# Geoffrey Ball No More Laughing A Technological Adventure between Silicon Valley and the Alps Deaf Boy

HAYMON

**HAYMON***e*BOOK

# Title

# Geoffrey Ball No More Laughing at the Deaf Boy

A Technological Adventure between Silicon Valley and the Alps

#### Citations

"He usually never writes enough stuff down. He thinks if he knows it, then that's good enough ... not for the rest of us."

> Dr. Richard L. Goode, Stanford School of Medicine, Professor Emeritus Otolaryngology, Head and Neck Surgery

"Great invention requires a great story. Our lives are determined by the stories we live and the stories we create. Sometimes we choose our paths; sometimes they are chosen for us. How we act and react are what comes to define who we are, how we see the world and what we contribute. Where our path begins sets the stage for where we end up. My path started in the city of Sunnyvale, California, the heart of Silicon Valley." Geoffrey Ball, Axams, Austria

## Dedication

This book is dedicated to all those who still suffer from hearing loss, to my loving wife and sons; to my parents; to my mentor, Dr. Richard Goode; and to Ingeborg Hochmair, who saved my inventions.

### **Arriving in Sunnyvale**

"There is a road, no simple highway, between the dawn and the dark of night. And if you go, no one may follow. That path is for your steps alone." Jerry Garcia

I will never forget the first time I saw Serra Park. The year was 1969, and I was five years old. My father was at the wheel of our purple 1961 Mercedes Benz 190 sedan, which we had just recently driven all the way across the United States from Massachusetts. He was really proud of his Mercedes even though it was purple. But it had great seats and plenty of room for me and my two-year-old brother to fight for the first five states of our cross-country journey. After that my mother moved to the back seat to maintain a bit of peace as we crawled across the lower forty-eight.

We had plenty of time to enjoy our ride as my father's philosophy of driving is truly binary. In his opinion, the car is either "on" and travelling at 54 miles per hour, or it is "off." This remains true regardless of whether he is on a wide open highway or circling side streets looking for parking. He always drives 54 miles per hour. So when the "We're here!" announcement finally came, it brought with it a great sense of relief.

We went and looked at our new home at 1526 Kingsgate in Sunnyvale, California. Sunnyvale was in the center of what would later come to be known as Silicon Valley. In keeping with our family's peculiar color taste (or complete lack thereof), the house we had chosen was bright pink, though I was later to learn that the correct name was salmon. Fine, but it was pink to everyone else. I can only imagine what the neighbors thought of our purple car parked in the driveway of our bright pink house. After we finished chatting with the former occupant of our new house and checking out the great swing set in the backyard, we drove around the block. "Guys! Here is the park!" Dad announced.

I peered out the window as we drove up and parked the car. There before me was Serra Park. My five-year-old eyes had never ever seen such utter beauty. The sun was setting over the Santa Cruz Mountains to the west, and the beautiful California dusk sky provided a breathtaking backdrop for the setting. The park staff had turned on the tall walkway lights that lined the paths running in and out of both ends of the park. The play structures were gleaming with white fresh paint. The miniature play town and steamship-design climbing structures stood proudly, hosting a small army of children who were gleefully hanging from them and running around. There seemed to be hundreds of newly planted redwood and sequoia trees that stood five to eight feet tall, with stake sticks holding them up. The cement pebbled walkways were freshly laid and provided a maze of possibilities. The man-made lake, fed by the bubbling man-made creek, was in tip-top condition, and the fountains were pumping rooster tails of spray. The new bridges across the gentle rapids capped off the whole affair perfectly. The sand box had mounds of fresh clean sand.

I had never seen such a place. I had never even imagined that such a place existed! Lowell, Massachusetts, had nothing like this, and for a kid from that grey, bleak city, it was truly a Eureka! moment. It was a five-year-old's Eldorado. It was paradise! It was Sunnyvale.

I am from Sunnyvale, California, and damn proud of it!

#### **Kingsgate Drive**

A stream begins Beneath a stone Water flows The path well known Over and over Again and again To repeat the path Never to end

The best street in the whole world to grow up on was Kingsgate Drive, located on Sunnyvale's south side near Serra Park and Serra Elementary School. Like many other people, I recall my childhood home with great affection -Sunnyvale and with dood In 1969. reason. had approximately 50,000 residents living mostly in single-story suburban style homes intermingled with vast tracts of apricot, pear and cherry orchards and a few acres of flowers. The main boulevards were Sunnyvale Saratoga Road to the east, Homestead Road to the south, Fremont Road to the north, and the finished portion of Highway 85 to the west. Serra Park, with its fine man-made creek and amazing steamship play boat complete with steering wheel, was a short walk away, and Serra Elementary school was adjacent to the park.

From 1969 through the 1970's Sunnyvale was in its heyday. Moffet Field Naval Air Station, originally built as an airstrip for dirigibles, had been the genesis of a key research and development hub for NASA, Lockheed Space and Missiles, Northrop, and many others. The development of the transistor eliminated the need for vacuum tubes, and the defense industry was in its prime, driven by the close proximity of Onizuka Air Force Base, the "Blue Cube," and the cold war-era thirst for high technology and cutting edge electronics. Hewlett Packard was arguably the dominant player in the Valley's booming electronics industry. These were the days before the area was known as Silicon Valley. Sunnyvale was already a mecca for electronics engineers, and any engineer worth his salt, such as my father, was dying to land a position in the Valley. The power of the electronics industry drew top engineers from around the globe, so the Ball family became good like people friends with the Camenzinds (from Switzerland), the Siggs (also from Switzerland), and their friends the Heinemanns (from Germany). The Valley was attracting the best and the brightest from all across the globe, and our community was a truly multicultural one.

The impact of Stanford University on the development of Silicon Valley cannot be overstated. Stanford was a hubbub of activity, and many Saturdays found my father and me walking around the campus, looking at all the activity both inside and outside the labs This was back in the days before security was all that it could be, so it was no problem to stroll around and see students and researchers working on their projects. My father and I would spend hours upon hours in the Stanford libraries and at the bookstore, where my father found and read the latest integrated circuit and electronics publications. Stanford was truly alive then, and the place was electric with energy. In the early 70's, it was really quite the sight to see. I was mesmerized by all those long-haired hippie students making the incredibly magical devices and inventions on display, many of which were glimpses into the future.

The demand for a highly educated workforce exceeded the levels that Stanford and nearby San Jose State University could supply. The exploding electronics industry and their supporting fields and services desperately needed new employees in order to grow. De Anza and Foothill junior colleges became key factors in training and educating new workers for the fields of electronics engineering, manufacturing, mechanics and computer technology. Again, in the early 1970's these institutions were places where innovation was in the air. "De Anza days," when the entire campus was thrown open to the public for the weekend, allowed students to showcase their latest achievements. We never missed these epic technology demonstration events, which comprised everything from arts and crafts to the forerunners of modern digital computer games, including a computer connected to a black and white display screen that would play endless rounds of tic-tac-toe and never lose. Other devices on display, including a working seismograph that recorded the shocks of the San Andreas Fault earthquakes, were a source of fascination to most of us. I think we were

more interested in understanding earthquakes than we were afraid of them, since anyone who lives in Sunnyvale for more than a year or two is sure to feel at least a couple of good rollers.

Kingsgate was swarming with the sons and daughters of the techies who turned Silicon Valley into what it is today. The families of Kingsgate were a wide cross-section of the Valley at the time. We had several neighbors who worked in the defense and aerospace industries, electronics, real estate, or law, as well as a grocer and a lawn-sprinkler installer. And most of them had lots of children. The Banker family two doors down from us had four daughters; the to them had three, and the next door Stevensons Schenones beside them had four daughters and a son, so just those four families on Kingsgate had 15 kids, counting me and my brothers. Kingsgate was a very small street linking Dallas to Lewiston, yet in 1970, from end to end, there were 47 school-age children in 22 homes. There was no shortage of playmates – or of potential babysitters. My favorite was Erin O'Conner, who took me under her wing and helped me out all the way through high school by giving me advice and pointers along the way.

When the moving van carrying my family's belongings pulled into the big driveway of 1526, it was the greatest arrival I could have imagined. It seemed like everyone on the entire street came out to watch. We had only had a small two-bedroom apartment in Massachusetts, so could not have taken the movers too long to unload and carry all of our possessions into 1526, yet somehow they made a day of it anyway. By the time they were done, I had met Matt Schenone, who by day's end would be my new "first best friend."

The very first week we lived in the salmon-colored house smack in the middle of Kingsgate, my brother and I realized that although our house may have been pink and may have had a purple car in the driveway, it had one thing going for it: It was a magnet for all the kids on the street. There were several reasons for this, the first being that we had the widest and flattest cement driveway - perfect for roller skating, bike turnarounds and dodge ball. The Schenones also had a large driveway, but theirs was blocked by an old Dodge that Mr. Schenone was always going to fix up some day but never did (he had it towed away years later). The fact that they had converted their garage into an extra room for the two older girls meant there was no garage door suitable for "wall ball." If our home had a redeeming factor, it had to be the backyard, which was small but had everything else going for it.

The previous owner of 1526 had somehow acquired from the Sunnyvale Parks and Recreation department the old jungle gym (a. k. a. monkey bars) and swing set that had been in Serra Park before it got new playground equipment. Having proved too large for the previous owner to move, both this huge climbing structure and the swings were in our new backyard. Unlike store-bought play park equipment, this was real heavy duty gear. Our predecessors had also left behind a small outdoor goldfish pond chock full of fish and lily pads. To top it off, there was a large crabapple tree in our yard that turned out to be the favorite climbing tree in the neighborhood. A kid could climb way up into the branches and then toss "crabapple bombs" on moving roller skating targets on the driveway below. Every morning when my brother and I woke up, we would be inundated by a horde of kids coming over to play. We skipped the awkward new kid phase and immediately became the "rock stars" of Kingsgate because we lived in such a great house, even if it was pink or salmon or whatever. It was the best.

Matt Schenone soon had me running his football games. He would always yell out, "Quarterback! Called it first!" (he always called it first), but I was always quite happy to be his wide receiver and sometimes running back, even though I had no clue what those terms really meant. Soon Matt and I had progressed to a level where we could take on the big kids up the street. Joe Walker and Kent Bates, who were both older than we were and two grades ahead of us, would team up against Matt and me. We always got trounced soundly as we could not really do much to "Big Joe," who was twice our size and could throw the ball much better than we could. Kent was not as much of a football talent as Joe was, but he was faster than we were. Joe also knew all the strange and baffling rules of American football, and since Matt and I were younger, it was no use to protest against Joe's rulings. If I snapped the ball back to

Matt and somehow got open and caught Matt's pass and ran it in for what we thought was a touchdown, Joe would invariably come back with a penalty call such as, "Ruling! Ruling! Receiver interference on the defender past the ten yard line. Five yard penalty. Lose a down!" In the 273 matches that we played against Joe and Kent, Matt and I had a record of one win and 272 losses. They were nice enough to let us win one game on Matt's birthday.

Matt lived three doors down from us on Kingsgate. He had four older sisters, and his father was a real estate agent. Tony Schenone and his co-worker Mrs. O'Conner, who also lived on Kingsgate four doors down from 1526, had sold much of the real estate in the southern Sunnyvale area. Mrs. and Mr. O'Conner had three children, and their youngest, Erin, turned out to be the best and most beautiful babysitter my brothers and I would ever have. Matt loved his sisters and parents most of all, and after that it was football and basketball. Every night when Tony got home from work, he and Matt could be seen tossing baseballs and footballs back and forth.

Matt and I were best friends (and I was his best wide receiver) for years. We were quite a pair. Later, when I was around 10 or 11, Matt somehow changed. He would get angry with me, and we started fighting. It got worse and worse until we finally started avoiding each other at home and at school. I made new friends, and Matt found new wide receivers in Pat Selami and Mark Marino, who lived a few streets away. I later found out that during all this time, Matt's mother, who had rarely been seen on Kingsgate, had been suffering from scleroderma, a horrible affliction for which there is no cure. She passed away around that time. I hope that I allowed Matt to vent some of his anger and frustration, and if it helped him to take it out on me, I'm glad. Matt was my first best friend ever; the first to meet me and welcome me to Sunnyvale. He went on to have a great career running the public relations group at Valley Health Center. Matt also died of scleroderma in 2003, and I miss him terribly.

The wide sidewalks lining all the streets in Sunnyvale were terrific for bikes and skateboarding, and all the paved driveways were excellent places for bike chases and endless games of follow the leader. And with 47 kids living in such close proximity on Kingsgate, there were more than enough willing participants. The streets of Sunnyvale are also very wide by suburban standards and well lit with large green streetlights, making after-hours games of hide and seek and kick the can a terrific way to end the day before the mothers of Kingsgate began to call us home from the front porches.

One of the criticisms of Sunnyvale is that it is too organized and too plain: Everywhere you look, there is a sidewalk, and every twenty feet there is a tree placed by the city arborist. The city streets tend to have a monotonous military organized look that contrasts with the comparatively more cutesy look and feel of the streets of Los Altos, located just on the other side of Highway 85. Newcomers to the Valley are often surprised to find that as they drive along El Camino Boulevard they can easily pass from the City of Mountain View, through Sunnyvale, into Santa Clara, and then on to San Jose without even noticing where one city stops and the next begins. Drivers have wasted many hours looking for an electronics company located in North Sunnyvale, all the while driving into and out of Santa Clara since all the streets and corporate parks have a frustrating sameness. The lack of discernable landmarks only adds to the feeling.

What Sunnyvale lacked in cuteness and ease of getting around, though, it more than made up for in the quality of life of its residents. Almost everyone could walk to excellent parks, grocery stores, work, and schools; for others, those things were just a short drive away. For a planned community, the city got more right than not. In the 1970's the schools were well-funded and full of the children of workers in the electronics, defense and aerospace industries. Serra Elementary School had two classes of twenty kids for each grade, K-6, for a total of nearly 300 children. As Matt and I walked with his sisters to our first day of kindergarten, both sides of the streets had a line of kids stretching down the sidewalks. Crossing guards were out in force with stop signs provided by the Safety Patrol force to stop the occasional car that approached the school. The bigger kids raced by on their bikes. Unlike today, almost all the kids walked or rode their bikes to school. Hardly anybody's parents drove them to school unless it

was raining, and the few kids who did arrive by car quickly rushed away in shame. We have sacrificed independence by joining the army of SUV's dropping our children off at elementary school.

My first years of elementary school at Serra were happy times for me. The staff of three janitors kept the place and immaculate inside and out. The squeaky clean desks still smelled faintly of ammonia every morning, and all the linoleum floors had been buffed to a shine so bright they reflected the recessed lighting. Not a leaf hit the ground without being banished into a garbage can in short order. The large windows and the panels were clean and usually open due to the fact that Silicon Valley has such a mild climate, so mild that many often complain that there are no seasons. The kids were also generally immaculate, thanks to the many stay-at-home moms, and the clothes that we all wore were bought for us at the nearby Sears Roebuck and Mervyns.

My kindergarten teacher, Mrs. Whitely, was supported by an army of willing mothers of students. They were a wellestablished group in the elementary schools, and it was not uncommon to have two or three volunteer moms in class serving as "helpers" on any given day. There was a feeling of safety and security, and everyone generally helped out, including the older kids looking after the younger ones.

As much as I liked Serra Elementary School, the City of Sunnyvale Public Library was even better. The library was also a favorite haunt of my father's, so once a week, on Friday evenings or Saturday mornings, we would hop into the purple Mercedes and ride north up to the library, located just off of El Camino Boulevard, next to City Hall. While my father went to peruse the latest stacks of electronics magazines and books located to the right of the entrance, my brothers and I would tear off to the left to the Children's Library. We all had our own library cards with "full privileges."Those cards were a great source of pride for us and allowed us to check out up to nine books at a time for up to two weeks – for free!

#### Diagnosis

Silence makes no sound, Yet much is there, Easily found With attention and care.

One of my earliest memories is of when I was a toddler running through my aunt's house to see the giant grandfather clock each time it went through its hourly song before striking the hours. It was loud, really loud. And then one day, after a long bout of sickness and high fevers, I can distinctly recall staring at the clock and waiting for it to start to clang. But it never did. I could see it moving as it went through its motions but couldn't hear it at all. I can remember trying to ask Aunt Marilyn to "fix it" or "make it louder," to no avail. I could not have understood what this meant to me at the time. But looking back, I absolutely can recall that that clock, which at one time had and had sounded so great and been so loud that I could hear it from the other end of the house had now fallen completely silent.

Now my mother swears that she had known about my deafness well before I understood that I had a hearing problem. The first time I can recall failing a hearing test was at Serra School in 1969, in the California Hearing Associates mobile hearing test van that was parked out in the front parking lot. During the day, each class of kids would pile in, and each student would take one of the seats and put on a set of headphones. After a few minutes of holding up our hands when we heard a tone, everyone would pile out – except for me. I had to stay and be tested and re-tested and tested again by grim-faced adults who whispered amongst themselves (though they did not really need to whisper as I could not hear them anyway). Today I know this means that at one time I could hear, and then one day at a very young age, I could not. My hearing loss may have been severe as defined by the hearing science world, but the diagnosis of it and the effect it had on my life would be profound.

It was really something when all the kids left the hearing test and my mother was called to come down to the school. At first I was not sure what to think, but then I found out that there was something really wrong with me. That day a feeling of dread sank in, and I have carried the memory with me ever since. I failed the hearing test again at age six, and then at age seven and again at eight. After that, the good folks who operated the California Hearing Associates test service began to recognize me and figured out that re-testing me with the other kids was pointless as I was being tested so much anyway. I was a bit disappointed as I had always thought that one day it might get better; that one day I would pass that test and that I would be let go with the other "normal" kids. But it never happened.

My hearing loss probably started during my infancy. I had had more than my share of childhood illnesses that often kept me in bed with high fevers, swollen glands, and chronic recurring ear infections and necessitated lots of trips to the doctor. What definitively caused my hearing loss I will never know. I have also had allergic reactions to some of the antibiotic class drugs. Today the ear doctors (otologists) generally agree that my hearing loss was most likely caused by a high fever or by an ototoxic reaction to antibiotics, or both, with the smart money being on an ototoxic reaction to a shot of Gentomyocin. But what caused my hearing loss does not really matter. It would not have changed the result.

"This boy has severe hearing loss! Severe hearing loss, Mrs. Ball! He is going to need lots and lots of help, Mrs. Ball! Lots of it!" shouted the audiologist.

By the age of 11 I had become somewhat used to being "re-diagnosed" with severe hearing loss from time to time, but this audiologist was particularly zealous. Each time my father changed jobs or our health plan changed, a new audiologist would inevitably "discover" my hearing loss again. By the time I was tested by this latest irrationally exuberant audiologist, I was already somewhat of a pro at being diagnosed with hearing loss. Unlike the first times I learned that something was "seriously wrong" with me, I did not cry; I did not have one of those huge lumps in my throat; I did not feel like my life was forever changed and I was going to have to go to a special school or something. This time I got mad.

"Well we know that! You know! We know I cannot hear. What is wrong with you? It really is not cool to act all excited about this!" I exclaimed. I was irritated. The way she was acting was ridiculous.

The audiologist, who was young, just stared at me, stunned. Behind her, my mother was looking at me with a big frown on her face. I thought to myself, *Oh great. I'm in trouble again.* But on the way home in the purple Mercedes, Mom explained that she was not mad at me at all; it was the exuberant one that had got her ire.

"Geoff," Mom said, "sometimes people are going to do stupid things and act stupid about your hearing loss. It is not your fault."

"Mom," I replied, "I don't want to go back to that girl. She does not understand it."

"Fine. We will see what we can do." And with that, Mom took me back to school.

I hated my deafness. It terrified me. From what I could surmise, the doctors were trying to rule out some really serious bad things that could be wrong with me. Though I did not know what the terms 'acoustic neuroma' or 'tumor' meant, I knew that they were not good. What if it got worse and I lost the remaining hearing that I had?

Being diagnosed with hearing loss was horrible, and the whole terrible process made me feel worse. Even today, just remembering it gives me a sinking feeling in the stomach and a serious case of the chilly willies, and of course I can still recall the deep uncertainty and dread. It is the feeling of having lost something precious that you can never get back no matter how hard you tried not to lose it or how desperately you want it to back. It seemed hopeless, dire and cursed. In the first weeks after my diagnosis, I spent hours upon hours in soundproof rooms being tested for hearing and speech. No matter how hard I tried to do better, the results were always the same. *Dang it! Failed another test!* After a few months, the hearing tests stopped and life returned to normal for a while, but the sick feeling in my stomach remained.

Perhaps one of the reasons I hated my hearing loss so much was the undeserved stigma that it has. It is common for people with hearing loss to be labeled with the dated term "deaf and dumb." I am not sure where this crazy saying originated, but it most likely comes from the fact mentally developmentally that many or otherwise challenged people are also hard of hearing. It may also stem from the fact that those of us with hearing loss often answer the wrong question with the right answer, which can make us seem "dumb" when in fact we may be quite smart. Not hearing well also means that we cannot hear how loud our own voices are, so we can often come across to others as obnoxious or loud. We find ourselves in many embarrassing and confusing situations with no good social protocol to follow. It is one tough nut.

One of the many social conundrums for the hearing impaired is the fact that if we cannot hear what a person said or is saying, and we move closer so that we can hear them better, they begin to speak more softly. It happens every time, and it's maddening! Or when someone learns of our hearing loss, they start to speak much too loudly, sometimes shouting and often using lower-level, basic vocabulary. Sometimes they throw in wild hand gestures for good measure. "GEOFFREY!!! I! WANT YOU! YOU! TO READ THIS! TO READ THIS SENTENCE! TO THE CLASS! TO THE CLAAAASS, THE CLAAAASSSS!" The teacher waves her hands and points excitedly at the passage, while all your classmates stare at you with bemused expressions. Oh, you just want to die. At such moments I would often freeze up, a shocked and embarrassed, while my mind raced to find the right words, the right thing to say, all the while literally dumfounded by the idiocy of it all.

Such acts are not limited solely to the act of speaking to the hearing impaired. Upon learning that I had hearing loss, one teacher that I had immediately moved me to the very front of the class and took to writing on the black board in absolutely huge letters in red chalk. Whenever I was in the room, out came the red chalk and the writing increased to two to three times its normal size. Again, if you're deaf, you're dumb, so of course I would also benefit from much larger letters in red. I just sat there feeling inconsolably demoralized.

Of course there were many times when I just wanted to scream, "I can see fine! What are you doing? Don't make me sit at the front! Don't make big letters for me! The rest of the kids will think I am an idiot!" So I just sat there squirming in my chair each day, thoroughly humiliated, feeling naked and exposed and embarrassed beyond words by the best of intentions with the worst kind of thinking behind it all.

I am sure that the reality was not that bad and that what the other kids actually thought was probably nothing like what my imaginative young brain made it out to be. But at the time, I wanted to disappear. I did not want anyone to know I was different, especially my classmates. I probably had a lot of mixed-up feelings that had no basis in fact, so I just hung on the best I could. It was tough at times. After my hearing loss was diagnosed, researchers and graduate students from nearby university programs and other hearing research institutions began to visit me. I became a speech pathologists study case for and hearing researchers. They would often sit there and watch me, take notes or give me something to read or an exercise to do. Sometimes they would ask me to read a passage out loud. They would give me new words and then have me try to sound them out. With the help of my mother, who always read books to me and my brothers every night, I had somehow taught myself to read before I started school, and for some reason the way that I read and learned to speak and understand new words was what fascinated them most. I can remember a lot of questions from the researchers regarding how I read, how I learned to do it, what this word was in relation to another word, and so on.

Looking back, it seems to me that they were spellbound by the fact that I never learned to sound out words from the beginning to the end, as was usually the case, and that I read by recognizing the patterns of words and of entire sentences. I will never know exactly what it was about my reading, vocalization and hearing that was so intriguing to them. I can recall one young graduate student who had spent a lot of time with me explaining, "We are studying you because you are very interesting to us. You do not do these things like the others, and we want to know how you do it so maybe we can understand it better and help you and others."

At the time, the last thing I wanted to be was different. In my creative little brain, I was sure that they were looking for a reason to take me out of Serra School and send me to the school for the deaf. I did not want to be "interesting" to researchers. I may not be able to recall what they found so interesting about me, but what I do recall is that out of all the concepts that the many special education experts and speech therapists worked on with me, there was only one that I found interesting: lipreading.

I got a lot of extra help developing my ability to read lips at school. I was not the only child at Serra Elementary who was given extra attention and extra time for special needs. There were actually several of us. Even though we were told we were "special," I think all of us had figured out that in some way we were in fact "not normal." I had more speech help than any of the other kids at first. As my speaking ability for some reason or other improved rapidly despite my severe degree of hearing loss, I was given more and more time to practice my lipreading. To those of you without hearing loss, reading lips may seem almost like voodoo, but it was the right choice for me. I practiced the techniques for hours with speech coaches. They had me practice lipreading in noisy, confusing situations. They gave me endless exercises to practice reading lips when I could only see only part of their mouths, or sometimes just their cheeks. Over and over, again and again. This was much more fun than spending hours and hours on vowel and "O" "OOOOhh." "O." "Now, consonant production. Geoffrey!" "S." "Sssss." "S". I can remember it like it was vesterday But I thought lipreading was cool, and I thrived on it. When I started showing up for my hearing tests, the audiologists were astonished by how good I had become at it. At first they thought my hearing had improved; then they thought something was wrong with their test equipment. They soon learned that hiding their mouths when they read off the words for speech testing was not enough, so they faced in the other direction during testing. I became so good at lipreading that most people had no idea that I could hear so poorly. I can recall one of my hearing testers telling my mom, "Mrs. Ball, Geoffrey here, well, he is the best little lipreader I have ever seen!"

The California school system was flush with funding for special needs kids at the time. In elementary school, I received more than my fair share of extra help whether I wanted it or not. Soon I was meeting with a speech therapist three days a week to develop my speech patterns and pronunciation. I received extensive lipreading training. I became a world champion lipreader. I was really, really good at it. When the other children had foreign language course work, I was sent to get more speech and extra help with English. (At the time the belief was that learning a foreign language could be detrimental to learning proficient English skills – a belief no longer held by hearing professionals). I did well enough with all of this that early attempts to teach me to learn how to use sign language were scrapped. I was put in special classes, often with truly deaf kids, but more often with other special needs kids. Some of these efforts helped; some probably did not. Some of the special needs teachers were great; some were not. A few of them really "got it" (and, more importantly got *me*), and what they did for me truly helped. My speech is quite good today, and my pronunciation is clear. No one is perfect, though, and my wife says I still say "stupid things" all the time, but at least she can understand what I say!

It was not long after I was diagnosed with hearing loss that I was fitted with my first hearing aid. It was a huge clunky device with a large, unsightly ear mould. At the time, audiologists in the United States did not believe in hearing aids as a viable treatment, and their oversight body (the American Academy of Audiology) therefore did not allow them to dispense acoustic devices. My hearing aids were fitted by a man operating out of his home, which was squashed in between an auto muffler repair center on one side and a vacuum cleaner sales and service shop on the other, down on First Street in San Jose. The place was tacky. It had shiny light reflectors on the acoustic ceiling. The office was dank and cramped, and it had an awful smell, likely due to the three barking Pekinese dogs that had the run of the place. The man's wife, who helped run the front office area, had a beehive hairdo that was so high it almost hit the doorways when she passed through. My ear doctor at the time, Mansfield Smith, had a real health care office that was obviously designed for treating people and helping them to get well. This was not that place. This was nothing like it. The dichotomy for me as a young child was obvious: How on earth could I go from a bona-fide health care facility to such a place? *This*, I thought, *cannot be good*.

The first time they put the hearing aid on me, I felt like a mutant alien – like I had just landed on a different planet that was full of electronic humming and squealing, screeching inaudibility. They showed me how to put the earpiece in my ear canal, how to put the larger piece behind my ear, and how to use the wheel to adjust the volume. I told them I did not like it, so the man put it back in a test machine and looked at the readout.

"It's OK. You just need to get used to it," he told me.

"But it hurts and it sounds bad!" I said.

"You just need to give it some time," he repeated.

I put the device on, went outside, and was almost bowled over as the sounds of the traffic on First Street roared into my brain. Everything was so loud! When my mom took out her car keys, the "ching-a-ching" sound felt like it was pounding on my head.

"I hate it," I told her.

"They said you will get used to them, so just keep trying them," Mom replied. But I knew from the start that this was not for me.

"Can't the doctors do surgery to fix my ears?" I asked.

"No, your hearing type cannot be helped by surgery. That is what the doctors said."

"Nothing?"

"No," she said.

Now the good thing about getting fitted with hearing aids was that I got to skip the morning session of school on Monday. But the really bad thing was that the teacher had taken it upon herself to tell the entire class where I was and what was happening to me. Thus, all my classmates knew about my hearing loss and that I would be coming back that afternoon with a hearing aid. Good idea? No, it was not!

When I got back and walked into the classroom wanting nothing more than to sit down and disappear, every single kid came over and said, "Let me see it! I want to see it!" "You told them! You told everyone!" I accused the teacher. And when she looked at me, I knew she had – it was obvious. I was now surrounded by the whole class. One kid even tried to take the device off. Others spun my volume wheel. The hearing aid man had told me not to touch the wheel for at least a week until I got used to it.