Medicine, Science and Merck

P. ROY VAGELOS

LOUIS GALAMBOS

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My life is in many ways the classic American dream: poor immigrants come to the United States and work very hard; their children receive an excellent education and lead a better life. I was born just before the start of the Great Depression, in October 1929, in Westfield, New Jersey, where my Greek father and one of his brothers owned a shop that sold candy, ice cream, and snacks. In the next few years, times were hard for all of us, but we were cushioned from the worst effects of the economic crisis by our family. Children now grow up in a society less supportive than mine was even in the harshest days of the 1930s.

In elementary school I was a cutup who entertained the other students – but not of course the teachers. They were interested in teaching Pindaros Roy Vagelos (they wouldn't use my nickname, Pindo) to read and write in English, goals that seemed formidable to a first-grader who spoke only Greek at home. I was a slow learner. I wasn't interested in learning. It was much more fun to fool around and tease the other kids. Besides, I had recurrent ear infections that made it difficult for me to hear. Since my last name begins with a "V," I sat in the back of the class, where it was hard to hear even when I was healthy. I got used to not paying attention to the lessons, although I was clever enough to pretend to work when the teacher was watching.

My sister Joan, fourteen months older than I, was a different kind of student. She learned to read early and loved it. My specialty was wasting time. Nevertheless, Joan and I were very close because we went through school together and shared the harsh years of the depression, when our family was forced to move repeatedly into smaller and smaller apartments to survive financially. Joan and I did everything together (except read). We always went to the movies together, we learned to ride bikes and swim together, and we took music and Greek lessons together. I was afraid of the dark upstairs, so she would go with me. When we went fishing, she always put the worm on the

Vagelos family outing, 1930. Roy's mother and father at left with Roy (far left) and Joan.

hook for me. Our younger sister Helen, born nine years after me, was also a quick reader, but she had a different life. By the time she came around, the depression was fading and life became better for our family and Joan and me.

The year 1936, when I was in first grade, was an especially difficult one for the family. My father and his older brothers had settled in Westfield, an affluent bedroom community about an hour's drive from New York City. My father and his oldest brother owned the Westfield Sweet Shoppe located on Broad Street in the center of town. Like many other Greek immigrants, they gravitated to the candy and small restaurant businesses because they were largely uneducated and restaurant startup costs were small. They could thrive with minimal English, making up with hard work and warm personalities what they lacked in education and language skills. The Westfield Sweet Shoppe was modestly successful, providing our family with a very nice four-bedroom house on a wide, tree-lined street a few blocks from the store. But the hard times of the 1930s didn't spare New Jersey. Some of the shop's former

Roy with his sisters Helen (left) and Joan (right).

customers were now out of work and finding it hard to pay for their food and rent, let alone for ice cream and candy. In addition, my father had invested in real estate in Westfield and bought stock on margin. When the market collapsed, he had to sell the real estate to cover his losses.

I was quite aware that times were tough because, in 1936, we lost our house. Business was so poor my father couldn't pay the mortgage

on both the store and our home. Since the store was our only source of income, we moved into an apartment above a drugstore in Cranford, about two miles from Westfield. Gone was my sunny bedroom. Now I had to sleep on a sofa in the living room. I felt as though my life had lost all sense of order. We couldn't go visit the store for ice cream, candy, and sodas anymore because we now lived too far away. We changed schools and neighbors. In Westfield, three of our relatives had lived within one block of our house, and several other relatives and other Greek families lived in town. In Cranford, no relatives were nearby, and we were the only Greeks we knew. This was a new world for us.

I remember it like it was yesterday. My parents, Herodotus and Marianthi, never discussed their financial problems in front of me, but I absorbed every sign of urgency in our family. My father and his older brother Thucydides tried to keep the Sweet Shoppe going by cutting expenses and working longer hours. My father took off only a few hours from the store on the weekend to spend time with us. My mother grew very anxious. She talked about jobs she needed to get outside the home and was short-tempered when I pestered Joan. When I fooled around, she would sometimes break into sobs, and I grew frightened about these disturbing episodes.

Around this time, my mother, who had stayed home before I entered school, took a job ironing clothes in a laundry. After a full day there, she came home and made elaborate evening dresses for the few women in that part of New Jersey who could still afford them. My mother, an expert seamstress, could make a fancy dress from any pattern and fabric supplied by a customer. People loved her work, and although her hours were long and the pay poor, she was able to bring in some income as my father struggled to sustain the family. Joan and I watched, trying not to upset my mother. We had jobs too. I washed the windows and swept out the store and the sidewalk in front of our business. Once a month, I polished the Sweet Shoppe's wooden tables, chairs, and booths. I actually enjoyed being around our family business and took pride in doing adult jobs.

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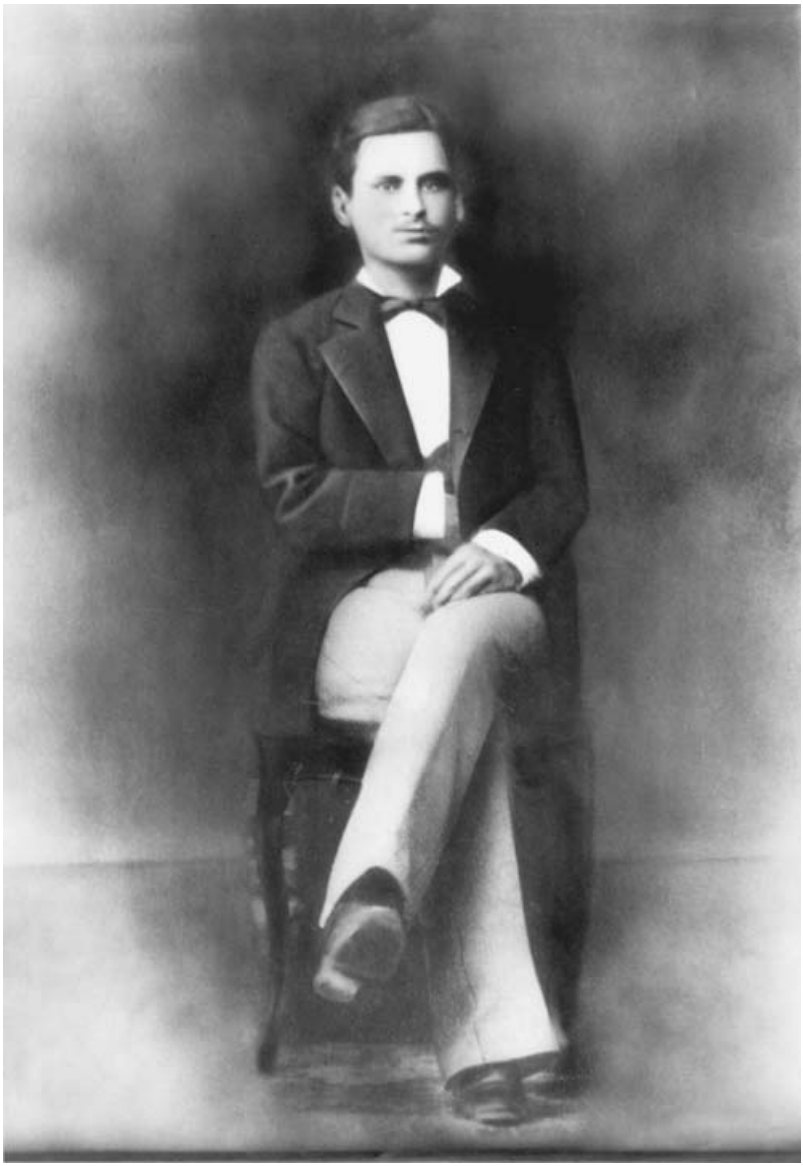
Family and business were intertwined, as they were for many of the families that came to America from Europe in the early years of the last century. The Vagelos family came from the village of Eressos on the island of Mytilene, the ancient Lesbos. Grandfather John Vayos Vagelos



John Vagelos, M.D. (P. Roy Vagelos's grandfather).

had died of typhoid fever in 1898 while serving as an army physician in Denizli, Turkey. His widow, Aphrodite, had then returned to Eressos with her daughter and five sons, the oldest of whom was Thucydides. The fourth son was Herodotus, my father.

Although they could farm and raise goats on the family property in Eressos, Aphrodite's sons recognized that their holdings would never support a family of seven. Thucydides was the first to leave in search of economic opportunity in America. In 1901, at age fifteen, he bought passage to the United States with help from a relative and sailed alone carrying a note to a family friend who was to meet him at the dock in New York City. But the friend never showed up. Thucydides, who spoke only Greek, wandered about the strange city for a couple of days holding a note in English that directed him first to Connecticut and then to New Jersey.

Eventually, he found his way to the home of Stratis Mitchell, another Greek immigrant, in Westfield, New Jersey. Transformed at Ellis Island from a Michaeledes to a Mitchell, Stratis had settled in New Jersey, learned how to make candies, and launched the New York Candy Kitchen in Westfield. He needed help, and Thucydides needed a job. Together, they built a successful small candy business that became the Vagelos beachhead in America.

Thucydides was determined to help his brothers leave Mytilene and to make their passages easier and safer than his had been. He met Homer and Phillalithes (who soon became Philip) at the dock in New York and helped them set up their own candy shop in nearby Woodbridge, New Jersey. Next in age and next to come was Herodotus, who was born in 1890 and named after the world's first historian, Herodotus of Halicarnassus. After finishing the sixth grade, the most advanced schooling available in Eressos, Herodotus had apprenticed to a shoemaker. Good with his hands, he enjoyed the ancient and honorable craft of making shoes to order, but when he arrived in America at age eighteen, he learned that shoemakers spent most of their time repairing worn, smelly shoes. He quickly decided to find a new calling to accompany his newly anglicized name, Roy, courtesy of the Ellis Island officials.

After apprenticing with a candy and ice cream manufacturer, he joined Thucydides at the New York Candy Kitchen on Elm Street (just around the corner from its later site on Broad Street) in Westfield to run the manufacturing wing of the tiny enterprise. The business, like most

N.Y. Candy Kitchen delivery truck. Roy Vagelos (at left) and helper.

of the Vagelos brothers, changed names, becoming the Westfield Candy Kitchen and later the Westfield Sweet Shoppe. There, Herodotus introduced a major new product line, homemade ice cream, that became popular in Westfield, then in Woodbridge, and finally as far away as Plainfield and Elizabeth, New Jersey. In Westfield, everyone seemed to know just when the freshly made ice creams were ready. The police always dropped in to sample his latest creations. Thus, this transplanted Greek – Herodotus at home, Roy to the customers – became something of a local personality by way of his high-calorie confection.

By the early 1920s, the brothers were doing very well in Westfield. Stratis Mitchell had returned to Greece permanently, leaving the shop in their hands. By 1922, all five Vagelos brothers, including the youngest, Emmanuel, were settled in America, all running small businesses producing, retailing, and to some extent wholesaling candy and ice cream. All five returned to Eressos to marry in the Greek style. For immigrant Greek men, marriage was arranged by their relatives – sometimes to

good effect, sometimes not. The bridegroom was expected to have launched a successful career, acquired some money, and established a home in America. By the early 1920s, Herodotus met all three conditions. He had built a house in Westfield, near the Candy Kitchen, and by the standards of Eressos, he was a wealthy man and a desirable thirty-five-year-old bachelor.

He returned to Eressos, met his fiancée, Eleni, and together they began the elaborate preparations for a formal wedding in the Greek Orthodox Church. These were festive affairs attended by virtually the entire population of the village, most of whom were related. In the summer of 1925, Eressos celebrated the marriage of Eleni and Herodotus, but shortly afterward, the young bride became ill and died in a matter of months. Herodotus spent the next six months in Eressos as a widower growing a long gray beard while he mourned his loss. (Vagelos men get prematurely gray hair, as I can attest.)

As he prepared to return to the United States, several villagers, unwilling to see this energetic, well-to-do, young compatriot leave the island a bachelor, approached him about arranging another wedding with one of their daughters. Herodotus decided he should indeed marry again, but this time, he took matters into his own hands. While preparing to marry Eleni, he had visited a special dressmaking shop for wedding clothes in the port city of Mytilene and met an adroit, attractive seamstress. He had been so taken with Marianthi Lambrinides that he boldly invited her to the wedding, but she of course refused his invitation. Now a widower, he persuaded Marianthi and her family that she should marry him. On January 17, 1926, she and Herodotus John Vagelos, his mourning beard neatly cropped, were wed at the island's capital in a beautiful white church overlooking the Aegean Sea. They sailed to America a month later.

Marianthi, like her husband, had Turkish connections. She had been born in Smyrna (now Izmir), Turkey's second-largest port city, which had a large Greek population that dominated the finance and commerce of the region. In 1922, war broke out between Turkey and Greece, and the Turks of Smyrna began to loot and burn the city. The Greek population fled for the coast, Marianthi's family among them. Some of the Turkish soldiers they encountered helped them, but some robbed them; others killed Marianthi's uncle and two men from her family's party in front of their children. At the waterfront, pushing their way through terrified crowds, they boarded the last ship out of Smyrna. For the rest of her life, my mother feared and distrusted Turks.

Her family had lost all its possessions except for a few clothes, but fortunately her entire immediate family – parents, three sisters, and two brothers – survived and escaped to Mytilene. There, she worked in the dressmaking shop where, three years later, she met the man who became her husband.

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Herodotus had a sentimental streak. He remained loyal to people and even to objects long after they lost their value. He refused to move his new wife into the house he had built for Eleni. He had a second house built in Westfield, and in the meantime, he and Marianthi lived with Thucydides, his wife, and their daughters. The ice cream and candy business was prospering, and soon after moving into their new house, Herodotus and Marianthi started a family of their own.

Their first child, Joan, was born on July 23, 1928, and their second, Pindaros Roy Vagelos, on October 8, 1929 – just three weeks before the stock market crashed. My grandfather had named his sons for notable ancient Greeks: Thucydides, the great historian of the fifth century B.C.; Homer, the poet; Phillalithes, the great soldier Philip of Macedon. Another brother, who died during the typhoid epidemic of 1898, had been named for the poet Pindar. My father gave me that brother's name, Pindaros. In Greek style, my father's "American name," Roy – the anglicized version of Herodotus – became his son's middle name.

Since Pindaros – pronounced "PIN-da-ros" – was a bit long for everyday use, I became Pindo to my family and friends. That's what they call me even today. But my teachers insisted on using Pindaros even though they found it hard to pronounce. They weren't the only ones who butchered the name, and finally I asked my father what I should do. "Use your father's name," he replied. "Use Roy." I was a bit concerned because it was not a Greek name, but I became Roy and simplified my education.

At school I needed all the help I could get. I had barely survived the first grade in Westfield, receiving an E (on a scale of A–F) in spelling and a D in reading. Music, which I still love, was my only strength, and I hadn't yet mastered reading when I squeaked through the second grade. I was among the weakest students in the school and I knew it. So did my father.

I can now look back and see that while hovering on the brink of school failure, I was actually learning a great deal about life at the Westfield Sweet Shoppe and at home. From an early age I understood how

hard you had to work just to hold your own. Being part of an extended family, I also knew something about community and interdependence. We celebrated all of the Greek holidays at home, and these occasions brought together all of the aunts and uncles, cousins and spouses.

Easter is the most holy day of the Greek Orthodox Church. During Lent, our family observed the ritual of fasting and ate no meat. During Holy Week, the week between Palm Sunday and Easter, we ate mostly vegetables and a few animal products such as milk or cheese. On the Saturday before Easter Sunday, my mother prepared red Easter eggs, special Easter pita, and a special soup, *patsa*, made with tripe and other sheep organs mixed with egg and lemon (*avgolemono*) laced with garlic.

Easter eve was spent at church in Newark, at that time the only Greek Orthodox church near home. Just before midnight, the priest, accompanied by special music, would intone, "Christ is risen," and everyone in church would light a candle. The congregation then poured out of the church to break the fast. Milling around on the sidewalk, everyone cracked his or her own red easter eggs against someone else's. The winners – those whose eggs stayed intact – congratulated the losers and circulated among the crowd, cracking other eggs until their own eggs broke. The cracked eggs were then quickly devoured along with Easter breads. Then it was home to enjoy the *avgolemono* soup, or *patsa*, on this very happy and festive occasion. The next day, Easter proper, families gathered together. For us, it meant all the American Vageloses joined under one roof or another to share a feast of roast lamb with many side dishes and wonderful desserts.

Christmas was equally festive but quite different. We didn't go to church on either Christmas Eve or Christmas Day. However, Greek families in the United States, including mine, quickly adopted the Christmas tree, a tradition entirely unknown in Greece, along with the idea of Christmas presents and a celebratory party. In Greece, the big celebration was on New Year's Day, when people exchanged gifts, danced, and sang with their relatives and friends.

At all our family parties, everyone spoke Greek and ate Greek food: roast lamb, special homemade breads, and fresh salads with olives. Appetizers included *keftedes* (meatballs made with red wine, garlic, and oregano), pickled vegetables, and stuffed grape leaves (filled with either meat or rice and spices). The desserts – all made with honey – were baklava, *galatoboureko*, *koulourakia*, and *karethopita*. The

appetizers were accompanied by *raki* (Turkish for ouzo), a colorless grape distillate flavored with anise. With the meal, the grownups drank Greek wines, both white and red. As the evening wore on, the adults would begin to sing Greek folk and love songs, many of which described the islands they had left years ago.

These Greek family traditions were central to our little community. Watching my father help other members of the family come over from Greece taught me important lessons about our responsibilities to others. Even during the worst years of the depression, when we were just scraping by, Herodotus and Marianthi helped their relatives in whatever way they could. Like many other American immigrants, they considered themselves fortunate to be in a place where people could build new lives and had access to greater economic opportunities. They sent money and packages of clothing to those who were still in Greece. Over time, my father arranged the passage of other relatives to America, meeting them at the dock, housing them for months, and helping them find work, homes, and even mates. He offered advice, mediated disputes, and lent relatives money when they needed it. When we had a guest bedroom, it was always occupied by newly arrived Greek relatives or friends. All the guests ate with the family and learned about this country from my parents, who had themselves only been here a few years.

Dad, who was easygoing and good natured, nevertheless had a strong set of beliefs that he repeated to us frequently. America, he said, is the most wonderful country in the world. If you work hard, you can achieve anything here, and the role of the immigrant is to work very hard so the children can get an education and lead a "better life." The Greek culture and language, he told us many times, needed to be preserved in our community and family. Greeks are inherently smarter, more able, more efficient, and harder working than Americans. I, of course, believed him until I was about twelve, when I began to notice that all other immigrants said the same things about their own group. Nevertheless, we heeded my father's admonitions, and my parents never socialized with Americans. It was shocking when my sister Joan defied my father by dating and ultimately marrying an American. All ten of our cousins, who had been born and raised in America, married into Greek families. Me too. Although it is important to work hard and plan your future, my father explained, fate and luck play a role in every life. It is important to help others in the Greek community. Family

always comes first. Friends come and go, he said, but your family will always be with you.

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In 1938, we moved back to Westfield to a two-bedroom apartment over a furniture repair shop next to the railroad tracks. Finally our lives settled down a bit. My parents continued to work very long hours, and money was still tight. After a few years in the Westfield apartment, our finances – along with those of many other Americans – began to improve even more, and the family was able to move to a small house on Walnut Street. There, we had a big garden. My dad was proud of his huge red tomatoes, which he shared with others by the boxful. We raised chickens for food, although sometimes weasels broke in and ate them, and later, during the Second World War, I raised and bred rabbits to supplement the family larder. After reading several books about how to do this, I built a large six-cage hutch for them. I fed and tended my animals, but when we needed meat, my father had to take over the job of killing the rabbit selected for dinner.

After we moved back to Westfield, our maternal grandmother, who had moved in with us when she could no longer live independently on Mytilene, helped with the cooking. Despite the hard times, my sister Joan and I were able to continue the music lessons we had begun while living in Cranford. My violin lessons and Joan's piano lessons each cost one dollar a week, and my father also paid twenty-five cents a week for our Saturday Greek lessons taught to six of us from the Westfield community by a traveling teacher.

Our family was close, and some of my strongest memories come from the Westfield Sweet Shoppe. The luncheonette had two distinctly different components. One was the store on Broad Street with its candy cases, soda fountain and booths, and ice cream freezers. My uncle Thucydides, his wife, Elpiniki, or their daughters, Irene or Effi – all of whom were fluent in English – greeted the customers at the door. My dad ran the manufacturing operations in a little two-story factory in an alley off the main street. The downstairs held all the ice cream equipment, including a huge cylindrical drum in which fresh milk and cream were heated to be pasteurized. The mixture was then cooled by circulating ice water through a jacket around the pasteurizer before being piped into the ice cream machines. My dad would add sugar and sliced and mashed fresh strawberries, peaches, or other fruits or flavorings (chocolate syrup or vanilla or coffee extracts) as the mixture

was churned. Eventually, the ingredients became ice cream that was poured into five-gallon receivers, which were carted into a walk-in freezer. From there it went to the Broad Street store or was delivered to other retailers, including my uncles Homer and Phillalithes. As a little boy, I was allowed only to watch my dad and his helpers perform this miraculous operation.

Upstairs, however, my dad made his candies, and there our whole family plus our relatives contributed to the magic of transforming large slabs of chocolate and bags of sugar into confections: chocolate candies with centers of caramel, roasted nuts, delicious creams, and, my favorite, peanut brittle. Wearing a crisp white apron, dad would heat sugar and sugar concentrate in a large copper kettle. In another kettle, he browned the peanuts and then tossed them into the molten, caramelized sugar. Next, he poured the hot mass onto a large steel table, where it quickly cooled and was broken into irregular chunks. More than fifty years later, I think I could still make his style of tasty, fresh peanut brittle.

His candy business really boomed on the holidays, and his Easter and Christmas candies were the best. Everyone in the family pitched in at those times. My dad showed us how to work the hot materials and protected us with big white aprons and heavy gloves. At Christmas, we made multicolored ribbon candy and red-and-white candy canes from scratch, twisting and pulling the mixture by hand. One year, when I was about fourteen, we made an enormous candy cane, about five feet long, as the centerpiece for the store's Christmas window decoration. We then realized we could sell it if we could figure out how to price it. My entrepreneurial instincts were aroused, and I suggested that we raffle it off for about a nickel a chance. Customers loved the raffle, and we made far more money than we could have by selling the giant candy cane outright.

Easter candy was the most fun. We poured molten chocolate into tin molds to make chocolate rabbits and hollow eggs, which were then elaborately decorated with hand-piped swirls of white, pink, and yellow frosting. We were proud of these candies, and so each Easter, hoping to build his business, my dad invited the children and teachers from our grade school to tour the little candy factory and gave each one a sample to take home.

Like my dad, I preferred making things to selling them. Luckily, the two brothers' personalities fit the dual needs of the business. Thucydides, the salesman, read the newspaper and interacted with the

customers. Dad largely stayed in the factory, wallowing in ice cream and candy, making the stuff of children's dreams.

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All during my childhood, Dad delivered ice cream to homes, where it was served for dessert after big dinners on Sundays and holidays. I was always delighted to tag along. We drove our red truck up to the large houses with fancy lawns and gardens, found our way to the back door, and dropped off ice cream stored in a pail of ice. On holidays, the ice cream was shaped in fancy molds – turkeys, Christmas trees, and rabbits. The only people we saw were the kitchen help, who were all on a first-name basis with my dad.

Saturdays, however, Dad insisted on being free to be with us, and he would fully stock the store with ice cream and candies so they wouldn't run out. During the school year, we would visit Greek friends and relatives for coffee or dinner, storytelling, and reminiscing. In the summer, we would often go on family outings. At the last moment, I would be sent to get "gas money" from my uncle. He would take fifty cents from the cash register, and that would buy us enough gas to fight through the horrendous weekend traffic to the Jersey shore. Our red delivery truck also served as our family car. At dawn, Herodotus and Marianthi would fill the truck with excited children, sandwiches, and fruit, and we would head to the beach at Asbury Park, Point Pleasant, or Belmar. My father was the only Vagelos brother who could swim, and he enjoyed the beach almost as much as we did. We kids – my sisters and any cousins who were available that day – loved everything about these days at the shore – swimming, running around, being free from the shop, and being with our parents when they were relaxed and paying attention to us. My dream was to spend more than one day at the beach, staying the night at a beach cottage or motel perhaps. In the late 1930s, however, we could spend only one day. But to make up for this, on the way home Dad would stop at a favorite food stand where we would indulge in a hamburger and a Coke. These were the only times we ever ate out as children, but it was heaven after a long day in the broiling sun. Contented, I usually slept the rest of the way home.

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While I was learning important things about families, communities, and work, those lessons in life weren't making me a scholar. I was an

able young musician, playing my violin in the school orchestra and singing in the chorus. But, if anything, that encouraged me to think of myself as an entertainer. My older sister was doing very well in school, and the contrast between the studious Joan and the comedian Pindo only made me look worse. During our toughest depression year in Cranford, Joan had become an avid reader. She retreated every moment she could into the books the drugstore downstairs gave to her when they remained unsold. Resentful, I hid her books, but to no avail. She was stronger than I was, and she tickled me until I either confessed or we aroused our mother's ire.

While all this was going on, Herodotus remained gentle but firm. He kept telling me about relatives whose sons had received scholarships to college. He spoke of the advantages of working with a pen behind a desk instead of working long hours on one's feet in a store or a factory. Gradually, I began to get the picture and started to concentrate more of my energy on schoolwork – especially when I discovered that mathematics came easily to me and that my spelling was not too bad. Reading was still a problem, however. Herodotus and Marianthi were obviously pleased when I displayed a new enthusiasm for education, and that encouraged me to channel even more time and effort into class work. I didn't, however, become a loner. I still had plenty of close friends even though I no longer made them laugh in class. We played touch football after school, and I found I preferred studying with my friends rather than alone. My academic performance improved steadily, and to my surprise I found myself among the top group of students at Roosevelt Junior High School.

About that time, my father and his brothers began to fight bitterly over the business. They had diversified to accommodate the growing Vagelos clan. Thucydides had continued to manage the Westfield Sweet Shoppe, while Herodotus handled the production. But now Emmanuel and his wife had started to prepare and serve sandwiches and hot meals at noon and dinners in the evening. This arrangement was successful at first, but as their business started to pick up in the late 1930s, the three brothers began to disagree about how to share the profits. After cooperating informally for years, they found it necessary to bring in lawyers and formalize the organization in 1941. My father was horrified, but he felt he had no alternative. The family gatherings became less frequent and smaller, which was very sad for everyone. Two years later the split had widened, and my father sold his shares to Thucydides. He

and Marianthi bought their own business, Estelle's Luncheonette, from another Greek family who had saved enough money to retire. So we moved once again, this time from Westfield to Rahway, a working-class town just five miles away.

For me this move was providential. It threw me into the hands of Miss Brokaw, who was the immediate source of my first epiphany. Miss Brokaw, an algebra teacher at the high school in Rahway, was young, enthusiastic, and interested in her students. When she saw that without much effort I could consistently score one hundred on her tests, she began to make me feel that I could do something important in life. She constantly challenged me with extra homework assignments, and I responded to that positive pressure by doing exactly what she had in mind. I kept ratcheting my performance up another notch as I learned the excitement of meeting the serious intellectual challenge of an advanced algebra curriculum. Thus, final traces of the clown were erased in math class right there in the public high school in Rahway, New Jersey.

Oddly enough, a second aspect of this transformation took place at Estelle's. Through high school, my sister and I continued to work at the family's luncheonette. My mother ran the kitchen, Herodotus was out front making sandwiches and handling the cash register, and my sister Joan waited on tables. Even my grandmother was occasionally pressed into service peeling potatoes – a task she clearly felt was beneath her. By the time Helen turned ten, she too was assigned regular hours at Estelle's. I split duty between the kitchen, where I peeled potatoes and washed dishes, and the fountain, where I was a soda jerk. My parents spent long hours there, and the family had dinner together at Estelle's every night except Sunday, when the place was closed. My dad taught me every aspect of running a small luncheonette from preparing the dinners and making sandwiches and sodas to washing the dishes and floor. It all had to be done, and it was all done by family members (later assisted by part-time waitresses when the business picked up).

When I was working the fountain and helping with the tables, I got to know our customers, especially the people who worked for Merck & Co., Inc., the big pharmaceutical company that was Rahway's leading business. Merck was only a few blocks from Estelle's, and many of its scientists and engineers regularly came over for breakfast, lunch, or dinner. Several of them impressed me with their intelligence and ability to talk about different ideas. I wanted to understand the things they

talked about and to be educated like them. They talked about interesting chemical reactions I didn't understand. The chemical engineers discussed costs and efficiency and the purity of their products, and for the first time I saw people excited about their work. I decided I wanted to be like them and do work that improved people's lives.

The common language seemed to be chemistry, but the level was way over the head of a high school student. I found the rote experiments of high school chemistry dull and could see no relation between what I was doing and the processes discussed by the Merck engineers. But I knew enough to understand that a knowledge of chemistry was necessary to undertake the kind of work – making medicines – I was hearing about at Estelle's.

I started to see an interesting path opening ahead of me, and it was made possible only by going to college. Less than a third of my Rahway high school classmates would go on to college, but I was now determined to be part of that elite group. For some years, my father and Miss Brokaw – separately and in their own special ways – had been marking that trail while they waited for me to realize what I needed to do. Now I did, even though I still wasn't certain where higher education would lead me. All I knew was that math and science, especially chemistry, were my strengths. When I was in high school, my parents became convinced that I had inherited my grandfather's medical interests and abilities. But the conversations of the Merck researchers were all about chemistry, and that was the science I targeted.

Once I had a clear goal in mind, and once I understood that academic success in high school was essential to winning a scholarship to college, I turned up the intensity of my school work another notch. I concentrated especially on the courses that prepared for a technical career: math, physics, biology, and chemistry. I had to work every afternoon at Estelle's, so I couldn't play varsity sports, but I took part in intramural games and continued to play the violin since I could schedule my own practice sessions. Most of my intellectual energy was, however, now focused on science.

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By the time I was a senior at Rahway High School, in 1946–47, I was class vice president and an honor student on a fast track in science and mathematics. Academic accomplishment brought out a fiercely competitive streak in my personality, which is something I can't remember