fe and Times of a Lucky Tekkie

This an update for an image intensive family and travel focused auto biography (Leighton's Voyages of Discovery) written during the Covid pandemic in 2020 and commissioned by my daughters for assembly by a professional graphic designer. I have written it as a stream of consciousness diary to highlight my self designated lucky tekkie persona, and being lucky enough to live during a period of tremendous technical developments when I have encountered so many shakers and movers. I am also compensating for advertising myself as an underachiever within my Princeton Class of 1966. which features many leaders in their chosen fields. Not bad for a class that graduated mostly doctors and lawyers, but included many All American athletes, contributing to Princeton's reputation as the undisputed jock school in the Ivy League. All things considered, in the final phase of my life, I am thankful for having lived a satisfying and full life which was extremely eclectic.

Cambridge MA, Peking, Arlington MA and Santa Monica CA 1945 -1961

I was born an ABC (American Born Chinese) in Cambridge, MA and named Leighton after my godfather John Leighton Stuart, founder of Peking University (now Beijing University). Leighton is also is a chinese translation for year of peace when World War 2 was about to end. It also has old English roots, with Leightonward being a gardener; My luck was being born ahead of the pig in the python baby boom, which precipitated the American global hegemony and unprecedented post war prosperity. It was also my good fortune to have a father who rose from poverty to become the most prominent scholar of Chinese Buddhism of his generation. While my father served at the Harvard Yenching Institute in Peking, the Chinese civil war raged, and we were lucky enough to have been evacuated before Mao Tse Tung overran the country. Mao blasted John Leighton Stuart in an infamous letter, but Stuart's longstanding service to China earned him the gratitude of the Chinese peoples and government to the extent that the Communist Party chairman Xi Jinping attended the dedication of his family residence in Hangzhou a few years ago.

I attended a conveniently located Catholic school and was bullied by ethnic Irish and Italians, constantly being called Ching Chong Chinaman. My closest friend was Paul Welton, who helped me get a paper delivery route in Arlington, in which I delivered the Boston Globe on a bicycle. I did have a serious crash on the job on my hilly route, which left a lifelong scar on my side, but foreshadowed developing thunder thighs for future bicycle racing endeavors. Athletically I had minimal success as a pitcher on a softball team. My boy scout experience was mixed with my drive to accumulate multiple merit badges, but I was regularly bullied physically by the troop's leaders. It did have the effect of me developing a stoic personality with no really close friends during my childhood. Tekkie wise my favorite hobby was building model airplanes and ships from Revell and stringing them to cover my bedroom ceilings. I also built fancy roller coaster configurations of railroad tracks from my Lionel train collection to roll marbles.

Moving to California was godsent with no racial discrimination in Santa Monica, where I flourished, joyfully running long distances on the beach, and playing high school football and track and field. I also body surfed extensively right off the world famous Santa Monica pier. My crowd included the daughter of a French diplomat and a running companion who was a chick magnet. My first girlfriend was the daughter of a UCLA film professor who lived in Malibu. I got a the sympathy vote to win a class officer position when I froze completely on my campaign speech in front of my 1000+ classmates. I studied with a charismatic Latin teacher Bernard Roberts in high school, and learned Russian in an extra curricular experimental class he inaugurated. Developed crush on Dorothy Berger, my high school Biology teacher, and also on my gorgeous desk partner, but couldn't date her because she was always busy with a very successful dancing career. Her favorite ploy was tying up my shoelaces behind my back. I was granted a NSF scholarship to study chemistry atnd geology at the Colorado School on Mines in Golden, CO, we shared the dining hall and dorms with the AFL's Denver Broncos in their preseason training camp.

Sadly, my family left Cali when my father joined the faculty at Princeton. I originally saw Bill Bradley play freshman basketball during my senior year at Princeton HS, and was motivated to pick Princeton to watch him play. He went on to win a Rhodes Scholarship, Olympic and NBA championships and serve as a NJ senator. At Princeton HS, I was rejected for the honors chemistry class after transferring from Santa Monica HS, but made the case I should be able use the same textbook as I had started off with in Cali. They eventually relented and I ended winning the prize as the top chemistry student in the class. Princeton chemistry professor Charles Phelps Smythe wrote a nice recommendation after I scored an interview with him to review a high school project. My ultimate revenge against was not attending my graduation ceremony, even though they threatened to withhold my diploma, but I had the Princeton admittance in my pocket, and it would have been a bad read. Again my tekkie persona had me join a Princeton University affiliated rocket club where we sent modified pipes aloft. My hope then was to become an astronaut in the space program.

Princeton 1962-1966

I was luckily admitted and lived across the street from Palmer football stadium. At Princeton I was marginalized subtly, and had one bid in bicker for the eating clubs, which I rejected since the cycling team homed in in the newly created Wilson College alternative dining option and allowed us to roll in late after dining hours and feast with our bikes in the dining room. It also allowed me to have a single dormitory room in 1937 hall, which I preferred after rooming my freshman year with Gregg Rice, from Vineland, who was the other NJ grant winner at the Colorado School of Mines. Wilson College's dining hall also was where the first female cohort enrolled as part of a Critical Language initiativedined . Also we were able to invite many prominent faculty professors to dine with us, and I particularly enjoyed many conversations with Norman Itkowitz, a prominent scholar of the Middle East affairs.

Athletically, I played a lot of pickup basketball at Dillon Gym, across the street from my freshman dorm, hit tennis balls against a practice wall, and high jumped in a dirt pit. Did 150 lb football, lightweight crew where I was recruited by Al Povey, the coach for the cycling team. Trained extensively over a winter in the bowels of of Dillon gym and launched a successful racing career training with

three time Olympian John Allis and track Olympian Alan Bell, as well as Mikk Hinnov, who came in 2nd in the Somerville race, the premiere domestic bicycle race at that tine . Crashed out in that race my senior year, but nevertheless dominated that year in collegiate racing, winning the national collegiate individual championship to go along with being on national championship team for 2 years. Notoriously nicknamed the "Orient Express" by the competition, with one Yalie rider even on record as his only life goal was to beat me in a race. He never did. Princeton supported the team financially and provided Dillon gym. Taking advantage of an obscure "rule," all the team members on our National Championship teams were awarded Varsity letters, which was almost unheard of for a club team. Throughout my time at Princeton, the cycling team was sponsored by Fred Kuhn, who owned the Kopps Cycling shop, the oldest bicycle store in the country. He donated equipment gear to me and arranged for me to get a custom English Hetchins bike, that is considered a classic amongst afficiandos as the Rolls Royce of racing bikes. It served me well, all decked out with the latest state of the art parts. Princeton hence set me up for a lifelong sport, which I carried through the mountain bike transition, and extensive European bike trips with tour operators catering to hard core riders.

Tekkie wise – Princeton installed a brand new IBM 7094 in the engineering quad, and I enrolled in a voluntary Fortran programming course being offered to students to entice interest. We educated the operators of the need to put time limits on our submitted programs for overnight processing, as inevitable infinite looping programs canceled the running of all subsequent programs waiting. Extracurricular wise, I lasted one year before being cut from the University Press Club, where I was a stringer for many local papers, and got to cover the glory years of Princeton football and basketball. I did refine my writing skills though, which helped me immensely later. I was also a manager for the track team, a sound engineer for Princeton's WPRB radio station and ushered all the interesting stuff at McCarter theater, being able to usher there anytime I wanted, and even had the keys to Dillon gym to attend anything else from being on the Cycling Team who needed access for our early morning departures from our biking room there. Finally I was a regular winner for the Music Department's lottery for free opera tickets at NYC's Metropolitan Opera House, helped by its obscurity amongst the male population of the undergraduate body. Academically I entered Princeton as an Aeronautical Engineering candidate, but got annihilated by the required Math, Physics and Chemistry freshman work load and a sophomore course to calculate shock waves in weird pipe configurations for an infamous weeding out professor, I retreated to a major where I knew I could succeed … chemistry. My options for post graduation were to study oceanography (had senior course with Harold Hess, who pioneered continental drift theory), but realized my sea sickness would hinder such a career. Princeton discouraged continuing grad school there, but it was just as well as I had already taken at least 4 grad level courses there as an undergraduate. Rejected by UC Berkeley and Harvard, but accepted at Wisconsin. Had a Vietnam avoidance backup plan for my risky draft lottery position in place by making an overture to join John Allis on the Army's Special Service cycling team, but my grad school exemption funded by a NSF grant allowed me to go to Wisconsin, which worked out well. My successful cycling also motivated me to try to make the national team for the 1966 World Championship held late that summer at the famous Nurburgring F1 racing track in Germany. To kill birds with one stone, I enrolled at the Goethe Institute to study German in preparation for the foreign language requirement for PhD students (advanced competency in one language, or minimal in two). Shockingly I did well enough to pass ETS's German exam at the advanced level, and was actually pretty fluent orally at the end of the summer, though I pretty much lost all competency in the

following years due to unuse. Racing wise, at the Goethe Institute I linked up with a young Swiss banker who was a talented bike racer, Giancarlo Ghillioni, who subsequently became a life long friend, each visiting each other at our homes in Lugano and Marlboro, NJ. He was a great training partner and plotted out our training routes along the Rhine River and up the switchbacks to the top of the riverside plateau, where we would regularly beat the trucks going uphill. He was very frustrated when he would crush me on the training rides, but I would return the favor by doing better in the races. We joined a local racing club which got us to the local races. Giancarlo and I were infamous at the Goethe Institute for being able to down over ten Brodchens (German croissants) at breakfast everyday to fuel our cycling workouts. I did well, winning one race where Giancarlo and I broke away on a hilly course, but he dropped his chain and was left behind, leaving me to contest the last lap with a local German. I managed to drop him on the last climb and solo in for the win. Giancarlo kept up with the sport and was a director sportif for a British world champion racer. My best ride was in an international race where I got into a four man breakaway with three other Europeans and covered the first 100 kilometers in 2:07, which would have won most of the prior Olympic 100 kilo team trials. Despite these successes, I was not picked for the World Champion team at the Nurburging, but did get to the F1 race that year, and to this day race the complete course virtually on my PC's F1 simulation in a virtual vintage F1 racer with all the relevant technology of those glory times and all the famous F1 tracks such as Monaco and Monza.. Finally taking advantage of my love of Richard Wagner's operas, I was able to score tickets for 2 operas at Bayreuth, the legendary performance venue for his music. I boarded a train and rode the last 40 kilometers to Bayreuth and stayed there, where you can have dinner during the last intermission for his looong operas. In summary, I feel that Princeton taught me the survival skills in a competitive environment where I lived a monastic nerdy life.

Madison WI and Buffalo NY 1966-1974

After graduation I proceeded to the PhD program in Physical Chemistry at Univ. of Wisconsin at Madison, where I met Kay while ushering at the Wisconsin Union, which I did at McCarter theater at Princeton. Survived the comprehensive exams requirement to stay in the PhD program, with the help of my major professor, Daniel Cornwell. We worked on an obscure molecule proving quadrupolar coupling in a gaseous low temperature space. Subsequent modeling and simulation software was utilized to prove the thesis. My research tool was the Nuclear Magnetic Resonance spectrometer which used computer tomography to analyze the data output. This technology eventually rose to prominence as Magnetic Resonance Imaging, a renaming because of the negativity of all things labeled nuclear. I can claim to be an early adopter of the technology that has driven so much progress in medical treatment. My research also broke new ground in applying linear algebra to multi vector matrices to statistically analyze our experimental data in collaboration with UW math professor Ben Noble.

We had our lab right next to the Stirling Hall bombing 1969. Madison was a hotbed for the resistance to the war, and I marched in the antiwar protests to the capitol taking many photographs. Kay and I were tear gassed at a McDonalds during that time, and we attended the Gene McCarthy rallies at the Dane County Colosseum. I almost accompanied a fellow grad student to Lincoln Park for the 1998 Democratic Convention, but predicted there would be violence and did not go. My friend was bloodied and radicalized. After

getting his PhD, he spent a year at Bell Labs then left the country to work in Germany. Dan Cornwell was married to a chief advisor to Wisconsin's senator Gaylord Nelson, and our presidential election watch parties were memorable. I kept up with Dan and my fellow grad students, all of whom did well. Racing wise, not so well, as I lost the support of all the strong teammates at Princeton. I walked around the first few days with a Campagnolo racing bag as a book bag and quickly was joined by Rich Hammen, an organic chemistry married grad student out of Stanford. We trained extensively together to this dismay of his wife, and they eventually divorced. Hammen did eventually opt out and became somewhat infamous for riding his bike around the country dressed in Red, White and Blue as Captain America. Dan Cornwell surprisingly tolerated my feeble attempts to stay competitive in cycling with long training rides at the expense of studying and lab work. We just couldn't successfully compete against the Chicago club teams dominated by German sprinters working together. Both of us weren't strong sprinters, so we never so much a placed, and frequently were dropped in the 50 mile criterium street races on the racing calendar. Nevertheless we did form a racing team in Madison which we cheekily named the Two Tyred Wheelman. It proved to be tremendously successful after we both left Madison, recruiting the primarily Milwaukee based speed skaters, who discovered that cycling complemented their winter sport's racing well. They got Beth and Eric Heiden, both of whom became national pro and Olympic champions, as well as placing at least one other rider on the Olympic team. My biking skills unfortunately didn't translate to any speed skating abilities, although when we moved to Middleton a few miles from Madison, I was able to skate to campus on a frozen Lake Mendota. Kay and I will always treasure our time in Madison, which has frequently been named one of the best places to live in America. While waiting for me finish my dissertation research, Kay had a position at the University of Wisconsin's Primate Center, a national leader in rhesus monkey research. We took full advantage of the Hoofers Outing Club, with me courting Kay on a bus trip to the newly opened Vail resort and visiting Giancarlo in Davos and Courmayer. Also domestic ski trips to other top resorts such as Aspen, rock climbing a Devils Lake, and sailing Tech Dinghies and larger boats on Lake Mendota.

After finally getting my PhD, I went to Buffalo as a non tenured adjunct faculty in the chemistry department to run the chemistry lab and teach introductory chemistry. Enjoyed the teaching gig, as I had good students, and even had a Miss Wisconsin in one of my classes. Kay was happy to be close to Rochester, where she was able to play at Kodak's badminton facility, which had a famous national champion there often.This was during the gas crisis, and we frequently went to Canada for their buffets and duplicate bridge tournaments. Kay and I started playing together after our marriage in 1970, helped by my roommate Jerry Shen, a fellow grad student in Cornwell's group. Madison had many good duplicate bridge players, and we were lucky to be mentored by Bill Fox, and we both accumulated points toward becoming a life masters. We played regional tournaments with Steve and Sara Tyer, a life master couple and managed to win a few of them and getting a good reputation.

Greensboro NC 1974-1977

After the SUNY gig was up, I was unemployed, since the times were bad for PhD chemists, with most settling in for extended post doc positions. I was rejected by everwhere I applied including academic positions and national labs. So we took advantage of the

summer to road trip out west for the national parks, and got the word that Lorillard Labs in Greensboro would interview me. Their director was from SUNY Buffalo, so he was the difference maker. Got the job, so in spite of Lorillard being a cigarette company, I had no alternative. All in all, did well at the company as a research chemist with my major contribution being to use the tobacco drying process to put more air in the leaf so they could use less raw material and more air in the cigarette eventually manufactured. Also did other morally indefensible things like writing papers to say that second hand smoking by non smokers in well ventilated inside facilities were not a health hazard. Also with my office mate Ray Knighton, we built a device with a radio transmitter and thermometer to embed in the tobacco stream drying process. After a few initial runs, it was hijacked and hidden by an old timer who didn't like us intruding on his watch/line and management never found out. Ray had come from AT&T and later left to work in Florida in the space program. We kept up and scuba dived near his home at Crystal River.

This was the time when the personal computer took off, and I bought the Apple II when Steve Wozniak invented the first portable floppy disk drive for mass storage to the PC, replacing the tape drives being used early on. Actually was in the elevator with Steve Jobs at an early Applefest in Boston, but didn't get more than a congratulatory fanboy pledge before I was cut of by the syncophants in his force field. I became a group leader in all things computer for the lab, and had one of my employees build a hard wired circuit board with PC like capabilities. We acquired the first Microsoft Basic interpreter in machine language to program that board. Bill Gates had appropriated the technology from another Seattle based startup, and that was the beginning of the eventual Microsoft success. My group was responsible for using the other new kid on the block, Digital Equipment's PDP-8s, for laboratory automation. Besides my home Apple, my work's PC was a PDP-12, which used a paper reader to boot it, followed by entering octal code to load the tape drives to run programs. It became popular as a biorhythm reporter which the employees liked, but its heaviest use was to automate the running of the premiere tobacco research conference. I am not proud that my sole invention award of a U.S. patent for an an otherwise useless calibration device in service to legitimize tobacco research and the company's reputation.

We bought our first house in Greensboro with a mortgage of $133./month and celebrated Christine's birth in 1975. That event shut down our duplicate bridge tournament playing. I had already become disillusioned with tournaments because of the rampant cheating and the ability to buy a life mastership by players hiring professionals to partner them with minimal participation. My parting gesture was to quit the game completely with less than one point needed to achieve that life mastership. I did however did play long enough to give Kay the bragging rights of being the only life master in our family. I got along great with my Lorillard boss John Wagner, a true Southern gentleman, whose side hustle was being the leading local snapdragon grower. I especially enjoyed woofing down the North Carolina vinegar based barbeque pork pit cooked in 55 gallon steel drums outdoors. Only possible in rural locations due to its air pollution now. This delicacy was best finished by peach cobblers. My other foodie delight was the fried oysters from Libby Hill. Nevertheless, working for a tobacco company preyed on my social conscience, and I was looking for a way out, especially after my office mate left. Kay did keep busy working briefly at a Center for Creative Leadership and then scoring a computer science teaching position at Guilford Technical Community College in Jamestown, NC, which contributed to being hired by Bucks County Community College when we moved to Pennsylvania for me to accept a job with Betz Laboratories. Just prior to leaving Greensboro,

I had the misfortune of being named the foreman for a homicide trial as the rest of the jury knew I would be leaving town, and didn't want to face the repercussions of a guilty verdict. We convicted, but the trial was memorable in featuring a classic Clarence Darrow like defense attorney who passionately argued that the case was a justified self defense by the bullied defendant.

Newtown, PA and Marlboro, NJ 1977-2001

Betz Labs was a specialty water treatment company based in Trevose, PA and was later acquired by General Electric after I left them. I was hired as a research chemist and my computer background quickly got me assigned to modeling and simulating process streams to minimize scaling in water pipes and corrosion in oil pipes. This took me to paper mills and oil refineries across the U.S. and Canada and awakened a love of traveling in me. Betz treated me well, promoting me rapidly to lead multiple groups. My publications in industry journals scored me an invitation to the prestigious academic Gordon Research Conference to present a paper at Plymouth, NH. My boss Phil Davis was transferred to Houston and wanted me to accompany him. We even bought land in preparation for that move, but he ended up going to Jacksonville, and we backed out of moving to Texas, a lucky move as far as I was concerned. Too many snakes in the backyard. I was a shameless software pirate and built up my software collection, attending Apple computer clubs in Philadelphia to exchange programs such as the first appearance of the Visicalc spreadsheet, which got rapid adoption by financial weenies and contributed heavily to Apple's early growth. Of course, the most sought after were the early games such as Space Invaders, PacMan and Tomb Raiders. Kay even achieved high national scores on some games and frequently overran the point count buffers for the 8 bit CPUs of the day. She won a Tee shirt at the Trenton Computer Festival, an early must attend venue for early PC devotees.

My Princeton background and my computer chops got me an interview with Bell Labs, the holy grail for tekkies at that time. They were hiring after the courts forced AT&T to divest its local monopolies into seven Regional Bell Operating Companies. I interviewed entities from two of them, but chose the original classic AT&T Bell Labs, primarily because I would work for a Princeton PhD in math, Charles Stenard. He was a talented cellist, and would eventually play a concert with Kay, but his movie career never materialized when he was left on the cutting room floor in Walter Mathau's Einstein IQ movie in 1994.

Initially I chased government Request for Proposals as a system integrator, and led a partner acquisition team allowing me to meet early imaging leaders including Pixar and Silicon Graphics and weather experts at NOAA.We lost the bid to Ross Perot, who won the contract by conducting secret meetings with the U.S. weather bureau and putting them on EDS payroll. Fittingly EDS never made money with their win, as the Internet subsumed everything with Accuweather by providing public access to the NOAA weather products for free. My government assignment took me to Livermore National Laboratory as well as the US Air Force Logistics Command in Dayton, OH as a systems integrator. Bell Labs employees were instrumental in evangelizing email with UNIX mail, social media which culminated later in Facebook, special interest groups and file sharing thru the Usenet, and video gaming with Space Wars.

I developed a reputation for having a great bullshit detector in meetings where people constantly strove to be be the smartest guy in the room. Useful when my future assignments sent me to meet many start up tekkies to make decisions as to whether Bell Labs should partner, do a joint venture or acquire them. I learned just enough from a stint at the Kellogg School of Management during a summer to get a micro MBA, where I was sent to develop financial wisdom and be able to ask penetrating questions. My favorite was ask these startups what their exit strategy was, which told me a lot about their future prospects.

After my stint doing work to support AT&T's partnerships with the government, I was lucky enough to lead the Bell Labs Visits Program which hosted top executive tekkies from Fortune 500 companies brought in by our aggressive sales teams as a reward for their allegiance to AT&T. It developed my shmoozing skills and enabled me to interact and invite the technical wizards at Bell Labs for presentations to customer top management. The visits program featured a world class cutting edge demonstration lab which evangelized the inevitable Internet tsunami with demonstrations of virtual reality (crowd pleaser was a walkthru of Pompei before it was leveled developed by a Carnegie Mellon team), telemedicine and education over a broadband network. We had the best connectivity for the Holmdel NJ location, because we built a rogue T45 private line to the Freehold NJ network switching facility. The program also hosted a generation of the top Chinese communications tekkies which they leveraged into leapfrogging the U.S in cell phone adoption by building out a router based network. AT&T was hampered by its legacy network based primarily on fixed dedicated private lines. I was part of the change agent crowd at Bell Labs agitating for the use of packet switched Cisco routers and Asynchonous Transfer Mode switches. We also helped a Carnegie Mellon startup Fore Systems by having their top switches in our lab which gave them the exposure to be acquired by Cisco, which contributed to their future success. We also had a huge Digital Equipment presence in our lab with their VAX computer line, which made the Bell Labs wizards at Murray Hill jealous because that product led the market with their UNIX flavored BSD operating system at the expense of AT&T's UNIX V operating system. My engineers also developed a preference for the UNIX like LINUX operating system on smaller hardware, which Microsoft and Google exploited fully to power their distributed networks with multiple circuit based CPUs mounted as frames and depended on software to ensure reliability. Another real benefit of directing this lab was my ability to appropriate the N minus 1 generation of hardware to take home when we upgraded our demo capabilities to the latest and greatest.

East Windsor NJ 2002-present

If nothing else, my Bell Labs career was eclectic and exciting and some of the interesting assignments I had included:

Led team which developed and tested utilizing Feature Group B to enable location based services to Dominos Pizza to enable faster deliveries and faster approvals by the leading financial Point of Service credit card transaction devices.

Responsible for the compilation of every significant hardware element used by AT&T in their network. This database enabled AT&T engineers to identify single points of failure to ensure the reliability of the entire network.

Led team to develop the new virtual library for AT&T Bell Labs, when Lucent inherited the corporate library during the split from AT&T. This allowed me to visit Microsoft and Google during the early days of the Internet as well as leading academic libraries who were struggling with how to operate in the future. Became a villain to the content providers like Lexis Nexis and Dow Jones who charged exorbitant user fees for access to their content. I demanded new pricing models with enterprise wide contracts with the right of free redistribution within the company. I was lucky enough to reject the offer to lead the new AT&T Library because of my lack of any experience in the field.

While working for the office of President of AT&T Bell Labs Dave Nagel, who chose to live in Silicon Valley rather than come to NJ. Became his eyes and ears in the east, as a strategic partner manager for the IBM and Lucent technology relationships, AT&T's largest customer (and vice versa). I was also heavily involved with the strategic partnership with British Telecomm as part of AT&T's international push, resulting in successfully building up AT&T's European telecommunications coverage. I participated in many debates on being on whether to be on the technology bleeding edge or be a fast follower and where the intelligence in the network should reside at the server or client side. My major contribution to the office was to write pithy one page summaries on emerging technologies. Here my year with Princeton's University Press Club served me well, knowing that top executives would not read anything longer. All in all, my writing skills were paramount to any success I had in these endeavors. Another takeaway which enabled me to be put into leadership positions was not to be the loudest voice in a meeting room, but quietly work behind the scenes to construct win-win solutions cultivating political alliances. It was my belief that the technical decisions that had the best outcomes were ones where all the hard work and prep were done before to reach consensus. Another successful tactic I always communicated to my mentees was to control your destiny if possible by having great bosses, and proactively avoid bad bosses. I was wise enough to know my limitations about not rising too high in the managerial hierarchy in a corporation of ambitious employees. Since Bell Labs depended on the business units to fund their work, I had no interest in any promotion to a level where the majority of time was spent on fund raising. Toward the end of my career, I was lucky enough to be able act pretty much as an independent internal technology consultant with hardly any micromanagement overhead. My reputation even allowed me to represent Bell Labs at a weeklong prestigious Futurist conference interacting with the leading technology savants of the day at the Asilomar Hotel and Conference facility outside Monterey. Befitting my self delegated role in the President's office as a technology consultant, I was charged with competitive analysis and worked with leading outside telecommunications consultants such as RHK to evaluate market shares and trends and be be invited to annual industry readouts San Francisco, Scottsdale and Silicon Valley. That was actually quite fun.

I was privvy to many of the decisions made by the top of the house at AT&T, which included the Indiana dominant leadership which championed core midwestern values with then CEO Charley Brown telling the obvious CEO designate that he would never become that when he was found to be maintaining a lover at company expense locally. In 1996, John R. Roberts from RR Donnelly & Sons (AT&T's Yellow Pages publisher) was hired as a President and COO for AT&T and designated to be Robert Allen's successor as AT&T's CEO. Challenged technically, he only lasted a year as he could not get along with the sales teams. C. Michael Armstrong was

designated CEO in 1997 and tried to remake AT&T into an IBM like technology behemoth but was thwarted by AT&T's fossilized leadership, leaving in 2005. It was a classic demonstration of the meme of culture eats strategy for breakfast everytime.

Then there's the history of mergers and acquisitions. Bell Labs was complicit early on with a paper adopted by top management predicting that the market for cell phones would never amount to much, and didn't capitalize on its early advantage. When AT&T acquired McCaw later, it was too late. There was the acquisition of NCR who dominated the cash register market, but was found to be not a good fit. There were the overtures at our Visits facility to acquire Apple, which failed by just a few dollars. This was after Steve Jobs was ousted. If the acquisition had gone thru, AT&T would likely have gutted Apple so there would not been anything for Jobs to come back for and subsequently build into the behemoth it became. AT&T also had multiple opportunities to acquire Cisco during its infancy, but was thwarted by the switch crowd wedded to the legacy network. Cisco then emerged as the leading technology provider which birthed the Internet. AT&T also lost bids to build out the first national Internet infrastructure offering up the use of its restoration private line circuits but lost to an acadenic consortium led by the Univ. of Michigan built around packet switching routing technology utilizing Cisco.

In 1997, AT&T acquired Telecommunications, Inc., then the largest global cable TV provider and named Leo Hindery as the CEO of AT&T Broadband. In 1999, that entity merged in a $72 billion deal with Comcast, who is now the largest pay and cable TV company, the largest home internet provider, and the nation's third-largest home telephone service provider. Finally, the crowning irony of the court ordered divestiture of AT&T in 1983 was the fate of two of the two divestees. NYNEX became Bell Atlantic, acquired GTE in 2000 and became Verizon, now the leading wireless service provider in the country. Southwestern Bell acquired AT&T in 2005 and rebranded itself as AT&T.

I was part of the Bell Labs crowd which evangelized Voice over IP, and eventually was adopted when top management finally saw the light. Ultimately my career at Bell Labs cannot be characterized by any great creativity, but provided me with plenty of excitement given the opportunity to rub elbows with world class tekkies of my generation. I fancied my role as an early adopter and evangelist of emerging technologies and a change agent. I fear for the future because of the law of unintended consequences that the Internet has wrought with global polarization into tribes and hope that the current mania for an Artificial Intelligent world might not end well. When reminiscing about my Bell Labs experiences with its widely dispersed diaspora, many in Princeton, I remark that I worked there when it mattered. I got there just after the court ordered divestiture, and saw it transition from a corporation focused on engineering and research excellence to being marketing driven by near term profitability. It was sad to watch the inevitable slide in relevance and the impact it had on the managerial behavior focused on survival. Fortunately I had positive interactions with just about all of my management, colleagues, employees and mentees, I couldn't ask for more.

I was lucky enough to take the best buyout package ever offered, foregoing multiple stock options which never rose above water. I was also lucky enough to sell our Marlboro residence profitably before that housing market briefly crashed, and that the years post retirement era were mostly characterized as a prolonged bull market. My low risk decisions to focus on index funds, ETFs and fixed

interest annuities with due diligence to asset allocation allowed my family to build financial independence, driven by my auditing of renowned Princeton Professor Burton Malkiel's course on investing, which had guest lectures from Vanguard's John Bogle.

Outside of my work life, I can identify with Forrest Gump in being lucky enough to been around celebrities and significant historical events:

Short summer stint as a reliability analysis engineer fir the Apollo Space Program which landed a man on the moon while doing a summer internship at Douglas Aircraft in Seal Beach, CA. My assignment focused on a valve on the Saturn IV-B stage of the launch vehicle.

Wondering whether to complete academic assignments during the Cuban missile crisis at Princeton, and the subsequent trauma with Kennedy's assasination.

Actively supporting the peace movement during the Vietnam anti war demonstrations, lucky enough to not get arrested or drafted. Shook hands with President Lyndon Johnson on the Princeton campus in spite of his Vietnam War policies.

Within a couple of feet of President Gerald Ford at the Guilford Battefield Historical Park in NC, but blocked b;y his secret service detail

Hero worshiped Lance Armstrong when he was crushing the competition at the Tour de France and passed within feet of me on one his winning races on an Alpine stage when I joined a hard core group to follow the race. He was stripped of all his Tour titles for doping, but the reality was that all riders then were guilty, and no one else replaced him as designated winners. He was also on my pedestal for his cancer survivor advocacy, but fell from it because of his arrogance.

Told Chrissy Evert that my daughter was named after her at the Copper Mountain ski resort when she was married to Andy Mill.

Had a great relationship with Tom Christiansen, a former Assistant Secretary of State for Far Eastern Affairs, who led the China and the World program at Princeton. I audited all his courses and was regularly invited to his post lecture dinners with prominent diplomats (including leading mainland Chinese) and domestic China experts. This enabled me to engage with like minded folks in the Princeton community and establish a circle of close friends. Another Princeton faculty friend is Anne Cheng (audited all her courses), a long time advocate for Asian American studies at Princeton, author of numerous books on Asian culture, gender studies and Josephine Baker. She routinely teaches some of the most popular courses on campus.

Rubbed elbows with Brian Kernighan, renowned for his seminal co-authorship of the first textbook on the UNIX programming language. He was a popular speaker at the Visits Program, and contributed to the growth of Princeton's computer science department to attract the largest number of students to that major currently.

Friendship with Lanny Jones, a fellow 1966 classmate, and is acknowledged to have brought the “baby boomer” designation into public awareness. He is the author of numerous popular books and was responsible as chief editor of People and Money magazines.

Opportunities to attend lectures and even brazen enough (rarely) to ask questions at Princeton with many of Princeton’s Nobel Laureates including Eric Wieschaus (audited his class), Ben Bernanke, Paul Krugman, Daniel Kahneman, Eugene Wigner, John Nash, Kit Thorne, Toni Morrison, Arno Penzias, David MacMillan, Frances Arnold, Michael Spence, Daniel Kahneman, and Maria Ressa.

Short lived post Bell Labs consulting. I had a brief stint joining Rich Skibo, a former Bell Labs colleague at his startup Princeton Nanosystems Technologies startup and chased government contracts for the war on drugs and remote detection of improvised explosive devices used by the bad guys in the mideastern wars. It was interesting work, but the lucrative compensation did not offset the hefty tax burden imposed making it less attractive. At least I got to travel to some interesting venues for that work.

I have to acknowledge our family’s luck with Princeton. After not really engaged other than following its athletic successes, I finally started attending reunions with my class, starting with my 40th. This was motivated by Christine’s acceptance into the Class of 1997, and later by Stephanie into the Class of 2009. While legacy admissions continues to be controversial, it certainly impacted my family and led both daughters onto career paths where they have prioritized working for non profits and environmentally conscious organizations. They both leveraged their positive experiences at Princeton in the arts to the extent that Christine had a highly successful decade as a professional dancer. My gratitude is such that I am giving back in establishing an endowment to ensure the viability of Asian American studies in the future My other technology contribution included performing Webmaster duties for the Class of 1966 website. Going forward, there will be future interactions with the Religion Department at Princeton with Professor Bryan Lowe executing on a Princeton Histories project honoring my father’s significant role in establishing Buddhist studies at Princeton., culminating in an academic symposium in the spring of 2026.

Impact of Medical Technologies

Retirement was motivated by a prostate cancer diagnosis in 2000. The cancer metathesized in 2018. I had the advantage of medical advances driven by technology After a radical prostatectmony in 2001, I cycled through the classic gold standard treatment options of radiation, vaccines, hormonal deprivation, second generation androgen receptor signaling inhibitors and chemotherapy. As part of volunteering for a Princeton neuroscience research project, I underwent a functional MRI (fMRI) brain scan and was told I had the neuron plasticity of someone 20 years younger. After getting my PhD, I was rejected for a post doc with Raymond Damadian who championed use of NMR medically on humans, but was ridiculed by the scientific establishment. Eventually much of medical diagnosis today depends on these scanning technologies

After an orthopedist told me I would never be able to play tennis or ski again after torn meniscus from white water rafting and accumulated mileage from cycling, I fired him and eventually got replacement knees on both legs, and regained some semblance of

my previous fitness, even adding ping pong briefly to my athletic portfolio. I gave up skiing a few years ago because of the fear of falling from snowboarder incidents. My tennis playing buddies in my development were kind enough to deliberately put their shots right near me when I play on the courts across the street. The Holmdel facility had a plethora of special interest clubs for participation as well as a full menu of cultural offerings in the auditorium, contributing to Bell Labs reputation as one of the most desirable companies to work for in the country. My vision has been compromised by glaucoma and I have gotten the gold standard treatments for that disease and I have had laser surgery (Lasers invented at Bell Lab) for my cataracts.

Retirement: 2001-present and Parting Thoughts

While my quality of life has suffered, I was not deterred until the Covid pandemic from an active travel and recreation agenda, which is well documented in the aforementioned "Leighton's Voyages of Discovery." My all in adoption of digital photography was driven by technology available from the top of the line cameras which I was lucky enough to accumulate. I am self taught and was lucky enough to become the house photographer for a decade with he American Repertory Ballet Company, a leading regional company based in Princeton during my time with them. My travel agenda was driven by the desire to document biodiversity, particularly endangered species, and I have been lucky enough to capture images on safaris and private tours led by professional photographers at most of the leading wildlife hot spots in the world. I take pleasure by providing free access to my image albums on Google Photos (over 70,000 images and counting). The dancers at American Repertory Ballet have been especially appreciative as they can share them on their social media, which many professional companies don't allow. Currrently, I am also on the top of the birding photographer leader board of the Birderz social media site. Luckily, all my travel was predicated by the rapid technology advances in air travel during my lifetime, making it possible to satisfy just about all my bucket list ambitions. Currently I have set foot on all 7 continents, all 50 states and 60 foreign countries.

My ending mantra is that you should always acquire quality top of the line technology. Ultimately, I have been lucky enough to be able to afford this approach and always championed the iconic technology brands such as Apple, Google, Canon and Toyota. In parting, I can identify my favorite lifetime songs as Climb every Mountain from Sound of Music, One More Day from Les Miz, and Edith Piaf's No Regrets. Confucius had a famous quote saying "May You Live in Interesting Times." I have.

Over and Out