



Colin Camerer:

The Early Professional Years of a Radical Educational Accelerant

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It is customary for most high school juniors to take the Scholastic Aptitude Test (SAT) prior to applying to college. During 1972-1979, a select group of twelve-year-olds, by virtue of scoring in the top three percent scholastically on any standardized aptitude test, were encouraged by the Study of Mathematically Precocious Youth (SMPY) at The Johns Hopkins University to take the SAT at this early age. A small number of these individuals scored greater than

600 on the SAT-verbal section and greater than 700 on the SAT-math section.

Colin Farrell Camerer, a member of this group, was one of the first mathematically talented youngsters aided by SMPY at Johns Hopkins. At age 11 he had a Stanford-Binet IQ of 160, and at age 13 he scored 750 out of a possible 800 on the SAT-M and 610 out of 800 on the SAT-V (corresponding to the 99th and 93rd percentiles, respectively, of college-bound 12th-grade males). With the support of SMPY and Psychology Professor Julian C. Stanley of Johns Hopkins, he skipped five years of schooling and finished his B.A. at Johns Hopkins the month he turned 17. In September of 1981 he became a 21-year-old assistant professor at Northwestern University.

Early Years

Colin was born on 4 December 1959 in Philadelphia, Pennsylvania, but his family moved to Ohio while he was still very young. Colin was an unusually quiet but otherwise normal child. He played with his three sisters and his age-mates, and did not display any marked signs of precocity. One day, however, when he was five years old, he asked his mother to explain a difficult word in *TIME* magazine. His parents had assumed he was just looking at the pictures, but he was actually reading the articles. No one knows when Colin started to read, and he has no recollection of learning to read, but he was probably reading considerably before the age of five.

Colin spent the first few years of his schooling at the Bedford district school in Cleveland, Ohio. In kindergarten, his teacher thought him very intelligent; at her request, the school psychologist tested Colin and found him to be unusually bright. The school was willing to accommodate Colin and let him work ahead as fast as he could, although he was required to complete worksheets that gauged his progress. By second grade, he was doing fourth or fifth grade work.

After the second grade, Colin moved with his family to Baltimore County, a few miles north of the city of Baltimore. His third and fourth grade years passed uneventfully, but in the fifth grade his teacher told Mr. Raymond Trimmer, the Educational Director of the Maryland Academy of Sciences (MAS), about Colin. The school released Colin

for a few hours each week to learn about computers from Mr. Trimmer, and in the summer he took MAS's computer course. Soon Colin had exhausted the Academy's resources, and Mr. Trimmer referred him to Dr. Stanley, the Director of SMPY, hoping that he would be able to help the boy.

Under Dr. Stanley's direction, Colin was given a difficult battery of standardized tests and found to be exceptionally talented, especially mathematically. Since Colin had not entered first grade in Ohio until he was nearly seven, he was a year older than most of the children in his sixth grade. Thus, Dr. Stanley recommended that Colin skip the seventh grade so that he would be more challenged intellectually and also be among his age-mates socially. Colin moved from the sixth grade in elementary school to the eighth grade in junior high.

Colin learned pre-calculus mathematics in SMPY's first Saturday-morning speeded-math class; he finished the entire pre-calculus sequence in 120 hours in August after his eighth grade. He scored consistently in the upper-90th percentiles on standardized tests of algebra, geometry, trigonometry, and analytic geometry (a sequence that most students take four and a half years to finish). During that school year, he also took an introductory computer course at Johns Hopkins, on released time from school, and earned an A.

In the spring of the same year, Dr. Stanley met with Colin and his parents to discuss long-term educational plans for the boy. Colin decided to skip the last year of junior high and the first year of senior high, thus becoming an 11th-grader. Although Colin discussed the alternatives extensively with his parents and SMPY, his decision to accelerate was entirely his own. By skipping grades, he was better challenged and thus enjoyed school more. He strongly believes that he would have had difficulties in school had he not accelerated, because his classes would have been far below his mental level.

Colin enjoyed high school. He was in the chess club and on the "It's Academic" television quiz team. He won a letter in wrestling, and was the campaign manager for his 14-year-old best friend's successful run for president of the student government. He also took Advanced Placement (AP) Calculus in school, worked through AP Physics on his own, and attended Tow-

son State University at night. His AP scores were 5 out of a possible 5 on the Calculus AB exam (equivalent to a grade of A+ in the first semester of college calculus) and 4 out of 5 on the Physics B exam. Confident that he could handle the advanced coursework, Colin applied to Johns Hopkins in the spring.

College and Graduate Years

At age 14 Colin entered Johns Hopkins with 34 credits and sophomore standing. Although very involved in extracurricular activities, including the school newspaper and varsity golf, he completed the work for his bachelor's degree in quantitative studies after only five semesters out of eight. He finished in December of 1976, at the age of 17 years 1 month, and graduated in the May 1977 ceremonies. This made him the fifth youngest recipient of a baccalaureate from Johns Hopkins since it began awarding such degrees in 1879.

Colin's next objective was to develop his keen mathematical ability and his interest in the social sciences by applying to the graduate schools of business at Wharton (Penn.), Stanford, and the University of Chicago. Based on his previous record and scores of 630 verbal and 790 quantitative on the Graduate Record Exam and 800 on the Graduate Management Aptitude Test, Colin was accepted by all three, and decided to attend the University of Chicago because of its outstanding Ph.D. program.

With eight months remaining before matriculation at U.C., Colin accepted a contributing editor's position with the *Beachcomber* weekly newspaper of Ocean City, Maryland. Acquiring a taste for journalism, Colin and a fellow student revived the student newspaper at the U.C. Business School. Colin received his M.B.A. in Finance from U.C. in June of 1979 at age 19, having spent the intervening summer as a securities analyst with Morgan Guarantee Trust Company of New York City. Continuing at U.C., Colin completed his Ph.D. requirements in Behavioral Decision Theory by December of 1981. The interim summer during this period was spent as a writer in residence with the *Washingtonian* magazine. So at the age of barely 22 Colin had completed his Ph.D. while most of his age-mates were just completing their B.A.'s.

While finishing his Ph.D. requirements at U.C. and still 21 years old, Colin accepted a position as an assistant professor of business policy in the Kellogg Graduate School of Management at Northwestern University. Two years later, in a subsequent career move, he joined the faculty of the Wharton School of the University of Pennsylvania. During this time he had several publications: "The Pricing and Social Value of Commodity Options," *Financial Analysts Journal*, Jan./Feb., 1982; "General Conditions for the Success of Bootstrapping Models," *Organizational Behaviour and Human Performance*, 1981, 27, 411-22; and "Underground and Overpaid: Equity Theory in Practice," with Ken MacCrimmon, forthcoming in *Theories of Equity: Psychological and Sociological Perspectives*. He is currently involved in numerous research projects, and is teaching Master's-level research seminars. An informal questionnaire by the authors has elicited Colin's views on various aspects of acceleration as follows.

Views on Acceleration

The primary concerns most people hold regarding acceleration are the possible problems in social and emotional adjustment. Colin holds an antithetical view to this and states quite eloquently that he found social adjustment somewhat difficult and would have even without acceleration. His theory is that most scientists are fairly introverted, i.e., more interested in ideas and things than in people, and therefore would always find it relatively difficult to make friends. By analogy he compares being younger with someone's being especially tall, something that is a slight handicap, but by no means insurmountable. Colin feels that his social life "was and is underdeveloped, by most standards, but this is more part of a natural loner/introvert tendency than a result of acceleration." One should keep in mind the converse to the primary concern; namely, that maintaining age-in-grade status for these intellectually precocious youths may itself be detrimental to their social and emotional well-being. Young children can be vicious to others who are different from themselves.

One might wonder whether a 17-year-old graduate student was treated differently from conventionally aged

students. Colin was not obviously physically or emotionally immature and therefore was not conspicuous. In fact, he recalls a number of funny anecdotes about people in classes saying, "Have you heard about this whiz kid?" as he sat nearby, unrecognized. A closely related issue is whether or not he encounters difficulties teaching students as old as or older than himself. To this Colin definitely says, "No." Teaching theory-based courses, and having a greater knowledge of the subject matter than his students, he establishes credibility and commands respect in the classroom.

Looking back, Colin believes that the decision to accelerate was both his and his parents, and feels that they offered him much-needed encouragement. Probably his greatest source of support came from Dr. Stanley and SMPY. Without that intervention and concern he feels little or no acceleration would have occurred and his life would be vastly different, picturing himself in some low-level management position. Regarding high-intellect people, Colin states that, "Ironically, I see many such people in the places I teach, and elsewhere, bright people who have not really been sufficiently challenged and often don't get a chance to tap their enormous potential."

Having been a gifted child and an accelerant, Colin offers a few suggestions to other intellectually precocious youths. First, as a gifted child, do not feel you owe a debt to society. Second, understand that many of the vagaries of adolescence are general problems and may be slightly exacerbated for the bright. Finally, accelerate only if emotionally stable and remember that it is not necessarily right for everyone. "Think of [intellectual] gifts as exactly analogous to physical gifts such as great tennis or swimming ability - and, similarly, pursue an intellectual gift only if you enjoy it, but then do so wholeheartedly." As for his own future children, Colin has one additional concern - the possibility that they may compare themselves to their father. This problem lies in the future, though, and therefore as yet remains latent.

Looking toward his own future, Colin anticipates remaining in academia for some time. However, he feels that there is a part of him that needs to delve into business ventures. He has no immediate marriage or family plans, but they are included in his future goals, though

he has no qualms about marrying after age thirty. His present objective is to work towards "turning the field of business policy around," since he feels that at present it is a rather "soft" academic area.

The only negative point regarding acceleration Colin recognizes is that without acceleration he might have had a more formative high school experience. Colin recalls, however, that "Bright friends who went through high school traditionally have agreed with my opinion that it's an unnatural rite of passage and not especially easy for people with any degree of abnormality." This is to say that intellectually precocious children are more readily accepted by their intellectual peers than by their chronological peers. For Colin, acceleration seems to have had many more benefits than detriments.

Colin's case is a strong argument in favor of individualized educational acceleration. He is an example of a highly successful, radically accelerated SMPY protégé. At 21, he had already accomplished what usually takes at least 27 years to do. By finishing his formal education early, Colin has extended his productive years and also avoided the boredom and frustration often experienced by gifted children who remain age-in-grade.

Of course, Colin is only one example of the benefits of curricular flexibility, and he is by no means unique. Even in his baccalaureate class at Johns Hopkins there were three other "radically accelerated" young men comparable to him academically. They have recently completed Ph.D. degrees, or nearly so, as follows: Cornell University (computer science), Massachusetts Institute of Technology (computer science), and Princeton University (theoretical plasma physics). Two are already faculty members at major universities. It should be interesting to follow the future careers of these four.

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