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A TOASTER, A DRYER, AND A GLIMPSE OF THINGS TO COME

Blessed is the mother who gives birth to a brewer.

—Czech saying

When I was two years old, I inserted a pair of tweezers into an electrical outlet. I vaporized them, gave myself quite a jolt, blew a fuse, and scared the wits out of my mother. Blowing a fuse was new, but I was already a dedicated student of electrical theory and this was not the first experiment that had unexpected results. It was this type of outcome that taught me to hide my experimentation from my mother; however, it's hard to hide a blown fuse. She knew that I loved to take things apart, but she didn't know the extent of my curiosity or how much it would shape the course of my life. The fact that I've survived to write this story is either incredible luck or a true testament to man's (or a boy's) ability to survive against amazing odds.



SETTING THE STAGE

I grew up in a typical, middle-class family in the 1950s. My mom was a housewife, raising three kids with a husband who was rarely around. My father was a partner in a small law firm that specialized in an obscure and now mostly obsolete aspect of the law related to interstate trucking; he had clients around the country and traveled a lot. He practiced law during the time when a three-martini lunch was the norm, and he fully embraced the program. I can recall visiting his office when I was young, but only a few times. I remember being fascinated by their now-antique phone switchboard with all the plugs and sockets that the receptionist used to route calls. On one occasion, I swapped a few of the plugs while playing with it and probably disconnected a few important calls. He didn't bring us kids to the office very often after that.

My brother, Steve, is two years older than I am; like most younger brothers, I tagged along with him and his friends much of the time. We enjoyed each other's company and were always close. My sister, Diane, is four years younger than I am. Being the youngest and only girl of the family, she didn't always fit into our gang of neighborhood boys.

My parents lived in an apartment in downtown Los Angeles, but they wanted to move out of the busy city. In 1959, my father got a promotion, and we moved to Woodland Hills in the San Fernando Valley when I was four and a half. Our two-bedroom, two-bathroom middle-class corner house was in a nice neighborhood but nothing fancy. The area had been an old walnut orchard, probably remnants of the Otis Chandler–Owens River water and land grab. We had just over half an acre with several big old walnut trees, so we had lots of room for building forts, tree houses, and go-kart tracks. We even had chickens for a little while until the rooster attacked and chased one of the neighborhood kids, who ran through a closed sliding glass door in terror. His injuries and the damage put an end to our livestock.

My parents divorced when I was 10, but since my dad had rarely been around before that, it wasn't that dramatic of a shift in our family

dynamic. After my parents divorced, my mother worked for the Head Start program as a teacher and later went back to school to get her master's degree in guidance and counseling with the hope of getting a better-paying job. In the absence of my father the position of a male role model fell mostly to my mother's father, Lewis Drucker, a generally soft-spoken and kind father, Superior Court Judge, and family patriarch. He had been born and raised in New York City in a family with limited financial resources, and as a young teenager he hitched and rode the rails out to California, where he later put himself through law school.

Even though my grandfather was a respected and successful judge, he often seemed most contented with a paintbrush in hand or when trimming oleanders around my mom's house. Much like him, I have always had the need to keep busy, not just physically but also mentally. Even while relaxing, I've always felt the need to be working on a project or accomplish something, whether it's tearing apart a stove or rebuilding the shower in a vacation house. One of the strongest memories and life lessons I got from my grandfather was his mantra, "Waste not, want not." I can't count the number of times I heard him say that to us kids or, for that matter, to anyone else who'd listen. Even though I didn't have his experience of living through the Depression, I developed a penchant for resourcefulness, frugality, and collecting because of his influence.



TODDLER TINKERING

My early years marked the beginning of many years of dangerous and foolhardy behavior. I remember always enjoying taking things apart and figuring out how they worked. In the beginning, this usually meant a one-way trip for the devices because they were rarely restored to their original condition. I was regularly reprimanded for dismantling the household appliances. My mother tells stories of me still in diapers taking apart the toaster, the washing machine, electrical outlet covers, and anything within my reach, using kitchen knives, tweezers, or

whatever I could turn into a rudimentary tool. The way my mother tells it, if I was left alone for a few minutes she would find me by following the trail of screws, washers, and bits of deconstructed devices. These stories became family lore, and like many things often repeated were also embellished; the extent of what actually transpired is hard to know. These early experiments were an indication of what would be a constant quest to understand how things work, and although it took a little longer to figure out how to put things back together, I learned a lot in those early years and soon started to invent and design my own devices and creations. My first invention came about when I was four years old. After watching my mom stoop to pick up clothes and hang them on the clothesline, I fastened a pulley to the laundry basket with a rope to hoist it to hip level, eliminating the need for her to bend over repeatedly.

My mom's older brother, Bob, helped encourage my growing interest in science and technology. When I was just starting to read, he introduced me to the *New Tom Swift Jr. Adventures* series. In the books, Tom invented all sorts of devices, fought for justice, and explored space. Although I wasn't much of a reader at that time, I was captivated by Tom and all his adventures. I had most of the series, but *Tom Swift and His Megascop Space Prober* was one of my favorites. Tom was a young, handsome, accomplished scientist and a brilliant inventor. He drove a sports car, had a beautiful girlfriend, and traveled through space solving all manner of critical issues while thwarting evil forces. What part of that wouldn't be inspiring to a young boy? After I started reading the series, I got more serious about inventing and building gadgets. Tom's inventions also helped give shape to some of my own projects.

Just before they separated my parents decided to add on to our two-bedroom house. I had the opportunity and a plan to wire my room and ran some small wires under the sheetrock for built-in stereo speakers and other projects I was contemplating. I built my own crude electronic door lock by removing the outside knob on my bedroom door and coupling an electrical switch to a standard key cylinder. I hid

the contraption in a linen closet down the hall. I had salvaged parts from our old washing machine and mounted the solenoid that had held the gearbox in the spin cycle on the door with a lever arm to actuate the lock. The only way to get the door open was to use the switch in the closet; it was crude, but it worked (most of the time) and kept unwanted intruders out of my bedroom.

According to my brother, Steve, who also read the books, my inventions were nothing to talk about and I didn't hold a candle to Tom Swift because he was a *real* inventor. I felt deflated by his assessment of my skills but was undeterred. Even though I came to see Tom's adventures as farfetched and unrealistic, I was never able to part with the books. They played such an important role in my early fascination with science and physics, as well as demonstrating what a young person can accomplish, even if none of it was true or even realistic. Years later, I had a few of my more artistic friends draw an 8-foot-wide, black-light rendition of Tom perilously floating in space after his tether had been mysteriously severed. To this day, I still have most of the series intact on a bookshelf in my living room, as well as the drawing of Tom (although it's not in the house).



CAST OF CHARACTERS

Our neighborhood was full of young families with a number of boys close in age to my brother and me, and over the years we grew to be a tight gang. Most of us attended Calvert Elementary, which was close enough that we were able to ride our bicycles to school from an early age. In kindergarten I started to meet some of the other neighborhood kids and developed strong friendships that have lasted all these years. These friendships became a bright spot in an otherwise dreary school experience for me. My recollections of my first day of school remain with me today. School sucked—I couldn't stand the confinement,

rules, and authority. All the freedom I'd experienced until then suddenly went away and bells, schedules, and lessons provided unwanted structure. I didn't understand why I couldn't go out to play when I felt like it or why I had to spend the day with a bunch of kids my own age. The first few days were rough, for both my teacher and me, and set the stage for many parent-teacher conferences to come.

In second grade, through my lack of attention, indifference, or early nonconformity, my teacher suggested to my mom that I needed an IQ test. My teacher equated my lack of attention and constant disruptive behavior with some kind of learning disability. I have some memory of the ordeal—trying to find patterns of numbers and trying to describe inkblots and free associations—but maybe I have just seen that in so many movies that it seems like a memory. Although my teacher probably didn't believe it, the results were well above average. The IQ test marked the beginning of my disconnect with conventional educational methods. Even at that young age I recognized that there was a price to be paid for nonconformity. Staying true to who I was set me on a path outside the norm. Although frequently labeled a troublemaker, I was lucky to have the support of my mother and many friends along the way.

The family that moved into the house across the street from our new home had four children—a daughter, Deborah, and three boys. Bill was slightly younger than me, and Thumper and Tommy were a couple of years older. Because my dad was rarely around, I quickly adopted the Hungerfords as a second family and spent a lot of time with them. The father, John, or Big John as he was usually called since one of his sons was named John (Thumper), quickly became an important figure in my life. One of my early mentors, Big John had one of those inquisitive minds that was never satiated. He had a well-equipped shop that doubled as a playground for us kids, probably much to his dismay, with a welding machine, an air compressor, and many cabinets full of wrenches, screwdrivers, and almost any other tool you could think of. He couldn't resist a sale on tools, and even if he didn't need anything, rather than buying one of something, he'd get six. His passion and at times compulsive

habits touched every aspect of his life and everyone who knew him. His collections combined with his meticulous ways occasionally came at the expense of others—along with many other chores, his children were required to wash and wax his slightly eclectic fleet of cars every week until he realized the regular cleaning and buffing regime had started to remove much of the paint.

Big John's obsession with cars was a source of amazement and intrigue for the other neighborhood friends and fathers. He installed and modified his vehicles to contain every conceivable aftermarket gadget and upgrade he could get his hands on. Some of these modifications come standard in automobiles today, but in the 1960s he was ahead of the curve. He had air shocks and an onboard compressor that he could activate from the dash to check and inflate his tires at will. The list of gadgets and improvements was never-ending, and weekends were spent finding real estate under the hood for the next innovation. Big John also outfitted each vehicle with its own spare parts; in the event you needed a replacement part, you could find it in the trunk inventoried, sealed, and labeled. I remember being off on some adventure, somewhere we weren't supposed to be, with one of his newly licensed sons when the water pump in his Peugeot failed. We pulled into a service station, assessed the problem, and, sure enough, found the new part, labeled and stored with all the tools needed for the repair neatly organized in a container in the trunk.

Another one of Big John's traits that rubbed off on me was his thirst for knowledge. He was an educator by occupation, and after teaching school for several years he became a principal and later held a senior position on the Los Angeles Board of Education. Besides spending time tinkering in the shop and working on his cars and house, he devoured information. Anything was fair game—science, technology, history, food. Piles of periodicals, pages torn out of magazines, and drawers full of folders crowded his library.

Although as kids we spent many hours working on projects in Big John's shop, we were not necessarily a welcome group, and at times were forced to sneak in when the parents were at work or away. We had the tendency not to clean up after ourselves and would

occasionally lose our access to the shop as punishment. I was generally blamed for most of the disarray, probably with good reason because I spent the most time there and wasn't the neatest child. We tackled many diverse projects ranging from bicycle repair and modification to building go-karts and minibikes at the beginning of our motor sports phase. I recall removing the two-stroke engine from a neighbor's lawnmower and modifying and mounting it on a go-kart we were building. We were proud of the invention, but the neighbor wasn't too happy when he found the mower missing its motor in the spring.

The Moellers were another neighborhood family that came to play a big role in my life. Greg Moeller was about a year older than me; he had a brilliant mind and wry sense of humor. He had an older sister, Ann, and a younger brother, Kurt. Their parents, Cal and Jean, loved to entertain, and they hosted many memorable parties. Cal had spent his career in aerospace, working on the Minuteman missile and later on various projects at Rocketdyne. Before he retired, he helped design and test space shuttle engines. Cal was active in the Sierra Club and was an avid hiker and mountaineer; he took the neighborhood kids on many of their first treks. He was an ardent cyclist and often rode with us and helped expose us to outdoor activities.

Cal was also a devoted homebrewer, winemaker, audiophile, rocket scientist, and foodie. He started brewing in the 1950s at college, where he studied to become a metallurgist. This was during the dark ages of homebrewing, well before any quality ingredients or sound information was available, so whether he started brewing to save money or because of his fascination with science and the alchemy involved in brewing will never be known. The Moellers had rows of carboys in their service porch with air locks bubbling away. On weekends the kitchen stove held large boiling pots of malt and hops.

Cal thought that kids should be exposed to science at a young age, so he converted a wooden shed in the backyard into a "laboratory" that he equipped with a range of chemicals and reagents, many of which are now regulated or found only in advanced college chemistry classes. We had metallic sodium that ignited when added to water and jars of mercury that we unwisely played with, coating dimes and filling our shoes to shuffle around like Frankenstein. We also had all the

compounds to make really great rockets and explosives. Although Cal gave us some rudimentary safety training, I don't recall having much direct supervision, and other than some books of experiments, we were pretty much left to learn on our own. From one of our young science geek friends we learned the recipe for a compound we called Super Flash, which I later learned was similar to the formula used in plastic explosives and ammunition. It was supposedly 10 times as powerful as gunpowder and had the added benefit that it could be triggered to explode when it came into contact with a strong acid, which enabled us to develop delayed fuses. A few of us decided to blow up every mailbox on the next block, and when suspicion arose that we were behind the prank, we blew up a few more closer to home to confuse our parents' investigation. Our smokescreen worked, and although our parents suspected us, they were never able to prove conclusively that we were the culprits. I don't think Cal intended for us to use our scientific knowledge for destructive purposes, but we were teenaged boys with boundless curiosity.

Another early entrant into our high-spirited gang was Dave Sheetz, who lived on the next block over and often lent his support to our antics. His father had been employed in marketing at a local brewery but passed away at a young age, just shortly before we met, and our shared fatherless existence forged a bond between us. Sheetz earned the respect of many of the neighborhood youth with his wheelie prowess on his Sting Ray bicycle and being able to travel the length of the block on his rear wheel, but even more for his ability to compress enough air into his stomach to recite long passages while burping and popping a wheelie.



YOUTHFUL ADVENTURES

Cal was also interested in early high-fidelity audio equipment and upgraded his sound system regularly. Stereo FM radio was a fairly new concept; the first stations had only begun broadcasting in 1961. When he replaced his old mono radio with a newer one, he gave the old one

to Greg and me to play with. We found a circuit diagram to build a multiplex converter to receive stereo signals and set about building the modified circuitry. There was a Radio Shack a few miles away, so we made regular trips on our bikes to buy diodes, capacitors, and resistors. Although it wasn't a terribly large sum of money, all of my allowance, less than \$2 a week, regularly went toward buying components for the conversion. With my mom struggling to make ends meet, and my grandfather helping her out, I was reluctant to ask for money.

On our last trip for supplies, without enough money to get the last needed pieces, I slipped a small bag of circuit board clips into my pants, casually strolled out of the store, and climbed on my sister's pink banana-seat bike (mine had a flat tire that day) to make my escape. I guess I wasn't quite as discreet as I thought, and the manager, who'd seen me slip the parts into my pocket, followed us out of the store and yanked me off my bike as Greg hightailed it home. It was bad enough to be caught but worse to be apprehended on a pink getaway bike. It was my first encounter with the law, and they threw the book at me as far as I was concerned. It was the day before my twelfth birthday, and my mom grounded me; the police notified the school that I had been caught shoplifting, so the principal called me into his office to reprimand me. A small bag of circuit board clips turned into a triple humiliation.

After my run-in with the law, I realized that I needed a regular source of income. I was in junior high and needed money to fund my many hobbies and vices, not to mention my growing interest in girls. In eighth grade I made the decision to get a steady job. I had been working for the next-door neighbor shoveling manure from their two horses, but it was neither steady work nor my cup of tea. The only perk was that he owned a bar and would occasionally leave some beer lying around. To find a job, I walked down Ventura Boulevard and knocked on every shop door that looked like a possibility. I was finally offered a job at a furniture store doing odd jobs, moving things around, cleaning up, and assembling furniture. When the owner ran out of things for me to do at the store, he would take me to his daughter's house, where I did everything from dishwashing to babysitting. They liked me and

paid me pretty well, but in my teenage mind, it wasn't a grown-up job. I applied for and got a job at a small bicycle shop that opened close to home. I started working there after school and on weekends assembling bicycles, which suited me much better. I continued working part-time at bicycle shops, increasing my skills and knowledge, for the next several years.

Although I now had a job, Greg's and my interest in electronics continued to evolve, and we began doing TV and stereo repair for friends and family. Back in those days most problems were related to bad tubes, a failed capacitor, or a burned-out coil, so troubleshooting was not nearly as complex as it would be with today's microchip technology. Although I didn't master circuit theory at a very high level or totally grasp the complexity of the devices I worked on, I had a decent rate of restoring dead televisions and radios. I had picked up a cast-off radio tube testing center that was commonplace in many stores at that time, so my work area in the garage looked fairly professional for a teenager.

Because of my limited income, I got into the habit of scrounging bits and pieces for my many projects. As luck would have it, a treasure trove of material, liberated by the passing of the elderly man who lived directly across the street, provided a nearby source of parts and tools. He had owned a hardware store, and when it closed, he moved much of the inventory home. When he passed away, his wife had a yard sale that I took advantage of, and then she started putting whatever was left of the old inventory in the garbage. My friends and I made a habit of digging through the trash until his wife reprimanded us, so we started scoping out the take in the afternoon and pouncing after dark. This charade went on sporadically for months. I don't know why our neighbor wouldn't give us the leftovers; maybe she felt guilty for throwing away things that had value. In the end, I had collected a lot of transformers, electrical hardware, and all sorts of junk to incorporate into my ongoing projects.

Our interest in mechanics extended to bicycles, which we adopted as our preferred mode of transportation around the neighborhood. The banana-seat Sting Ray was the hot ride back then and I wanted one

badly. Schwinn made the original Sting Ray, which was built to be very beefy and designed to take abuse from rowdy kids like us. I tried to convince my father that I had to have a Schwinn, but to no avail; he bought me an imitation built by Steyr Puch, which was a lightweight copy imported from Austria. Whether it was because he had to drive across town to buy the Schwinn or because the knockoff cost \$20 less I don't know, but the excitement of getting a new bike was dampened by the realization my dad had bought the imitation. I almost immediately started to take apart, modify, and customize the bike. I installed a smaller front wheel in an attempt to make it look like a chopper. Once I had it all set up like I wanted, I went with some of the bigger kids across the boulevard where there was a terraced hillside for a new housing project. The steep hillside provided the perfect ramp for high-speed jumps, and being the young daredevil that I was, I decided to go down without using my brakes. It was a quick descent, and the small front wheel didn't help my trajectory or the landing. I did multiple somersaults, breaking my arm in seven places, but even that didn't dampen my enthusiasm for cycling.

When I was 14 years old, I convinced my mom that I needed my own space and got her permission to build an outbuilding to live in. Little did she know I had already built a hideaway, dubbed The Hole, in our backyard. Above ground it was shaped like an igloo made from walnut branches covered in dirt that camouflaged a series of tunnels and underground rooms that we dug one summer. Accessed through a trapdoor in the igloo, The Hole was a mushroom-shaped room that we reached by climbing down a rope ladder through a narrow tunnel. It had lights, stereo, and air provided by a contraband evacuation system that vented into the neighbors' yard. We also built side tunnels called torpedo tubes that were large enough for two people to fit into, and we slept down there from time to time. My mom knew about the igloo but not about the trapdoor or the space underneath.

The Hole caved in eventually, prompting the need for a new space. Greg and Sheetz had already built their own backhouses, giving me ideas for improvements to make mine superior. Greg's had been converted from the now unused "science lab," and Sheetz had transformed his sister's kid-sized dollhouse in the backyard. I approached

my Uncle Bob, an architect, to draw up the plans before going to the county office to apply for a building permit. I was probably the youngest person ever to do that. Permit in hand, I became the foreman on the project. I did all the wiring myself and enlisted Thumper, Bill, Steve, Sheetz, and Greg to help with framing and roofing the split-level structure. I had never poured concrete before and had no tools, but I dug the footings to code and ordered a truck to deliver concrete for the slab. The driver was shocked to pull up and find a bunch of kids with no tools, experience, or adults to help, but he graciously agreed to provide the tools and stayed to help us lay the slab. Because I had obtained a permit the county building inspector came back to sign off on the completed project. Aside from some incorrectly wired boxes that were easily remedied, my self-taught construction skills were enough to earn me a pass.



EDUCATION MY WAY

Even though I would have preferred to spend my time riding bikes and tinkering on my projects, I grudgingly went to school. By the time I started junior high, I saw school as a place to see friends, goof off, and have fun. Other than the shop classes and PE, my most memorable moment was receiving a grade of A-U-U in a science class, the first ever in the history of the school. I achieved an A grade, but the two unsatisfactories were for work habits and behavior.¹ My mom was furious and didn't understand why I was so pleased. She didn't see any reason to be impressed. In junior high, my love of science and my mischievous bent got me into more serious trouble. One of my wilder friends told me about a pretty fantastic formula for making stink bombs that didn't involve any combustion and could be dispersed very discreetly, only needing to be dropped in water to release large quantities of hydrogen sulfide. One rainy day he and I decided to test

¹If my grandchildren read this, know that it's not something I'm proud of now, although at the time I thought it was pretty cool.

our formulation, so I tossed some pellets in the sinks, toilets, and puddles around the school grounds. It worked better than we could have imagined and, once unleashed, there was no stopping the stench. The entire school was evacuated, and because of my friend's earlier bragging about the recipe, he was identified as the culprit; I was deemed guilty by association. We were both suspended for a week. I thought it was funny at the time but was grateful not to have been punished more severely.

My creativity and curiosity finally started to find adult-sanctioned outlets in junior high shop classes. My school offered a wide range of industrial technology classes, including wood shop, small engine repair, crafts, drafting, and, my favorite, a fully equipped metal shop with a small foundry. I developed a great interest in creating metal objects and made the obligatory, but now politically incorrect, hand-peened ashtray in seventh grade when I was 12. My metal shop teacher, Mr. Benson, had the distinction of being an ex-prison guard and ran class as such. He was a tall, tough-looking man and had no problem keeping his students under control. I connected with him, and he gave me a lot of attention and freedom. I was able to take his class as an elective for a second semester, and it seemed like I had achieved a teacher's pet status and was granted special privileges. Subsequent projects were more complicated, and I eventually tackled making a screwdriver from scratch. It doesn't sound too hard, but it involved designing, melting, and casting a sturdy aluminum handle over a hand-ground tip of tool steel that I heat-treated myself. To finish the project I turned the handle on a lathe and knurled the grip. The challenge of building something with my own hands, the skills I developed, and the satisfaction I felt were monumental.

In addition to channeling my energy into practical skills, Mr. Benson also played an important role in how I learned to deal with grief. In junior high one of my best friends was killed in a tragic car accident that also critically injured another one of my friends. I was supposed to go to the movies with the gang that day, but my mom wouldn't let me go with the newly licensed driver. Mr. Benson was one of the more sensitive people who stepped up and helped all of us handle the loss.

Unfortunately, this was the first of several of my close friends who passed away early in life. Greg Moeller died in his late 20s, unable to pull himself out of a downward spiral fueled by alcohol and loss of direction in his life. Another friend from my television repair days died a sad and painful death as an early sufferer of AIDS. Losing friends while young taught me the importance of lasting relationships. Many members of the neighborhood gang were early supporters of the brewery and are still in my life today.



A CENTRAL CHARACTER ENTERS THE SCENE

In the late 1960s, I met Steve Harrison. Although his family moved into the house next door to the Moellers, our paths didn't cross for the first few years because he went to a different junior high than the rest of the kids in the neighborhood. He was a few years older than I was and hung out with a circle of wild friends from his old neighborhood. In the beginning, my mom warned me not to associate with him. Then she and his mother became friends, and we started to have more opportunities to hang out. For the first few years, our circles of friends still didn't mesh because his group was much rowdier than my gang. Harrison started to settle down a bit, or at least abandoned some of his more self-destructive habits, after getting into a serious car accident after partying. He retained a wild streak but soon integrated into our group, and his outgoing personality and sense of humor were ongoing sources of amusement for us. Our gang already had a Steve (my brother), so we called him Harrison. Because he had his driver's license and a car, he often served as the driver on our escapades. Harrison went through cars like they were worn-out shoes—totally expendable and not worthy of care or repair. He sought out and bought large, old, American cars. Among many others, he had a Studebaker President and a 1960s era Pontiac Bonneville. Harrison took his cars on adventures and seemed not to care if they made it back. One time, he attempted motorcycle hill climbs in the Bonneville,

much to the shock and chagrin of the dirt bikers he scared off the course.² Although he later got very serious about road cycling, in his teens Harrison was notoriously lazy and, at one point, would drive whatever clunker he had at the time miles down Ventura Boulevard to a drive-through store to get cigarettes so he wouldn't have to get out of the car.

Aside from being ingenuous, Harrison was also highly intelligent, passionate and impulsive. When he embraced something he was very focused and committed, but when he got bored, he was done with it and would move on without looking back. Harrison and I became good friends; he ultimately moved to Chico shortly after I did and became the first employee at Sierra Nevada. Harrison was a vital part of our early success; his passion and dedication to the brewery motivated everyone around him.

I hit the peak of my rebellious phase right about the time Harrison came onto the scene, and my behavior was pretty reckless by the time I started high school. Other than my shop classes, I didn't enjoy school nor did I do particularly well in my classes. I rebelled against any and all authority figures. I came of age at the end of the 1960s and embraced the culture of the time, including engaging in activities that got me into trouble but ultimately also helped expand my worldview. By that time, the neighborhood gang had solidified,

²In hindsight, the neighborhood streets were full of oddball cars, none of which was considered a classic back then. Cal had an English Rover Sedan, couple of Studebakers, a Hawk, and a Lark that ended up being Greg's first cars. The Hungerfords had a Peugeot, as did my father. The families across from the Hungerfords collected Packard Patricians, and at the end of the street, there was an Edsel and Renault Dauphine. Eventually, they both came up for sale, and my brother almost ended up with the Edsel as his first car. He settled for the cheaper Dauphine, instead, which I was later, probably accurately, credited with lighting on fire. I started smoking cigars in high school and had a penchant for a morning Hav-A-Tampa Jewel, a small, lone-wood-tipped slim cigar. The Renault seats had lost much of their fabric, and the fine wood excelsior that was used as stuffing made the ideal fire starter. Presumably an ember from my morning smoke smoldered in the school parking lot until the car finally exploded into flames during first period. Sheetz was in a class on the school's second floor and witnessed the flames and fire engines; upon hearing it was a red Renault, he knew it was Steve's car.

and I was one of the youngest members. Most of the others were closer to my brother's age, so they had more freedom, which I benefitted from. By then most of them were driving, giving us the ability to explore new pursuits and the world outside our neighborhood.



NEW HOBBIES

Even though I had been exposed to photography as a child, it wasn't until later that my interest peaked. My Grandpa Lew had an old darkroom in his basement that we played hide-and-seek in as kids. We got a thrill out of running around the pitch-black darkroom. Both of my mother's brothers had a fascination with photography and had given me a quality, hand-me-down box camera. In high school Big John introduced Thumper and me to his old photography equipment, including some movie cameras, prompting me to buy my first 35-mm camera to take photographs and build a darkroom in my mother's garage.

Photography marked the beginning of our group's artistic pursuits. Although Harrison had lost interest in it, Sheetz, Thumper, Dan Young (another neighborhood friend), and I took a lot of pictures and started staging and filming movies. Being near Hollywood, we had access to great props left over from movies and musicals. At one point, MGM auctioned off costumes from *The Wizard of Oz*, and we managed to get hold of some of them. We briefly used them in films but found that we could have a bigger impact and more fun with our new treasures by donning the costumes and wearing them around town. We went to a local mall wearing horned hats and outrageous outfits, and Sheetz wore a big black cape and a black face shield. We strolled through the center of the mall, side by side in a row. We also took our performance art to school and were considered outlandish oddballs by the majority of students. Our outrageous actions confused our classmates, but we were pretty pleased with ourselves and didn't care what others thought. Some of our inspiration came from the Firesign Theatre, a well-known performance group that we had been

listening to on records and had recently seen perform at Pierce College. Their antics fit well with our craziness and inspired many stunts.

We also listened to KPFK, an alternative station in Los Angeles that had an all-night show that played music and live recordings from Jimi Hendrix to Buffalo Springfield. Some in our extended gang were into a more eclectic music scene and influenced us to listen to divergent recordings from to Captain Beefheart to Gustav Holst's "The Planets." We also regularly snuck into shows at the Valley Music Theater near our neighborhood, where we saw great bands, including Buffalo Springfield, Spirit, and Ike and Tina Turner, among others. We were also lucky that our friend Amir's mother's boyfriend owned a recording studio and let us hang out there after school. On one occasion, we were allowed to sit in the studio while Led Zeppelin recorded. Fortunately, I had my camera with me and took lots of pictures while they recorded the song "Whole Lotta Love."

As we were exploring new hobbies, Cal took a bunch of neighborhood kids on a trip to the High Sierra. After that I started going on extended backpacking trips with my brother and a group of friends. It didn't take much to convince my mom that we were probably less likely to get into trouble in the mountains than in the city. We usually trekked on the East Side of the Sierra, driving up Highway 395 to destinations like Bishop or Lone Pine to enter the Sierras at trailheads starting above 9,000 feet; the terrain became alpine very quickly. We hiked stretches of the popular John Muir Trail or went cross-country on knapsack trails, typically covering 10 to 15 miles a day, making camp wherever we saw fit. We usually spent a week to 10 days away, and because we had limited financial resources we discovered we could cheaply provision in Chinatown, stocking up on dried shrimp, noodles, and rice. With our Asian food discovery, we budgeted just over a dollar a day for food and generally ate pretty well. Freeze-dried backpacking food had recently been introduced. We would occasionally splurge on an item like a special dessert, but it generally remained well out of our price range. I made many trips to the High Sierra over the next several years with various members of our ever-expanding, eclectic group of friends. I loved the beauty and freedom of the mountains as well as the physical exercise. I was tired of living in Los Angeles and very much at home in the mountains.

Although most of our early excursions consisted of trail hiking and mountaineering, we did more rock climbing as time went on and occasionally climbed moderately challenging peaks. On one trip, I suffered a deep gash while descending a peak on the morning of the second day of a two-week trip. A thin flake of granite cut my calf muscle to the bone, deep enough that a finger fit in the gash. I had to hike out many miles and go to the emergency room in Bishop. It took hours to hike out and a few more before the doctor could see me and deal with the gaping wound. After the doctor stitched me up, I agreed to his request to rest for a few days before rejoining my friends on the trail. When I returned to the trailhead, I met up with a family who cared for me while my leg healed. They let me camp with them and had two daughters close to my age who took pity on me and took care of me while I recuperated. After a few days I felt ready to return to the trail; I was still a little sore, so the daughters carried my pack as I hobbled along. When I met up with my group a few days later, they were impressed with my traveling companions. It was a warm summer afternoon in the Sierra, and the two attractive girls had taken advantage of the remoteness and taken off their tops to work on their tans. When we arrived at camp, my buddies enjoyed my good fortune.



MY HOMEBREWING BEGINNINGS

Between hiking trips, I started dabbling in another hobby. I don't remember the exact day I made my first batch of homebrew, but it was sometime in the summer of 1969, between junior and senior high, when Cal became a little miffed by the regular disappearance of his homebrew and, for that matter, all of the other beverages we snuck out of his liquor cabinet. I wasn't 21 and couldn't yet buy beer, but older friends regularly stocked up on Spring Beer, a "fine" Pilsner brewed by the Maier Brewing Company of Los Angeles. It regularly sold for 89 cents a six-pack, but on sale it could be had for around \$2 a case in cans—much less than a case of soda at the time.

My first experiment in fermentation involved a batch of Welch's grape juice in a gallon jug in the closet with the intention of producing wine, but it tasted terrible. I was fortunate that one of the nation's best homebrew supply stores was only a few miles from my house. I purchased a rudimentary brewing kit with an open top plastic fermenter (really just a white plastic trash can), 5-gallon glass carboy, hydrometer, short length of plastic tube to fill the bottles, and a crude bottle capper. I spent less than \$25 for everything, but it was a big financial commitment for what was still an experiment for someone making \$1.35 an hour.

For my first attempt I used a simple recipe that called for malt extract, a small brick of hops, and packaged generic top-fermenting yeast (that's about all you could get at the time). I used Blue Ribbon Malt and a generous amount of cane sugar. Most of my early batches were strong because in the beginning, I focused my efforts on the Prohibition brewing mentality of alcohol production rather than brewing the highest quality beers. I did what any teenager would and hid my equipment in my closet. Of course my mother found it, but I managed to convince her that it was just an experiment and I wouldn't drink it. She was working long hours, taking care of three kids by herself, and was probably relieved that I was keeping myself busy. She was relatively accepting of my new hobby because it harnessed my energy and kept me out of the trouble I tended to find myself in. Plus, it made me happy, and she always supported my creative interests. Brewing allowed me to combine my interest in science and the natural world with my growing sense of nonconformity. I began brewing multiple batches at once, allowing time for aging rather than consuming them before they were ready. I moved my brewing operation out to the backhouse. Although my friends knew what I was up to (and were enthusiastic judges of my work), I did most of the brewing myself. My brother wasn't involved early on, but Greg Shubin, a friend and classmate of my brother and a member of our expanding gang, and Moeller would come over and help with some of the batches.

Even though homebrewing was technically illegal in the United States at the time, no one was aware of anyone ever being arrested. The

law that made it illegal was passed during Prohibition, and although home winemakers had their rights restored when the Volstead Act was repealed, no one had addressed the needs of homebrewers. US homebrewing supplies came mainly out of England because in the 1960s the British government made a big push to raise beer taxes and the British, being both frugal and fond of their pint, turned en masse to homebrewing. British drugstore chains got into the act and sold kits meant to duplicate popular styles and common brands aimed at average beer drinkers. The Canadian Wine Art franchise had also penetrated the US market, and stores popped up around the country that offered a range of ingredients and supplies for home winemaking and brewing. Lower-quality ingredients such as Blue Ribbon Malt Extract could be purchased at grocery stores, drugstores, and hardware stores when I first started brewing.³ Information about homebrewing was scarce, and only a few homebrew books were available in the US market; most had been written for brewers in the United Kingdom, where homebrewing had made more headway. The books were relatively simplistic and didn't offer much science or practical techniques to produce consistent homebrew.

On one of my visits to a homebrew shop, I stumbled across new books, Fred Eckhardt's *Treatise of Lager Beer* and Dave Line's *Big Book of Brewing*. I devoured both of them and learned a lot about European traditional lager brewing and techniques like dry hopping, the procedure for adding additional hop flavor and aroma to the beer as it ages in the fermenter. Line's book was eye opening about the science of mashing and brewing; until that point, little information had been

³The fact that grocery stores stocked malt extract had to have been a carryover from Prohibition. Many breweries tried to ride out the "noble experiment" by producing a wide range of ingredients in their otherwise shuttered breweries. Some turned to malt products that could be efficiently produced in their idled brewhouses, whereas others developed drinks that could run on their bottling and canning lines. Brewers marketed and advertised an array of syrups that were supposedly intended to be used in producing breads and sweetened baked goods; they were condensed pale malt similar in consistency to honey or molasses. Other products were closer to condensed brewers wort with the bitter hops added. I have to wonder how many cans of hopped malt extract actually made it into a loaf of bread during Prohibition.

available to novice brewers. These books prompted my foray into all-grain brewing in 1970. I kept of a log of all my brews, although I lost track of the records of many of my early experiments. With the tacit approval of my mom and help from my friends who were all willing tasters, I continued homebrewing through high school.



MOVING ON

The day I graduated from high school, I took off on a backpacking trip and skipped the actual ceremony. It seemed more fitting to celebrate by doing something I loved—hiking in the Sierra.

Shortly after my graduation, Greg Moeller and Greg Shubin were heading up to Northern California to check out the state college in Chico, and I asked them if I could catch a ride to the Bay Area to join some friends on a bicycle tour. I really hadn't decided what I was going to do after high school; I knew I wanted some time to explore the world and was sure I didn't want to start college immediately. I had nothing keeping me in Southern California and had some extra time, so I went along to check out Chico. Four of us (Moeller's girlfriend, Betty, also came) traveled in Shubin's VW Microbus. The trip was 500 miles and took almost 10 hours. We arrived late that night, but it was still as hot as hell, even in early June. It turns out that the almost unbearable summer heat is common—a trait that almost ended my desire to make Chico my home.

We found the cheapest hotel we could, and the four of us shared a room. The La Grande Hotel was right downtown, had no air-conditioning, and boasted only one bathroom down the hall. Betty flipped out when she found blood splattered all over the bathtub and toilet. No one slept much, if at all, and out of a sense of place, we drank warm beer and whiskey and laughed and complained our way through the night. Most of the La Grande's tenants were permanent residents; shouting, fights, and commotion went on all night. Checkout

was at six in the morning because they rerented the rooms to the night shift railroad crew.⁴

The next day we had a great tour of the community, and I fell in love with the small city. The population was around 30,000 people at the time, and when school was in it added almost 10,000 people, which certainly changed the feel from a small, sleepy town to one with a fun and wild side. Chico seemed like a much better home base than Los Angeles while I figured out what I wanted to do for the next phase of my life. So that day I decided to move to Chico with my friends and set off to try to find a job. I rode my bike to the three bike shops listed in the phonebook and got a job offer at the Schwinn Bicycle shop. They were looking for a mechanic, and I could start as soon as I wanted. With that settled, Shubin, Moeller, and I started looking for a house the same day. We found a five-bedroom house at the south end of town with two other roommates.

Having secured a house and a job, my friends dropped me off in Novato to start my next adventure—a bike tour with Bill Hungerford that would take us from the Bay Area up to Ukiah, over to the coast and down Highway 1, over the Golden Gate Bridge and down to Santa Cruz, from where I had arranged a car ride back home to the San Fernando Valley. The two of us planned to start out alone in Novato and connect with some other friends along the way. I called home and told my mother that I was moving out in two weeks when I returned from my bike tour. She was sad, but she knew she had to let me go. Some people objected to the fact that I wasn't even 18, but my mom believed I should be allowed to make my own choices.

Bill and I had a fun and challenging ride north to Ukiah. Even though I was only 17, I had a full beard and looked a bit older. We took advantage of that and stopped at several wineries along the way. On our way along Highway 1, we stopped for lunch at a small restaurant

⁴Back in those days train tracks went through downtown Chico in the middle of Main Street. I was shocked the first time I saw a train go through town. We tried to play a brief game of chicken on our bicycles but realized how easily the tire could get stuck in the tracks; the odds wouldn't have been in our favor had we fallen.

along the coast, where I saw my first bottle of Anchor Steam Beer. Anchor's owner, Fritz Maytag, had only recently started bottling and distributing his beer. When he purchased Anchor Brewing Company, it had been producing a very limited amount of draught and had never previously bottled. It took Fritz several years to upgrade the brewery and refine and improve the beers' stability, let alone purchase and install a packaging line. I got into a conversation with the bar owner about homebrewing because he was a homebrewer himself and had just started carrying Anchor Steam Beer. I was excited when he offered me a bottle because I had heard about it from Cal Moeller but hadn't had the opportunity to try it yet. My first sip was memorable and an inspiration for any aspiring homebrewer. It was a style of beer I loved—lots of hops and malt, and unlike any commercial beer I had ever tasted. It was close in style to the type of beer I liked to brew; it was good to discover that there was interesting American beer out there.