. They don't become bitter or cynical or just quit trying.
- None of the six accelerates seemed to live in a single-parent home, but the families were varied: Protestant, Jewish, Black, Chinese background, Korean background, etc.
- All six seemed to have appropriate self-esteem and social ability. All were articulate, graceful, even eloquent speakers.
- Radical acceleration in grade placement certainly isn't for everyone, even the brightest. For example, Lenny Ng scored 800 on SAT-Mathematical twice at age 10 but did not enter Harvard College until he was 16 years 9 months old. He chose, instead, to be a high school and college (University of North Carolina) student concurrently until he graduated from the former. Thus, his first mathematics course at Harvard was at the graduate school level. Carefully note that Lenny was extremely accelerated in subject matter, especially mathematics, but did not skip many grades.
- One can have one's cake and eat it, too. SMPY has helped two highly effective boys attend both high

school and college concurrently and graduate from both at age 17! The Advanced Placement Program of The College Board, with its 30 college-level examinations, offers exceptionally able, highly motivated students a fine alternative to massive grade-skipping. For example, one of SMPY's protégés entered the Massachusetts Institute of Technology only a year early but with 11 AP-course exams passed (10 of them with the highest possible grade of 5) and some college courses for credit. In four years at MIT he completed four majors: in electrical engineering and computer science, economics, mathematics, and physics. Then he became a graduate student in computer science.

This is enough preamble. You'll now want to read what Cargain and Plotinck tell us about their coping mechanisms and achievements. Then,

you will probably want to look up the experiences of Charlton, Marolf and Ng (Charlton, Marolf, Stanley & Ng, 1994). All five reports have strong implications for helping highly gifted youth create suitable paths through the formal and informal educational network. ☺

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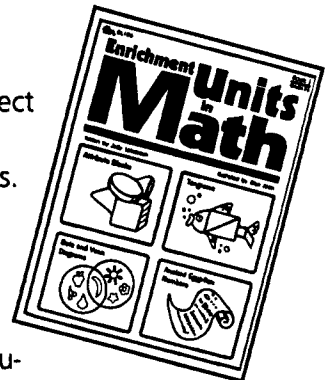
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My Education

by Alexander Plotinck

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Speech delivered at the Conference on Adolescence, Acceleration, and National Excellence at Simon's Rock College of Bard, Great Barrington, MA, June 19, 1994.

I'm not a normal kid, but it took me a long time to realize it. It wasn't that my parents tried to hide it from me, it's just that I never thought about it until a couple of years ago. Ever since I was very little, my parents have always had me around other very bright kids, and it wasn't until I started at the Community College (which I'll get to in a few minutes) that I realized I really am strange. I am unusual in the sense that I have never really followed without question the traditional path of learning that most Americans follow. My ability to assimilate information very quickly, coupled with a desire to learn as much as possible, allowed me to pursue an education that was, well, strange.

When I was about six, I started first grade at a private school in Blue Bell, PA. Oak Lane was a great place, but through both the second and third grades I felt that I was being held back from learning the things I really wanted to learn. I remember quite vividly the second grade; I was bored almost all the time. What I had absorbed in a day or two, most of the class had to spend a week on. I would come home every day and complain to my mother about how bored I was, especially in math. In third grade, my teacher was a little more understanding about this fact, but there was very little she could do about it. My teacher, like so many others, was forced to teach to the lowest common denominator, and this upset me a great deal. So, after the third grade, my sister, Ashley, and I began our careers as a homeschoolers.

At the time, homeschooling was the ideal education for me. I was not only able to work at my own pace, which was wonderful, but also I wasn't forced to be dragged along through a structured curriculum. I could learn whatever I wanted to. My mother required me to keep a journal every day for writing practice. I wasn't too thrilled about this, but I did it because I knew that however much I complained about writing, it was a skill I had to develop eventually. But other than that journal, very little was actually required of me. I did most of my learning of my own accord.

Math had always been my favorite subject, and at home I was able to study it at a rate that could keep me challenged. My mother was able to provide many different math curricula for me, and I worked through most of these in a matter of months. Most exciting were the ones very rarely, if ever, used in regular schools. With the help of cuisinair rods, fraction tiles, base ten blocks, hands-on equations, and other interactive learning tools, I was able to advance very rapidly. Math was not the only thing I studied, but for me it was always the most fun.

As a homeschooler, I had a lot of time to devote not only to quantitative studies, but to artistic ones as well. With more time to practice, I increased my violin skills immensely. Furthermore, for several years my sister and I took weekly art lessons at the Philadelphia Museum of Art. Every Friday, we went into Philadelphia for the day, though our weekly excursions were not just for entertainment. We went to various museums, including the Franklin Institute, the Academy of Natural Sciences, and of course, the Art Museum. We visited many of the

numerous historical sites in and around Philadelphia, learning history at the sites where history was made. Our Friday trips were always educational, and they were always a lot of fun.

As a homeschooler, I spent a lot of my time reading. I read all kinds of things: science, science fiction, fantasy, math, history, historical fiction, mystery. There wasn't much I didn't read. My mother was often yelling, "Will you put down that book and go outside!" I would eventually go out, usually taking the book with me. But I wouldn't just read the books; I would have fun with them. When I read books about Robin Hood, I would go outside and make bows and arrows from saplings in the woods. When I read science fiction novels, I would construct incredibly detailed model spaceships out of Legos. But of all the books that I read, I think the math and science books were my favorites. If I had a question about what I was reading, I could ask my father, who is an electrical engineer.

Toward the end of my homeschooling years, I learned much of my math through books that I read on my own. Unfortunately, my mother couldn't move as quickly as I could with math, and my father wasn't available until late at night. It finally got to the point where I wanted to continue with algebra, which I had started to learn, but I couldn't continue with it on my own. So, in the fall of '91, we called Bucks County Community College and asked them if I could take an algebra course there. They said that as long as I could pass the entrance exams, they would be happy to have me.

I started at Bucks with just one course, Intermediate Algebra, and found it challenging, without being too stren-