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1 Dr. Bartkovich is now a teacher of mathematics at the famed North Carolina School of Science and Mathematics, instructing mathematically talented 11th- and 12th-graders.

2 For comprehensive views of educational acceleration, see Southern, Jones, and Stanley (1993) and Brody and Stanley (1991).

An Addendum: Lenny Ng's Story

It's too bad my younger brother, Jakun, isn't here today, because by all rights he should be the one to speak. At one of his recent math competitions, someone who apparently recognized my name asked Jakun what it was like to have a famous brother. "I don't know, but I imagine it must be tough," he replied, "just ask my brother, Lenny."

In all seriousness, people often ask me what it is like, as a friend put it recently, "to be so smart," to have appeared on the cover of *Parade* magazine and been featured in *Newsweek*, *Life* magazine, and even *Sports Illustrated for Kids*. I can tell you that it's been a lot of fun, and extremely rewarding. Through my activities and competitions, I have made lifelong friends, seen fascinating places, and met people even more famous than my brother. Perhaps my greatest blessing is a mind enchanted by everything from math to music, from literature to tennis. I have been fortunate to have a wealth of opportunities as eclectic as they have been numerous. And much of my success should belong to my hardworking, devoted, and visionary parents.

Even as early as preschool and elementary school, my parents fostered and encouraged my many diverse interests. When I was three, my father wrote up a multiplication table for me; I remember this because I drew all over the sheet. I was exposed to literature early, reading Dickens's *Oliver Twist* at the age of six before seeing the high school production of "Oliver!" My early artistic masterpiece, a crude painting of a pelican, still hangs in my father's office, and his colleagues often remark that they have never seen anything like it before. For good reason, too: still weak in biology, I had given the pelican four legs.

Most precious to my parents, I suspect, was my interest in music. My father taught me fractions not for the math but to help me understand half notes and quarter rests. I started taking piano and violin lessons when I was four, and a year later composed my first piece. I quickly learned to use my parents' enthusiastic support for my composition skills to my advantage: if I broke a plate or upset my parents, I would run to the piano and tell them that a sudden musical thought had come to me. The house would hush to preserve my concentration, and after I had finished composing, all would be forgiven and forgotten.

School was not quite as encouraging as home. Some at school were not especially sympathetic to my academic needs. My age denied me participation in many programs. One elementary school teacher, noting that I had not performed perfectly on a math placement test, wanted to incorporate me into the rest of the class because, she said, "there are gaps." Another especially outrageous incident concerns my parents' attempts to find out the school system's textbook for a math course for my use. The junior high school principal lied to my parents that she could not divulge the information, and referred them instead to the superintendent. When they arrived for a scheduled appointment, the superintendent's secretary told them that he was not in and could they please come back another time, all the while laughing as if to say, "What a pushy set of parents. Why couldn't they cause less trouble?"

The presence of such obstacles hardened my and my parents' resolve to find opportunities sufficient to challenge me. Luckily for me, some teachers turned out to be very helpful. On the recommendation of my second-grade teacher, I skipped third grade. In fifth and sixth grades I was put in a special "self-contained" class designed to stimulate the academically gifted. Throughout this period, I pursued an independent study of mathematics under my father's guidance, completing Algebra II by my sixth grade year. My sixth grade teacher suggested that I take the Scholastic Aptitude Test in order to participate in the Duke University Talent Identification Program (TIP), a summer program mainly for gifted junior high students. So when I was barely 10 years old, I took the SAT, and was surprised to learn a couple of months later that I had aced the math portion.

This was probably my "big break." A few reporters from local newspapers found me, especially after I won the state Algebra II contest shortly after, and through them I was introduced to Prof. Stanley, who would become my academic guardian angel. He wrote letters to the principals of my junior high and high schools, advising them to allow me to take the courses most suitable for me. Through his influence I was able to take courses at the high school when I entered junior high, and by eighth grade I had taken Advanced Placement calculus and chemistry.

Outside of school, I continued to pursue various interests. I swam, ran track, and played basketball and tennis. My music compositions and playing began to win prizes. For three summers beginning when I was eight, I attended the Duke Young Writers Camp. It's hard to believe now, but back then I was cute enough that a newspaper feature article on the Young Writers Camp included a picture of me sitting pensively with a foot on my chair and a piece of bubble gum dangling out of my mouth. In the summer of my seventh grade year, I was fortunate enough to attend TIP on a full scholarship, studying number theory.

The next year I tried to apply to a state summer science program for rising high school seniors but was rejected, again because of my age. To my surprise, I was accepted to a much more prestigious national program for rising seniors, the Research Science Institute; I'm sure it didn't hurt that Prof. Stanley was on its board of trustees. I found my experience there during the summer of my eighth grade year to be enormously stimulating.

These summer programs were only one aspect of the opportunities I enjoyed. Various competitions also provided a much-needed challenge. When my mother discovered my knack for spelling, she interested me in the spelling bee, where in my eighth grade year I won a trip to the nationals. My greatest success was in math competitions, starting with Math-Counts, in which I worked my way to a first place national finish in eighth grade. I was president of my high school's Math



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Club from eighth grade onwards, and our out-of-town trips to various competitions are among my most enjoyable junior high and high school memories.

I never took competitions too seriously, even in high school. To me they were breaks from schoolwork, chances to travel — and incentive to work hard, because winning was fun! By the end of my high school years, springtime meant the beginning of a rash of contests, something I miss sometimes now that I am in college.

I especially miss the annual American High School Math Exam, which became somewhat my contest as I broke the previous record of two perfect papers by writing four consecutive perfect papers. That contest is the first step in a sequence culminating in the summer Math Olympiad Program, or MOP, to train for the International Math Olympiad. Ever since eighth grade, when I first attended MOP, it has become an integral part of my summers, enough so that I am returning this year as a staff member. As a student, I was on the six-person American team at the international competition for three years, winning a silver medal in Sweden and gold medals in Moscow and Istanbul. The experience was simply thrilling and well repaid all my preparation.

Of course, competitions, no matter how fun, were subordinate to schoolwork. Here I chose an accelerated path, skipping various math, science, English, and history courses, and jumping ahead to their Advanced Placement versions. In ninth grade, I began taking courses at the nearby University of North Carolina with the extensive help of my long-suffering mother, who drove me endlessly from the high school to UNC and back again. At UNC, I took physics, history, and computer science classes, and enough math courses to fulfill the math requirement for a Bachelor's degree. Had I wanted, I could have stayed for another year at UNC after high school and earned a Bachelor's.

I decided against plunging into graduate studies so early, though, opting instead to enter Harvard College last fall at the age of sixteen. This was not the first time I turned down an offer for even faster acceleration in favor of a more balanced childhood and a more normal social life. When I entered high school, the principal was willing to let me graduate in one year; I stayed for four full years, choosing to take advantage of the resources already available to me there.

I came to Harvard because of the opportunities here and the diversity and talent of my fellow students. I take part in intramural sports, and play violin in the Mozart Society Orchestra and the pit orchestra of the Gilbert & Sullivan Players. When I need a break from the unrelenting pace of academics, the nearest museum, park, concert, or ballet is at most just across the river. The classes here are wonderfully challenging — I am taking a graduate level math course, for instance — and there is even a spot of academic contests here: I was a Putnam Fellow in last year's Putnam math competition.

That is the story of my academic career so far, a story that has only just begun. I owe my present success to the multitude of opportunities I have been given, and I would like to think that anyone given similar chances can and will do similarly well. Unfortunately, schools nowadays show a troubling tendency to emphasize "feeling good" rather than excelling and to encourage their students to slip into comfortable mediocrity. My brother, Jakun, who is currently suffering through a secondary schooling when the so-called "middle school philosophy" is all the rage, has encountered obstacles far worse than those I encountered. His middle school reasons that all students should be treated equally and denies Jakun and other talented students their chance to excel. It is a pity, because if Jakun receives the same opportunities I enjoyed, I am sure that one day my friends will be asking me what it is like to have a famous brother.