cheeks. Walking out of the hall, he told a reporter that "it felt just like the old days, with Steve making announcements that shook my world." If Woz could forgive Steve, so could anyone. It had been a long time since Steve had first made him cry.

But lots had changed since that time. As Steve Jobs basked in the moment, the giant loudspeakers came to life. He slipped off the stage, and the Macintosh faithful streamed out of the auditorium, enveloped in Steve's reality-distortion field, while the sounds of one of his heroes whispered all around them. The song was "Imagine" by John Lennon, who was killed so close to the day of Apple's IPO in December 1980:

> You may say I'm a dreamer,
> But I'm not the only one.

Yet no one could have imagined Steve's own story.

PART ONE

Flowering and Withering

1

I think it's clear that Steve always had a kind of chip on his shoulder. At some deep level, there was an insecurity that Steve had to go out and prove himself. I think being an orphan drove Steve in ways that most of us can never understand.

—Dan Kottke, one of Steve Jobs's closest friends

Roots

We all tend to lose track of just how much change—as a country, a society, a civilization—Americans weathered in the twentieth century: the shock and chaos of two world wars, the hopeful uncertainty of the 1950s, the upheavals of the 1960s, the reconfigurations of the 1970s and 1980s, the technology-inspired turmoil of the 1990s. The parade of powerful events in these decades altered the way Americans work, think, play, and even love. In hindsight, we recognize the inevitable shifts in what we consider socially acceptable behavior, and they surprise us by having defied our own conventional wisdom.

One practice that has remained constant and yet changed in the years since the birth of Steve Jobs is adoption. It was far more common in the mid-1950s and earlier than it is today. The differences can be simply explained: back then, single parenthood was a disgrace, and abortion was not only illegal but, if available at all, too often deadly. The advent of widespread birth control in the 1960s changed the equation forever: arguably the Pill ranks with penicillin as the greatest medical developments of the twentieth century. In conjunction with the women's movement, birth control changed our moral compass. Back in the 1950s only one respectable avenue was open for a single woman

who was pregnant: giving her newborn up for adoption. Agencies dedicated to bringing together childless couples with women who were "in the family way" became something of a cottage industry.

Steve Jobs was born on February 24, 1955, in San Francisco, California. Beyond that one fact, he knew virtually nothing of his birth parentage until he was already grown and famous. Within weeks of his birth, the mother of "Baby John Doe" signed over legal custody of her infant son to a San Francisco couple, Paul and Clara Jobs, who had been thwarted for nearly ten years in their hope of having children.

Paul Jobs had been through several lives before landing out West. He was a man of imposing demeanor, a farmer's son raised with a no-nonsense midwestern Calvinism. It was enough to steel him for the decade-long Depression that would mark his young adulthood and define his choices. He dropped out of high school and wandered the Midwest for several years, searching for work during the height of the Depression and living something close to the life of a hobo. Eventually, Paul opted for the relative certainty of service in the military over the unsettling inconstancies of the open road, enlisting in the U.S. Coast Guard—the "Hooligan Navy," in the popular phrase that he often used—and mastered the skills of an engine-room machinist. Like his midwestern upbringing, his Coast Guard experiences stayed with him in tangible ways: the tattoos on his arms, the short crew-cut hairstyle. Though he was always conscious of his lack of formal education, he exuded the hearty, robust personality of a proud, productive, blue-collar American.

Paul Jobs landed in San Francisco when his Coast Guard ship steamed into port to be decommissioned. By then, with the war and the Depression behind him, Paul was looking for the same thing that other men all over the nation were: a new beginning. He made a bet with a shipmate that "in the shadow of the Golden Gate" he would be able to find himself a bride. He was soon dating a local girl and promptly asked her to share his life. Paul and Clara married in 1946 and headed back to Paul's roots in Indiana, where the mechanical skills he had learned in the service helped him land a job with International Harvester.

Paul's tinkering abilities extended into his hobbies as well. He found nothing more relaxing or rewarding than buying an old, beat-up jalopy and spending his weekends underneath the hood repairing it and

getting it roadworthy again. When the work was done, he'd sell it and buy another, pocketing a profit each time. His austere background made him a tough negotiator, especially when it came to his auto deals.

Yet the attraction to California was too strong. In 1952 Paul and Clara packed up and moved back to San Francisco, into an apartment overlooking the Pacific Ocean. Paul was soon hired as a kind of strong-arm man by a finance company that sought help collecting on auto loans—an early repo man. Both his bulk and his aggressive personality were well suited to this somewhat dangerous pursuit, and his mechanical bent enabled him to pick the locks of the cars he had to repossess and hot-wire them if necessary.

Three years later, following the adoption of the baby boy they named Steven Paul Jobs, the family moved to a house in South San Francisco, an industrial town with a number of new housing tracts for returning veterans. Even at three years old, Steven was shaping up to be quite a handful, what polite folks today tactfully call a "hyperkinetic" child. He often started his day at four in the morning and had a gift for getting into trouble. Once he and a playmate had to be rushed to the hospital after they decided to see what ant poison tasted like. In another incident, Steve jammed a bobby pin into an electrical socket and got a nasty burn for his curiosity. Nonetheless, his antics didn't dissuade his parents from adopting another child, a daughter, Patty, two years younger than Steven.

Perhaps Steve needed a bit more supervision than most children, but he was obviously bright and in many ways seemed much like any other American kid in the mid-1950s. He mugged for the camera in neighbors' Super 8mm home movies, roared around the neighborhood on his tricycle, and watched unhealthful amounts of television—perhaps an early sign that he would turn into a youngster who didn't make friends easily.

Not long after Steve was born, the Nobel Prize for Physics was awarded to John Bardeen, Walter Brattain, and William Shockley for their invention of the transistor. Paul and Clara Jobs could not have imagined how this invention would change their son's life and would lead him to change the lives of so many others.

. . .

By the time he was ten, Steve's interest in electronics was patently obvious. He was attracted by the practicality of electronic gadgets, using his youngster's imagination to see their nearly unlimited potential. By now, his dad had moved the family down the peninsula to Mountain View, a bedroom community for the electronics companies sprouting up around Palo Alto, where Paul Jobs continued working as a repo man. The neighborhood Steve's parents had chosen was particularly suitable, being filled with engineers employed by Hewlett-Packard and other electronics firms. On weekends, they could be found at their garage workbenches, where they usually welcomed the lonely boy looking to learn and keep busy. It was one of these neighbors who let Steve play around with a simple carbon microphone that he'd brought home from the lab. Steve was fascinated with the device and asked many perceptive questions. Soon, he had spent so much time at the engineer's home and had so impressed the man with his precocity that he was given the microphone for his own.

From his peers, though, Steve reaped nothing but trouble. He was already a renegade. Much later, a schoolmate would describe him as a "loner, pretty much of a crybaby." The two were on a swim team together, one of Steve's only ventures into team sports. "He'd lose a race and go off by himself and cry. He didn't quite fit in with everyone else. He wasn't one of the guys."

Steve's youthful penchant for mischief and willfulness rapidly developed into something else. He was suspended from school several times for misbehavior and defying his teachers, refusing to do any schoolwork or assignment that he felt was a "waste of time." According to Steve himself, "I was pretty bored in school, and I turned into a little terror." He was the ringleader in a group that exploded bombs and let snakes loose in the classroom. "You should have seen us in third grade," he said. "We basically destroyed the teacher." That those words convey a sense of pride and satisfaction in giving pain offers another clue to what Steve would become. It is no surprise that he was eventually expelled.

Steve soon came under the influence of a fourth grade teacher who changed his life: Imogene "Teddy" Hill. "She was one of the saints of my life," he said. "She taught an advanced fourth grade class, and it took her about a month to get hip to my situation. She bribed me into learning. She would say, 'I really want you to finish this workbook. I'll pay you five bucks if you finish it.' That really kindled a passion in me for learning things."

Steve learned more that year than in any other year in school. His teachers wanted him to skip fifth grade and go straight to middle school. Eventually his parents reluctantly agreed. He entered Crittenden Middle School a year early, but the school district made no provisions for the social adjustment of gifted kids, plunking them down with the older children.

At the same time, things weren't going well for Paul Jobs. He had quit the repo business and become a real estate salesman in the booming world of the peninsula. His brusque personality wasn't suited to the mix of obsequiousness and aggression required to be a successful realtor. One day during Steve's fourth grade year, Teddy Hill asked her class, "What is it in the world that you don't understand?" She recalls that Steve's hand shot up and he replied, "I don't understand why all of a sudden we're so broke!"

In time, Paul Jobs, after fifteen years away from the trade, returned to work as a machinist. Though he had to reenter at the bottom and work his way up, he quickly climbed the ladder and the family breathed a little easier financially. Paul went to work for Spectraphysics, where he eventually worked on developing the system of mirrors that read bar codes on products in just about every supermarket in the world.

Steve, however, was absolutely miserable at his new school. Mountain View's Crittenden Junior High was much tougher than the grade school, and it was on the wrong side of the tracks to boot. The local police were often called to break up fights, and the troublemaking of Mountain View hooligans made Steve's pranks seem tame by comparison.

His free spirit and immense intelligence went unnoticed against the backdrop of all the commotion, and he grew increasingly unhappy and frustrated. The situation became so dire, to Steve's mind, that he simply decided not to return to Crittenden the following year. He informed his father of the decision that summer. After much discussion, Paul and Clara accepted the reality that their son, already a discipline problem, was on the verge of becoming a full-blown juvenile delinquent. They understood that they had to make a choice.

"He said he just wouldn't go [back to that school]," recalled Paul Jobs. "So we moved."

At eleven years old, Steve was already able to demonstrate enough strength of will to convince his parents to resettle. His trademark intensity, the single-mindedness that he could apply to remove any obstacle to his progress, was already evident.

In 1967, the Jobs family moved to the flatlands of Los Altos and found themselves smack in the middle of what may have been the largest assemblage of science wonks ever gathered in one place since the Manhattan Project. Los Altos and the surrounding towns of Cupertino and Sunnyvale were sown through with electrical engineers and their families. At the time, Lockheed was booming as the prime contractor for NASA in the space race, and all through the area a profusion of electronics companies was springing up to service the moon shot. It was also ground zero for a wave of innovation and entrepreneurial activity that exploited the world of electronic miniaturization ushered in by the invention first of the transistor, and then of the integrated circuit, or IC, which crammed hundreds of those transistors onto a single "chip." In every garage there was a welcoming brain for Steve to pick and a box or two filled with spare parts or obsolete equipment that could be taken apart after school. In contrast to rough-and-tumble Mountain View, this was heaven.

At Cupertino Junior High School, Steve met Bill Fernandez, the slight, intense son of a local attorney, who was as much of a misfit as the young Jobs. Neither one was even vaguely athletic—they were both skinny, scrawny, and relatively uncoordinated—but they each had a discernible intensity, viewed as oddness by their classmates. Electronics was the perfect outlet for these outsiders. They could pursue their interests in the calm solitude of the neighborhood garages and workshops, while relegating the usual adolescent dilemmas of peer acceptance, sports prowess, and boy-girl turmoil to another world for hours on end. They may have been oddballs to their fellow students, but Fernandez and Jobs had tapped into the sensibilities of the surrounding community of engineers and scientists.

"I have this vivid memory of Steve Jobs," recalled Bruce Courture, who attended both Cupertino Junior High and Homestead High—six years of school—with him. Courture was voted "Most Likely to Succeed" in the senior class and is now living up to this expectation as a partner at one of the most successful high-tech law firms in Silicon Valley. "It's one moment that has always stuck in my mind. It was a very foggy day. All us boys in our freshman class were running a couple of laps around the track. And all of a sudden Steve, who was ahead of me, glanced back across the field at the PE coach, who was hidden by the fog, and saw that he couldn't possibly see the far side of the field. So [Steve] sat down. Well, I thought that was a pretty good idea. I joined him. The two of us just sat and watched everyone else run by us. When they came back around for the second lap, we stood up and joined them.

"We had to take some ribbing, but he had figured out how he could get away with half the work and still get credit for the whole thing. I was really impressed, especially that he had the guts to try it, even though he was just a freshman. I would never have thought to do that on my own."

Living directly across the street from the Fernandez family were the Wozniaks. The father, Jerry Wozniak, was an engineer with Lockheed, and since Fernandez's parents had nothing to do with electronics, Jerry had been Bill's mentor and tutor in the subject. Jerry's son Stephen also shared in the passion for electronics and on occasion pitched in with Fernandez on science fair projects, despite being five years older.

Steve Jobs entered Homestead High School in 1968, an important year for the United States. The country was wracked by conflicting sentiments about the war in Vietnam and civil rights, and college campuses were convulsed by protests, demonstrations, and riots, with newsworthy hotbeds at the northern California schools of UC Berkeley and San Francisco State.

Meanwhile, Steve Wozniak, a freshman at the University of Colorado, was leaving his own mark on the campus. In a series of confrontations, the daring and able computer prankster had challenged the school's administration. After one memorable episode on Election Day, the campus computer kept generating an irreverent message, over and over. That was the last straw, as far as the dean of students was concerned, and once the culprit's identity was revealed, Wozniak was able to stay only long enough to finish one academically lackluster year. He left campus knowing that he would not return.

Though the affair with the campus computer might indicate otherwise, he was, in his own mother's words, "a square." He didn't seem to notice girls and was athletically challenged.

"Woz," as he'd been called since grade school, was a generally obedient youngster despite his tendency to be willful in certain circumstances. He also had the ability to focus, completely and utterly, on whatever interested him and often became so absorbed that his mother's only recourse was to rap his head with a pencil if she wanted his attention. Few things held Woz's attention besides electronics and the science and math that constituted its basic elements. He could spend endless days designing circuit boards for various gadgets, but when it came to more mundane subjects like literature or social studies, his lack of interest held him back from doing even the simplest homework assignments. It was the classic personality profile of genius: brilliant in one area, bored in all others. By his senior year in high school, he was nearly failing English and history.

Still, Woz was secure in his knowledge of electronics and cocky enough to let everyone know it. In class, he talked back to his electronics teacher, catching him in errors and challenging him before the other students. His smug superiority made him equally unpopular with staff and classmates, leaving him isolated and with few friends, but his hearty sense of humor was appreciated.

The friends he did have were invariably younger. There was something about him—precision, single-mindedness, and a generosity of spirit—that appealed to youngsters looking for a role model. His best friend through high school was a boy two years younger, Alan Baum, another bright electronics whiz, who eventually went on to MIT. Woz was also a dyed-in-the-wool prankster. He honed his practical-joking skills while developing his talent for electronic design.

Despite his academic shortcomings and pranks, Woz soon became the best technician in the Cupertino neighborhood and was a figure of worship to kids like Bill Fernandez.

In the summer of 1969, Woz and Alan Baum spent a few months filling a folder with schematics and specification sheets for a computer. Then, when Baum left to attend MIT, Woz decided to build the device himself, scavenging parts from surplus stores or directly

from sympathetic companies. He convinced Bill Fernandez to help, an attractive idea since the methodical Fernandez had a neat, carefully designed, and eminently accessible workbench in his garage across the street.

"I wanted to design a machine that did something," Wozniak said years later. "On a TV, you turn a knob and it does something. On my computer, you pushed a few buttons and switches, and lights would come on." That was his goal and he succeeded: things could happen. At least, until the power supply exploded as the two boys were demonstrating their machine to a reporter from the *San Jose Mercury News*. It may not have been a sophisticated device, but Wozniak had built it five years before the first hobbyist computer kits appeared on the market.

They called it the "Flair Pen or Cream Soda computer," said Fernandez. "Woz was always drawing schematic designs with them. He said you could tell a real engineer by the Flair pens in his shirt pocket. Purple was the color of choice that year. And all we drank was cream soda in bottles. We were so broke that we would save up the bottles and walk over to Safeway to get the deposits back so we could buy another."

One day Fernandez invited Steve Jobs to see the computer that he and Woz had built. It was the first meeting between Woz and Jobs, and it was by no means auspicious. At eighteen, Wozniak was a bona fide electronics whiz, while Jobs and Fernandez, five years younger, were just a couple of kids who didn't know much of anything practical about the subject. Sure, they liked to play with gadgets, but they were much more interested in doing tricks with lasers and mirrors than they were in doing something worthwhile. Wozniak, on the other hand, had already designed circuit boards on paper for more elaborate computers and regularly visited the Stanford Linear Accelerator library to pore over the most advanced materials he could find.

Jobs was awestruck by the ability represented by the project. Though he had long felt unrivaled in his knowledge of electronics, he was sobered by his realization that Woz was "the first person I met who knew more electronics than I did."

Steve Jobs had already heard about Wozniak from Fernandez and knew his reputation as a highly accomplished prankster. His most famous high school stunt had resulted in Homestead High's principal running out on the athletic field holding at arm's length a heavy and

ominously ticking gym bag that had been snatched from a student locker; the bag contained bricks and an alarm clock. This little episode earned Woz a night in Juvenile Hall—and a standing ovation from the student body upon his return the following day.

Steve Jobs and Steve Wozniak seemed to be cut from the same cloth. They both were solitary, self-absorbed, and isolated, neither joiners nor jocks. Their five-year age difference was trumped by the passions they shared. Wozniak had an ardor for electronics that made his sentences run together like a speeding train when he tried to explain a concept or a principle that held his interest.

Jobs also had an intensity, driven by whatever his latest passion might be. He would stand very close to whomever he was talking to, invading the person's space as he poured forth about his newest discovery, and he was nearly impossible to avoid once he made up his mind to buttonhole you. Much later, an acquaintance said of him, "Trying to have a conversation with Steve Jobs is like trying to sip water from a fire hose." Steve had a sharp wit but rarely laughed—not as a boy or even later when he was on top of the world. At times, he was seen to smile, but real, uninhibited laughs were few and far between.

This was always a major difference between the two. Steve Wozniak had a quick wit and loved sharing a joke—it was one of the few things for which he'd take a break from technology. (A few years later, he ran a free Joke-a-Day service in San Jose, and even now he sends out jokes and cartoons almost daily to a select list of friends.) Woz was immersed in computers and electronics, while Jobs was immersed in himself.

Jobs almost certainly knew by then that he was adopted, and this knowledge seemed to have fueled a quest for something that would give his life meaning. The machine that Wozniak and Fernandez were completing was one early element to fill that void.

Woz may have had the know-how, but Steve Jobs certainly had the gumption. When Jobs had an objective, nothing stood in the way of his reaching it. One thing that didn't change over the years was his chutzpah, his aggressive personal willingness to wade right in, to go for the top person, the decision maker. After the family's move to Los Altos, he began a project to build a frequency counter—a device to track the occurrences of a given electrical frequency in a circuit. When he found

that he needed more parts, he picked up the phone and placed a call to Bill Hewlett, one of the founders and principals of Hewlett-Packard. "He was listed in the Palo Alto phone book," explained Jobs. "He answered the phone, and he was real nice. He chatted with me for, like, twenty minutes. He didn't know me at all, but he ended up giving me some parts, and he got me a job that summer working at Hewlett-Packard, on the line assembling frequency counters. . . . Well, 'assembling' may be too strong. I was putting in screws. It didn't matter; I was in heaven."

But as puberty worked its hormonal alterations on Jobs, he began to realize there might be more to life than electronics. "I remember my first day on the assembly line at H-P," he recalled wistfully. "I was expressing my complete enthusiasm and bliss at being there for the summer to my supervisor, a guy named Chris, telling him that my favorite thing in the whole world was electronics. I asked him what his favorite thing to do was, and he looked at me and said, 'To f——k!' "I learned a lot that summer."

Between his sophomore and junior years, Steve Jobs also discovered marijuana. "I got stoned for the first time; I discovered Shakespeare, Dylan Thomas, and all that classic stuff. I read *Moby-Dick* and went back as a junior taking creative writing classes."

Steve marched to his own tune, and as the United States changed from the conformity of the sixties to the individuality of the seventies, he quickly assimilated the countercultural values that interested him—individuality, a refusal to follow the rules or be intimidated by them, and an enthusiasm for mind-expanding drugs. Steve managed to embrace all of this without embracing the hippie ethic of putting out the least possible effort.

Homestead High School was a low, squat school thrown up in the post-war boom that hit the valley. It sits hard by two freeways and is the kind of campuslike school that California specializes in. Land was never much of a problem, so new classrooms were just tacked on to the rest of the school. When classes began in September 1968, Steve Jobs and Bill Fernandez arrived as freshmen.

The two friends from Cupertino Junior High School shared their enthusiasm for technology, but both felt at a distinct disadvantage

because they didn't come from heavily scientific households. The school offered an electronics class—John McCollum's Electronics 1—and the pair determined to enroll in it together.

They became "wireheads." The slang name that Silicon Valley high school kids gave to electronics club members had a hip connotation. The name combined the drug orientation of the time with electronics and avoided the bumbling connotation of "nerds." In Silicon Valley, it was "cool" to be into electronics.

Four years earlier, Steve Wozniak had thrived under the authoritarian and practical regimen of the school's science department. He had become the prize student in the electronics classroom—the president of the math and the electronics clubs, a winner of science fair awards, and the designer of endless electronic schematics. For Jobs, the subject never quite caught fire, and as he went through high school, he grew less interested in science and more interested in other things.

"I only vaguely remember Jobs," recalls McCollum. "He kind of faded into the background. He was usually off in a corner doing something on his own and really didn't want to have much of anything to do with either me or the rest of the class.

"But I do remember that one day he was building something and needed some parts that I didn't have, which were only supplied by Burroughs. I suggested that he call the local number for the company, talk to the public affairs people, and see if they wouldn't let him have one or two of the components for his school project.

"The next day he came in as pleased as could be and told me that Burroughs was sending him the parts, and they should arrive very shortly. When I asked how he had managed that, he said he had called the main office, collect, and told them he was working on a new electronic design. He was trying various components and was considering using theirs.

"I was furious. That was not the way I wanted my students to behave. And sure enough, in a day or so the parts arrived by air freight. I didn't like the way he had done it, but I had to respect his results."

As his sophomore year came to a close, the fourteen-year-old Jobs started to drift in new directions. Electronics had begun to lose its appeal, and swimming team practice at the Mountain View Dolphins took up too much time, so he switched to water polo. But that was a

short-lived interest. He found that he just didn't have the aggressive killer instinct that it took to "be a jock. I was always a loner." He was looking for something to get involved with. Something interesting.

A shop in Mountain View called Haltek was full of abandoned, rejected, obsolete, and unsorted electronic components. In Silicon Valley, components could be rejected for any number of reasons: a flaw in the paint, too high an incidence of failure in a particular batch, or a newer design that renders obsolete an entire warehouse filled with perfectly good product. More often than not, these orphaned parts showed up at Haltek—and so did all the garage designers and high school kids working on their own projects or experiments. Steve managed to talk his way into a weekend job there during high school.

When Fernandez shared details about the computer that he and Wozniak were building, Steve was already employed at Haltek on weekends and had started to develop a nose for electronics components and their prices that would stay with him for years. The Fernandez-Wozniak project caught his interest, and Jobs started to spend more time at the Fernandez garage. A friendship began to flourish between him and Woz.

They bonded in part over their love for pranks. Woz would design a scheme, and Jobs, with his almost compulsive willingness to be an outlaw, was more than willing to carry it out. His friendship with renowned prankster Wozniak gave him a certain cachet among his peers.

By age sixteen, Steve Jobs wore his hair shoulder-length, and his appearances in school became more and more rare. He was on the periphery of a band of technologically savvy hippies who had discovered how to fool AT&T's long-distance switching equipment. Dubbed "phreaks," the youngsters had learned techniques for completing calls by playing certain frequencies of tones into telephone receivers.

One of the most infamous of these phreaks was a character nicknamed Cap'n Crunch, who discovered that a whistle included in boxes of the cereal could fool the phone company's computers. Steve wanted to meet him, so he tracked him down. Eventually Crunch showed up and took the two amateur outlaws, Steve and Woz, through the world of phone phreaking, spending an evening calling all over the world for

free. The two decided they would build their own electronic machine to do the same thing that Crunch did with a whistle.

One approach for doing this involved a homemade device called a blue box. After some research in the Stanford Linear Accelerator library and a number of false starts, Woz came up with a design for a better blue box than any that the other phreaks were using. For one thing, it needed no on/off switch but automatically came to life whenever one of the keys was pressed. This kind of innovation would characterize a Wozniak design for years to come.

"We were ecstatic," said Jobs. "We thought it was absolutely incredible that you could build this little box and make phone calls around the world." None of the phreaks considered the free phone calls a form of stealing—the only loser was the phone company, a synonym for "the establishment." What, they reasoned, could be more honorable than that?

They showed the prototypes to friends, and the interest was obvious and immediate. Everybody wanted one, and the two Steves, now full-fledged phreaks themselves, garnered all sorts of attention.

Jobs, with the gift of persuasion he'd learned from his father, convinced Woz that they should start selling the units. With Jobs using his nose for bargains in buying the parts, their out-of-pocket cost for the first boxes was $40 apiece. Woz, now attending the University of California at Berkeley, did the assembly work in his dorm room; Steve sold the units throughout the buildings on campus. They charged $150 per unit but sweetened the deal with a guarantee of free repairs should any problems arise. As the machines became more and more popular, Jobs demanded as much as $300 from people who looked like they could afford it. Students, however, still qualified for the original price.

His princely income was a major factor in Jobs's declining interest in finishing high school. It was around this time that he met Chris-Ann Brennan, a fellow student working on her own animated movie who avoided any school supervision of the project by doing much of her work at night. In this rejection of authority, Jobs saw a like mind. Soon they were lovers, and he and Chris spent many afternoons taking long walks, drinking wine, and smoking pot. One day, choosing a wheat field as an appealing spot to take some LSD, Jobs recalled that "all of a sudden the wheat field was playing Bach. It was the most wonderful

experience of my life up to that point. I felt like the conductor of this symphony with Bach coming through the wheat field."

Wozniak didn't understand any of this. His idea of a good time was to talk about esoteric points of electronics.

Their blue box venture had been fun at the outset, but the scene quickly began to change. The phone company took aggressive steps to combat the scam, and things turned dangerous. One evening Steve was making a sale in a pizza parlor parking lot when he felt a gun being pressed against his body as a crook decided to rip off the rip-off artists. "There were eighteen hundred things I could do, but every one had some probability that he would shoot me in the stomach. I handed over the box."

Jobs's enthusiasm soon cooled. He was interested in expanding his vistas and making money, while searching for answers to something that smoldered inside him. They weren't answers he could discover with a blue box.

Jobs made the journey from Silicon Valley to Berkeley two or three times a week. The ambience in the heart of hippiedom was to his liking, as he traveled through the Bay Area, delving into ideas, practices, and people he rarely encountered in Silicon Valley. Jobs would soon be heading off to college himself, and what he saw in Berkeley profoundly influenced the type of place he chose.

The school that Steve Jobs decided on was Reed College in Portland, Oregon, the Pacific Northwest's premier liberal arts college. Private and expensive, it has always had a reputation for attracting and fostering brilliance and individuality. His parents were aghast—not only at the price, but at the distance from home. Still, "Steve said that Reed was the only college he wanted to go to," recalled his mother, "and if he couldn't go there, he didn't want to go anywhere." Once again, the headstrong boy prevailed over his parents. They bit the bullet, dipped into their savings, and sent him off to Reed.

Steve managed to leave his mark at Reed, not academically but through the sheer force of his personality. His studies came in a distant second to other pursuits. By autumn of 1972, Steve decided to abandon his experimentation with hallucinogens and opted instead for the philosophies of the East as a path to higher awareness. "I was interested

in Eastern mysticism, which hit the shores about then. At Reed, there was a constant flow of people stopping by—from Timothy Leary and Richard Alpert to Gary Snyder."

His first-semester grades were poor, so, with his characteristic directness, he dropped out of school and got a refund of the tuition. Yet he remained on campus, living in dorm rooms vacated by other students who'd left to pursue other interests. Reed, being a good liberal school, didn't mind, especially since Jobs had become friends with Jack Dudman, the school's dean of students. "Steve had a very inquiring mind that was enormously attractive," Dudman remembers. "You wouldn't get away with bland statements. He refused to accept automatically received truths. He wanted to examine everything himself."

Steve's decision to drop out but live off the school's bounty made him a celebrity. When the next school year started, he continued to live at Reed. "He very shrewdly perceived that he could get just as good an education without the credit," explained his long-time friend Dan Kottke, who met him as a fellow student at Reed, "and who needs the credit?" Jobs was tired of being poor and idle and still felt like an outsider, even in his group of close friends. Something else was driving him.

"I think it's clear that Steve always had a kind of chip on his shoulder," said Kottke. "At some deep level, there was an insecurity that Steve had to go out and prove himself. I think being an orphan drove Steve in ways that most of us can never understand."

In the spring of 1974, as both Watergate and the end of the Vietnam War played out, Steve was back at his parents' house. While idly leafing through the *San Jose Mercury News*, he saw an employment ad from Atari, a company that, even in forward-looking Silicon Valley, was considered a bit outrageous. Because of the stunning success of the company's landmark video game Pong—the game's installation at one tavern in Sunnyvale caused block-long lines—Atari was in need of electronic technicians. In an ad that became famous in the world of high tech, the company offered the opportunity to "have fun and make money." Steve Jobs applied and, to his shock, was hired.

At the time, Atari was experiencing an exponential growth spurt. Al Alcorn, the chief engineer, remembers, "We were used to folks showing up and saying, 'Hi, I'm going to work for you.' It was part of

the brashness of the Valley. Atari was growing fast, I'd hear what their skills are and more often than not I'd say, 'That's it, you're great, you've got a job.'"

One day the personnel director came by and told Alcorn, "We've got this weird guy here. He says he won't leave until we hire him. We either call the cops or hire him." Alcorn replied, "Bring him in."

Jobs was brought in, "dressed in rags basically, hippie stuff. An eighteen-year-old drop-out of Reed College. I don't know why I hired him, except that he was determined to have the job and there was some spark. I really saw the spark in that man, some inner energy, an attitude that he was going to get it done. And he had a vision, too. You know, the definition of a visionary is 'someone with an inner vision not supported by external facts.' He had those great ideas without much to back them up. Except that he believed in them.

"I gave him to Don Lang, who said, 'Oh, no, what are you giving me this guy for? He has b.o., he's different, a goddamn hippie.' But we wound up cutting a deal with him. Jobs could come in at night and wouldn't bother anybody."

Steve was given a number of minor tasks. Then one day he came to Alcorn requesting to be allowed to go to India "to see his guru." At the time, the company was having a problem with its games in Germany. Alcorn decided that Steve could correct whatever problems the Germans had on his way East. So Alcorn gave Steve a quick primer on the situation at the German facility and sent him to the last place you'd expect to find a juvenile hippie who was en route to search for a mystic. Alcorn recalled, "Here are the Germans, you know, 'Snap to! Attention!' And here comes Jobs off the airplane, just scuzzy. [But] I had given him a two-hour course [and] he solved their problem in two hours."

Before leaving, Steve approached his friend Dan Kottke about joining him in India. Kottke was as unusual in his own way as Steve was. Soft-spoken, diffident, and gentle, with a cascade of frizzy, tangled hair that surrounded his head like a mane, he was a superb pianist (his cousin is the pop guitarist Leo Kottke) and was smart enough to have won a National Merit Scholarship. What's more, he wasn't a Californian but hailed from the New York area.

Steve's devotion to the philosophies of the East seemed to be tied to his quests for other truths—the absolutes and the loopholes of science and electronics—and tied as well to his own identity. He was "totally determined to go," said Kottke of the planned trip to India. "He felt some kind of unresolved pain over being adopted. That was the same period that he hired a private investigator to try and track down his mother. He was obsessed with it for a while."

Steve's suggestion that Kottke be his traveling companion raised a problem. "I didn't have any money," Kottke said. "He had this great job at Atari, and he had thousands of dollars. So he offered to pay my airfare, which was very generous. And indeed, had he not offered it, the trip probably wouldn't have happened. I was very dubious about it, and he said 'Come on, I'll pay your way,' because he wanted someone to travel with. So I called up my parents and told them, 'I'm going to India with my friend, and he's going to pay my ticket.' So, of course, my parents, who were worried that I would never come back, gave me a round-trip ticket and plenty of money."

After the stop in Germany, Jobs arrived in India barefoot and threadbare. This was how he chose to dress, as an expression of a specific ideal or aesthetic. In India he was confronted for the first time with people who were poor—not the way California hippies were poor, by choice, but poor by fate. It was an eye-opener for him, as it had been for numerous others before him. The complete contrast with the material comforts of American life was intense and shocking, and it challenged everything he thought he knew up to that moment.

His clothes may have been ragged, but they were Western clothes, and he had something more than "going native" in mind. His idea was to make the journey as a mendicant—a spiritual beggar dependent on the kindness of strangers. He immediately traded his T-shirt and jeans for a lunghi, a loincloth that is the traditional Indian garb for mendicants, and gave away everything else he had. Joined by Kottke, he headed north from Delhi toward the Himalayas, the legendary center of spirituality in India.

They slept in abandoned buildings and bought what food they could in the villages they passed through. True to form, Jobs bargained hard. "He looked at prices everywhere, found out the real price, and haggled. He didn't want to be ripped off," recalled Kottke. His aggressiveness with a woman who sold them watered buffalo milk nearly caused them to be run out of one town.

Completely by chance, the two lucked upon a guru and his followers in the mountains. As Jobs told the story:

"I was walking around in the Himalayas and I stumbled onto this thing that turned out to be a religious festival. There was this baba, a holy man, who was the holy man of this particular festival with his large group of followers. I could smell good food. I hadn't been fortunate enough to smell good food for a long time, so I wandered up to pay my respects and eat some lunch.

"For some reason this baba, upon seeing me sitting there eating, immediately walked over to me and sat down and burst out laughing. He didn't speak much English and I spoke only a little Hindi, but he tried to carry on a conversation and he was rolling on the ground with laughter. Then he grabbed my arm and took me up this mountain trail. It was a little funny, because here were hundreds of Indians who had traveled for thousands of miles to hang out with this guy for ten seconds and I stumble in for something to eat and he's dragging me up this mountain path. We get to the top of this mountain half an hour later and there's this little well and pond at the top of this mountain, and he dunks my head in the water and pulls out a razor from his pocket and starts to shave my head. I'm completely stunned. I'm nineteen years old, in a foreign country, up in the Himalayas, and here is this bizarre Indian baba who has just dragged me away from the rest of the crowd, shaving my head atop this mountain peak."

Jobs was discovering his own truths. "We weren't going to find a place where we could go for a month to be enlightened. It was one of the first times that I started to realize that maybe Thomas Edison did a lot more to improve the world than Karl Marx and Neem Kairolie Baba put together."

The pair of traveling mendicants took off again after only a month in Kainchi. It was the summer high season when India is hottest. The dust was in their teeth and their hair, and they had grown weary of the poverty they saw everywhere. It would always be remembered by both travelers as a country of constant hassles. Kottke took up the narrative: "There's a very famous story in India about a guru called Baba Ji. He's

kind of like Davy Crockett over there. He's a well-known mystical yogi who keeps reincarnating and [he's] hundreds of years old.

"Well, presently he was incarnated as this guy Harikan Baba, and we decided that we would go visit him. And that was a real quest. It was a ten-mile hike up a dry desert riverbed, over boulders and along a trail that was almost impossible to follow, and our feet were rubbed raw from the sandals, and all we had on were the lunghi, so the sun was merciless. And finally we found this cliff, with a stairway up, and it was the ashram.

"We'd been going so long, and put so much effort into it, we weren't about to go away. Even though when we got there we both thought the guy was a bit of a bozo. After a couple of days we had had enough. I'm sure he was a very far-out guy, but he was very much into wearing colorful saris, he was really into his wardrobe, changing his clothes all the time. And he was very flowery with his language too. All 'the essence of existence is so and so.' Which did not impress us one little bit.

"We had no idea what we were doing. So when we left, even though we knew it was a long journey, we did so in the afternoon. Then that night, as we were sleeping in the dry creek bed, along came a thunderstorm. And I mean a real thunderstorm, like nothing I'd ever seen before. There we are in our flip flops and thin cotton shawls and the rain is beating on us, and the thunder is roaring, and the lightning is breaking all over us. And it got so intense, and the two of us were both so kind of out of it, that we decided to cover ourselves in the sand.

"There we were, wearing next to nothing, and I remember us hunkering down in the sand trying to defend ourselves from the rain pelting down, trying to dig a hole that we could crawl into so that the rain wouldn't destroy us. I'm sure that was the high point of the trip, because I remember us praying. Out there in the dry creek bed, in the middle of India, completely disoriented, all our rhythms and beliefs shattered, where we were sure a flash flood would come through any moment, the two of us praying to any god that could hear us: 'Dear God, if I ever get through this, I'll be a good person. I promise.'"

They survived to continue their journey. They ate food in bazaars. Kottke finally cut all his hair, not out of some inappropriate fashion statement but because the lice and the fleas and the filth drove him to it. They wanted to see Tibet, so they headed up the mountains. Each

contracted scabies in the town of Menali, the site of a famous spa, to go along with the dysentery they'd had for a while. But Kottke also had his traveler's checks stolen. This was the end of the journey. When he went to the bank in New Delhi, it refused to refund the checks to him. Jobs, who was leaving in a few days, gave Kottke all the money he had left—$300.

The whole experience in India had been intense and disturbing. It had been entirely different from anything Jobs had expected, anything he had known in booming Silicon Valley. But it had not been the answer. The inner fire wasn't satisfied. Jobs came back determined to work toward the root of things in a different way.

When Steve returned, he was rather distant and very spaced out. Wearing saffron robes and sporting a shaved head, he drifted into Atari and asked for his job back. This blissed-out kid in an orange toga might have prompted most companies to call for security as soon as he approached the door, but this was Atari, in California, in the 1970s. Atari said, "Sure."

Steve's return to Atari found him torn between the memories of his search for truth in the East and the new reality of electronic game playing and engineering. He remained true to the hippie aesthetic, which was easy enough because Silicon Valley was so close to the hippie meccas of San Francisco and Berkeley. He renewed his relationship with Woz, though soon he slyly began to redefine the relationship, trumping Woz's technical knowledge with his own business skills.

Woz, now working at HP, took advantage of his friend's being back at Atari. The company had put out a game called Gran Track, "the first driving game with a steering wheel," explained Jobs. "Woz was a Gran Track addict, so I would let him in at night and let him onto the production floor, and he would play Gran Track all night long. Then when I came upon a stumbling block on a project, I would get Woz to take a break from his road rally for ten minutes and come and help me. It was a great way to get terrific engineering for free."

It worked like a charm. Woz had no hunger for glory; all he wanted was to do something neat, like design a computer or play more video games. Jobs was the hustler, the man with the plan, the man who knew how to generate the income.

. . .

There was something about Jobs that Nolan Bushnell, the founder of Atari, responded to. "When he wanted to do something, he would give me a schedule of days and weeks, not months and years. I liked that," said Bushnell.

One day, according to Alcorn, Bushnell "grabbed Jobs and made a deal on the side. On his blackboard, Nolan defined the game of Break-Out, how the game would work, the details. Then Alcorn, the head of engineering, took over with the logistics—Jobs could build it as long as he worked at night when none of the other engineers were around. "He said that for every [computer chip] under fifty—or some number—I'm going to give you, like, a thousand dollars or something as a bonus to salary."

In Break-Out, the player would constantly fight a brick wall, trying to "break out" of it to win. Mastering the game turned out to require total concentration upon the task at hand, determination to succeed, and a driven attitude—all of which Jobs and Woz had in their blood.

The design for Break-Out was completed in one forty-eight-hour stretch. The company thought Jobs was designing it, but it was entirely Woz's work. "Steve's role was to buy the candy and cokes while Woz did all the design," said Randy Wigginton, a very young camp follower who would end up at Apple.

True to his past achievements, Woz managed to do the work using a ridiculously small number of chips. Alcorn was impressed and paid Steve the $1,000 he had offered. But Steve went back to Woz and said that Atari had paid only $600. He gave Woz his "half." So Woz, who had done all the work, ended up with $300, while Steve Jobs pocketed $700.

Afterward, Alcorn found that he had a problem. "We could not understand the design. And since Jobs didn't really understand it and didn't want us to know that he hadn't done it, we ended up having to redesign it before it could be shipped."

Woz didn't learn the truth about that transaction until a year later, and the story became a wedge between him and Jobs. On an airplane, Woz spotted Al Alcorn and went over to talk to him. Enough time had passed that Woz thought he could admit that he was the one who had designed the circuitry for the Break-Out game that had used so few

chips. In that conversation, Alcorn made a passing mention of the $1,000 he had paid for the design. Woz realized that his friend and partner had shortchanged him. The knowledge was so painful, one source said, that it made Woz cry.

According to Alex Fielding, a longtime friend of both Steves, when Jobs read that story in *On the Firing Line* by Bill Simon (co-author of the present volume), he was highly annoyed and called Woz to complain. "I don't remember that," Jobs insisted, as if "I don't remember" meant "It never happened."

Steve used the money from Atari—whatever the amount—to afford a break, heading for All-One, an apple farm in Oregon where his New Age buddies from Reed hung out. Steve Jobs was in a fantastic frame of mind as he headed north. He was working in the electronics industry, realizing his lifelong dream. Finally, he was actually doing something, actually helping to build something. With his nose for component prices—the result of his time at Haltek, the blue box period, and his father's example in rebuilding and selling cars—plus Wozniak's uncanny abilities, they had a good thing going. They'd done it once before with the blue boxes, so it seemed as if they could probably build something else and sell it. But what should it be?

With the publication of a *Popular Electronics* article in January 1975 announcing the introduction of an Altair computer kit, the first arguably "personal" computer had appeared. All it did was light up a string of bulbs across its front to demonstrate the answers to binary arithmetic questions that had been laboriously hand-coded into the machine's memory banks with a series of switches. But one local teacher with foresight, Bob Albrecht, decided with some cohorts that it was time to issue a call to form a club. Menlo Park was the hub of the "Free University" movement, which Albrecht had spearheaded, developing it out of the offices of the *Whole Earth Catalogue* (a kind of New Age manifesto and how-to guide to the back-to-the-earth sustainability movement). Together with a few like-minded enthusiasts, they put together a computer hobbyists' group to share tips and information, calling it the Homebrew Computer Club. Because of the hefty price tag the kits carried, the members decided that people who already had machines would share them with others who were not so fortunate.

Membership quickly ballooned from the original thirty members to more than one hundred enthusiasts, and the meetings were moved from an alternative school housed in an old mansion in Menlo Park to the Stanford Linear Accelerator Center's auditorium on the edge of the Stanford University campus.

In early 1975, as more of the kits appeared, Steve Jobs was already thinking about how he and Wozniak could profit from this new field. He had to find an angle. When he discovered it, the magic came about pretty much by chance.

2

I had learned one thing about the electronics business by then: you can't judge anybody by how young they are or how they look. The best engineers don't fit any mold.

—Dick Olson, talking about Steve Jobs in 1976

A Company Is Born

The split personality of Steve Jobs—wannabe businessman and Zen devotee—showed itself intensely in 1975. He was deep into the fruitarian, mucusless diet of Ehret, alternating that with fasting, like a nonconformist leftover from the flower-child era.

Jobs began to attend meditation retreats while employed at Atari. The nearby Los Altos Zen Center had attracted his attention as a place to practice Zen. During his spiritual reading period at Reed, Steve had been drawn by the emphasis on experience, intuition, and self-fulfillment through inner consciousness. Zen was not an exterior religious structure, and it suited his quest for something more. He'd been left emotionally reeling from many unsatisfactory answers about his parents and was searching for spiritual truths. Zen Buddhism provided satisfactory substitute answers. "Chris-Ann [Steve's high school girlfriend] was living in a tent up there," Dan Kottke said. "And there was this Zen master there by the name of Kobin Chino. Steve and I used to go visit him a lot, mostly in his house, which was near the zendo. And we would have tea, and sit, and talk.

"Kobin was a very far-out guy, but he had only just arrived from Japan, and his English was atrocious. So we would sit there and listen

to him, and half the time you'd have no idea at all what he was going on about. Well, I thought it was sort of fun and took the whole thing as a kind of light-hearted interlude. But Steve was really serious about it all. This was the time in his life when he became really serious and self-important and just generally unbearable.

"But I remember one time we were sitting there, and all of a sudden Steve says to Kobin, 'What do you think of speed? You know, doing things fast?' He was really serious about it and was really into this idea that the quicker you could do something, the better a person you were. But Kobin just looked at him and started to laugh, which is what he did whenever he thought that something was irrelevant. I thought it was pretty irrelevant, too."

Yet Steve was hooked. He studied with Chino for several years and considered him one of the most important influences in his life. (Years later, Chino became the official "roshi" of Jobs's second company, NeXT, and eventually officiated at Steve's marriage.) The Zen master's secret—the ability to answer a question with whatever is on his mind, impulsively—became a lifelong habit for Jobs. Some people might say that his management style started with Chino, because his study of Zen began the year before he founded Apple. Zen, with its emphasis on the spontaneous and the intuitive, synchronized smoothly with the chaotic style of Nolan Bushnell at Atari, which was the only place Jobs ever really worked.

To a personality that already was essentially unbridled and uncensored, a personality looking for a method to make sense of the madness of the universe and to answer some deep-seated questions, the attraction of Zen Buddhism was enormous. It offered a self-directed approach to religion, which was crucial to a terribly self-important young man. He had no need to depend on anyone else for guidance. Zen fought rational, analytic thinking by elevating intuition and spontaneity. For a young man who had essentially no formal education in anything, this was important. And Zen was mystical and concerned with the big issues—Zen koans like the "journey is the reward" appealed to Steve's sense of truth. He embraced Zen Buddhism more deeply than ever, and Kobin Chino became his master.

At the same time, however, Steve wanted to be a businessman. He wanted a business of his own.

Too young and definitely too inexperienced to know what he couldn't achieve, and ruled by the passion of ideas, he had no sense of why something was impossible. This made him willing to try things that wiser people would have said couldn't be done. He had a force of personality that could simply overrun objections, and his lack of real-world experience kept him from knowing what pitfalls might lie ahead.

The willingness to attempt the unlikely or the unachievable was one trait—perhaps one of the few—that he and Steve Wozniak shared. Woz delighted in doing something better, with fewer parts and more elegant engineering than anyone believed possible. He would go to one of the biweekly Homebrew meetings, pick up an idea or be spurred by a challenge that someone had posed, and work feverishly on a new schematic so that he could stand up and talk about it at the next meeting.

By the fall of 1975, Woz was proudly showing the pieces of a new printed circuit board, and by the end of the year he had built the second of two boards, both designed to drive a color display. Steve Jobs was impressed. Maybe this was what he had been looking for—maybe here was a product that he could build a business around. Of course, in the hothouse environment of the Homebrew Club, Woz was just another energetic enthusiast, and as other members started to mount businesses built around making personal computers, Woz's rough "breadboards" (engineering slang for rough mock-ups of products) attracted little attention.

Steve knew better, and he had faith in his friend's engineering prowess. He talked to Woz about turning it into a business, and Woz agreed to build printed circuit boards that a hobbyist could buy and then load up with components to create a "computer." Meanwhile, Woz continued working at HP and Jobs continued his night work at Atari.

When they were selling the blue boxes, everyone just called them by that name—"blue boxes"—but other hobbyists were already selling circuit boards. Wozniak and Jobs would need a name, a challenge that proved tougher than they'd imagined. Wozniak had his head in circuit design. Steve Jobs, the marketing guy, couldn't come up with anything that either of them much liked. One idea was a second-string choice that grew out of Jobs's admiration for pop lyrics and all the time he'd spent with back-to-the-earth friends on the apple farm in Oregon. Besides, "Apple" would come before "Atari" in the phone book. In the

end, with a self-imposed deadline for delivering partnership papers to the local newspaper for publication, they went with the gentle, non-threatening, hardly serious name of Apple Computer. (Eventually Apple would fight a long-running battle with the Beatles over the name, a battle that grew much worse once the iPod made its appearance and Apple moved to dominate the music industry.)

Wozniak bought in on the name but still had doubts about the partnership. Steve Jobs, the hard charger, had to keep his partner pumped up about the project. Woz didn't want to give up his day job, and his family questioned whether Steve Jobs was someone they wanted their son to hang out with, much less start a business with. Jerry Wozniak couldn't understand why his son should have to go fifty-fifty with a kid "who hadn't done anything." And Wozniak's new wife, Alice—he had gotten married a few months earlier at age twenty-five—was fed up with the way Woz had turned their apartment into a spare parts depot.

On April 1, 1976—April Fools' Day—Wozniak finally gave in, signing the ten-page document that gave him and Steve Jobs equal shares in the company, with 10 percent going to Ron Wayne, a Jobs buddy from Atari who had agreed to lend a hand. But none of the three, not even Steve Jobs, saw this as any grand venture. They weren't taking on the world; their big vision was to build the computer boards for $25 and sell them for $50. They hoped to make enough of a profit to earn back what they'd already spent on having Woz's circuitry turned into a professional design for a circuit board that could be built for sale.

Still, they weren't blind to the future possibilities. They called their first product the Apple I, clearly announcing their sense of more apples to fall not far from the tree.

The first challenge facing the intrepid entrepreneurs was the same one that has faced most entrepreneurs before and since: capital. Together, they could come up with only $1,000 cash. Woz sold his HP 65 electronic calculator for $500. Steve Jobs sold his Volkswagen bus for twice that, but the buyer paid only half because the van blew its engine within weeks of the sale. Together, this added up to a very meager bankroll. The picture didn't look any brighter when they took their printed circuit board to a Homebrew meeting one Thursday in April.

Woz stood up, showed the board, talked about the features, and sat down to a thunderous lack of interest.

Then the situation suddenly brightened, setting the stage for everything that lay ahead. As Steve Jobs later described it, "The guy who started one of the first computer stores told us he could sell [our circuit boards] as fully stocked boards if we could make them up and deliver them. It had not dawned on us until then" that the boards might have a bigger market if the purchaser didn't have to solder parts in place himself. The offer was all the more surprising because the man Steve was talking about—Paul Terrell, who had started what would become the first chain of retail computer stores, the Byte Shops—had met Steve at Homebrew meetings and had always avoided him. "You can always tell the guys who are going to give you a hard time," Terrell said later.

The Byte Shop needed product. Terrell was impressed by one demo at a Homebrew meeting and told Steve to "keep in touch." Steve showed up at the Byte Shop the next day, barefoot, to test the level of interest. Jobs was bowled over by the response. Terrell said he would pay $500 for Apple computers. And he wanted *fifty* of them—an order worth $25,000.

"That was the biggest single episode in all of the company's history," said Wozniak. "Nothing in subsequent years was so great and so unexpected." They were in business!

Or almost. Before they could build the computers, they had to have parts, and before they could buy the parts, they had to have money or at least credit. With the order in his back pocket, Steve traveled tirelessly all over the Valley, looking for funding. After a string of turndowns, he approached a big supply house, Kierulff Electronics. Bob Newton, the Kierulff manager, remembers Steve as "an aggressive little kid who didn't present himself very professionally." But he was impressed by Steve's driving intensity and said he would check with Terrell to confirm the order.

Anyone less determined than Steve Jobs would have said, "Okay, I'll call back in a few days," and left. Steve refused to leave until Newton had made the call. Terrell, it turned out, was at an electronics convention, where Newton finally reached him and got confirmation that the skinny youngster sitting at his desk really did have a purchase order for $25,000. That was good enough. Newton gave Steve a credit line to

purchase up to $20,000 worth of Kierulff products, but the credit was for only thirty days. Somehow, Steve would have to either deliver finished computers and collect the money to pay for parts or come up with another source of money within a month. Either too rash to understand the risk or too unconcerned to care that he might not be able to raise the money in time, Steve accepted the terms.

Perhaps the best description of high tech in that era came from Dick Olson, whose company assembled circuit boards by "stuffing" (attaching electronic components to them). The barefoot Steve Jobs, in his usual torn jeans, walked in one day to buy Olson's services on credit. Olson wasn't put off, commenting later, "I had learned one thing about the electronics business by then: you can't judge anybody by how young they are or how they look. The best engineers don't fit any mold."

Not long afterward, Steve showed up at the Byte Shop in Palo Alto with a dozen working computer boards—one quarter of the Terrell order. Terrell was not happy. It was a small matter of miscommunication: he had ordered computers. What Steve tried to deliver were plain boards. No cases. No power supplies. No keyboards. No monitors. As far as Steve and Woz were concerned, a fully loaded circuit board was "a computer."

Yet despite the misunderstanding, the boards gave Terrell one more product to offer customers. He accepted the boards and wrote a check for $6,000. That represented a profit for the partnership of $3,000.

By the end of the year, the fledgling company had delivered about 150 Apple Is, representing nearly $100,000 in revenue. Wozniak made almost as much from Apple as he had from his day job at HP. Yet he had no thoughts of walking away from the security of the regular HP paycheck.

In the fall of 1976, Steve Jobs worked very long days at finding the best hardware deals and drumming up new retail outlets. He was also looking for investors and for reliable people to help build the growing company. He was back together again with his high school girlfriend, Chris-Ann. She and Steve were still pursuing the way of Zen Buddhism, and at the zendo they occasionally ran into California governor Jerry Brown, another Zen devotee.

By this time, the Apple I wasn't selling very well at the Byte Shops, and Paul Terrell was thinking of dropping the line. That didn't deter

Steve. Competitors were making headway, and he was determined to outdo them. Meanwhile, Woz, much to the continuing chagrin of his wife, had covered nearly every surface in their kitchen with pieces for the new computer he was designing, which eventually became the Apple II. He had come up with a clever way to send color signals to a television set and was determined to provide plenty of extra expansion slots that would enable users to add cards to increase the functionality of their machines. That turned out to be a brilliant decision, but not for a reason anyone would have guessed at the time. The expansion slots would give developers an opportunity to coattail on the success of the Apple II by providing cards for the computer, increasing the value of the purchaser's machine while building huge revenues for one company after another.

Woz and Jobs also made a key decision about the operating system. The competitive Altair computer used a version of the BASIC programming language that had been written by a Harvard dropout, Bill Gates, and his sidekick Paul Allen, which they were selling to computer manufacturers at $500 for each machine it was installed on, a cost the buyers had to foot. The two Steves determined to provide a language that would be free to the user and would be stored on a chip on the circuit board. Instead of the customer having to first load the operating system each time he or she turned on the computer, before being able to do anything useful, the Apple II would load its operating system automatically, making startup much easier and more intuitive for the nontechnical user. This made the Apple machine the toast of a new generation of hackers who could write programs for the computer as soon as they unpacked it and set it up. Because Microsoft supplied this version of BASIC too, the Apple II was the Seattle company's most profitable computer platform until the IBM PC came along.

Another key innovation grew out of Steve Jobs's decision that the new computer should be *quiet*: it would have no fan. That was a fairly radical notion. Anyone else might have thought the idea absurd, but Steve just charged ahead.

His conviction grew as a result of all the time he'd spent studying Zen and meditating. He found the noise of a fan distracting and, in his intuitive way, was certain that consumers would be much more willing to buy a computer that didn't sit on the desk and churn loudly.

The main source of heat in a computer was the power supply. Getting rid of the fan wouldn't be possible without a different type of power supply. There was just one problem: no suitable unit was available anywhere. That didn't deter Steve. He simply went on a hunt to find somebody who could design one for him.

The man he found was Rod Holt, a forty-something, chain-smoking socialist from the Atari crowd who wanted to charge $200 a day. "We can afford you. Absolutely no problem," Steve assured him, even though they were essentially out of money. Undeterred by reality, Steve was trying to bring the Apple II to life on nothing more than moxie and energy.

"He just conned me into working," Holt said. And work he did—days, nights, and weekends. Week after week, the time that Holt ordinarily would have been out racing motorcycles he instead spent inventing a new power supply for Steve Jobs. To replace the conventional linear unit, which was heavy, hot, and based on technology more than fifty years old, Holt struck out in a new direction. He created a switching power supply that was much more complex but was also lighter, smaller, and cooler. The design substantially reduced the size required for the computer's case and met Steve Jobs's demand of making a fan unnecessary. It also revolutionized the way that power was delivered to electronics products.

In October, two men from Commodore came to see Jobs at the garage where Apple had moved its operations, and they wanted to talk buy-out. A Canadian calculator company, the firm had bought another hobbyist computer based on the same chip that the Apple II used—the MOS 6502—and was looking to expand. Steve was willing to consider it. He named the price: $100,000, Commodore stock, and salaries of $36,000 for both Woz and himself. The deal fell through, but you have to wonder what Steve Jobs and Steve Wozniak would have done with the rest of their lives if Commodore had paid the price and made Steve and Woz employees.

By summer 1976, Woz had made significant strides in designing the II. With the success of the Apple I the two friends had created, as well as the cash their fledgling business had already generated, they were primed to bring their improved machine to the world. That Labor Day weekend, they flew to Atlantic City for the first Personal Computer

Festival. They took along a working mock-up of the Apple II plus a cassette interface card (the precursor of disks) to store data that never worked very well. For the two Steves, the world's first personal computer festival became a very humbling experience.

It started on a red-eye flight to Philadelphia. On the plane, in addition to Jobs and Wozniak, were a number of other West Coast computer-niks. Most significant was the team from Processor Technology in Berkeley, whose members had with them a working version of the "Sol." Sheathed in a sleek metal stamped case with a built-in keyboard, the Sol was the first of the new generation of personal computers. It was self-contained and complete; it came fully assembled and ready to plug into a power supply and a monitor—and since it used the same microprocessor as the Altair, it was basically compatible with programs written for that predecessor. By comparison, the crude "cigar box" mock-up of the Apple II that the two guys from Cupertino carried with them was positively amateurish.

During the flight, Lee Felsenstein, the emcee of the biweekly Homebrew Club meetings, leaned over the back of his seat and talked to Jobs and Woz. Felsenstein, who had been a design consultant to the folks at Processor Technology, took one look at the crude circuit board, with its drastically minimized number of ICs and chips, and decided that "it was thoroughly unimpressive. All they had was a cigar box. I thought that Wozniak might be riding for a big fall. And I wasn't about to get in his way."

The convention was held in a decaying Atlantic City at a time before casinos appeared to revitalize that seaside resort. The buzz on the floor was all about what would happen to Ed Roberts and MITS, the company that had created the first hobbyist computer. The founder of Altair was casting about for buyers, and rumors swirled. Worried by the competition that suddenly erupted all over the industry, Roberts wanted out—but he was shrewd enough to know that he could probably still sell out for a substantial bundle of cash. Some of the biggest names in the retail electronics business were looking at the personal computer market—notably, Tandy, with its chain of Radio Shack stores, and Commodore, known for its aggressive marketing of calculators with inexpensive Texas Instruments chips during the early 1970s. Roberts was looking for a buyer.

While Roberts looked for cash, dozens of hobbyists and engineers wanted to take over the number-two position in the business. The Altair was still unquestionably the premier personal computer, but the explosion of retail stores and computer kit sales made it obvious by the fall of 1976 that there was a market for computers. The scramble for dominance was underway.

At that show, numerous new computers were on display. It was impossible to know who would succeed. But for Steve Jobs, a few things became evident as he walked around the convention floor. First of all, the new Apple had to be a complete, self-contained device to satisfy the new wave of computer buyers. Terrell, of the Byte Shops, had told him this, but as Steve saw for himself the second generation of machines that reflected this wisdom, he had to accept the message. A keyboard, too, was essential for input and programming, and since several of the new machines included keyboards, it was clear that to be competitive, the new Apple had to have one, too.

Then there was the matter of promotion. Apple had a booth that was fronted by a card table and framed by a row of yellow curtains, with another shoestring operation on either side. Its booth was decorated with a laminated copy of an article about Apple Computer in a hobbyist magazine and a single printed name card. It was far from impressive. Add the open-necked shirts, long hair, scraggly beards, and mustaches sported by Jobs, Wozniak, and Dan Kottke, who was helping out, and it all added up to an operation that didn't inspire much confidence. MITS and the newest companies on the block, IMSAI and Processor Technology, had enormous booths with all the flash, dazzle, and sizzle of trade-show hype—miniskirted girls, hourly demonstrations, three piece–suited marketing sharpies, and button-down engineers. While Apple was off to the side, where only dedicated enthusiasts bothered to go, the leading companies were out in the high-visibility center of the floor. None of the power brokers came to visit the Apple booth. The most unconventional of the computer companies, the one from deep in the heart of Silicon Valley, was all but invisible in the ballooning hype of the hobbyist electronics business.

Jobs and Wozniak's first complete circuit board, which they had thought of as "the Apple I Computer," even without the case, the power supply, the monitor, or the keyboard, cost around $250 per unit for parts and assembly. That was difficult enough for the two fledgling businessmen to raise. With the ambition of adding all the elements that the market seemed to require, Jobs knew that he'd have to find another source of capital. If he truly wished to make the kind of market splash that he envisioned for the Apple II, it would cost a lot of money. Furthermore, it required an expertise in public relations and advertising that neither Jobs nor Wozniak had ever encountered.

By the time Jobs left the Personal Computer Festival, he understood that to succeed with the new computer Wozniak had designed, he would require a new orientation to the business of computing.

Steve Jobs later explained the computer he led Woz to create as a result of attending their first computer show. "The real jump of the Apple II was that it was a finished product. It was the first computer that you could buy that wasn't a kit. It was fully assembled and had its own case and its own keyboard, and you could actually sit down and use it. And that was the breakthrough of the Apple II: that it looked like a real product. You didn't have to be a hardware hobbyist with the Apple II. That's what the Apple II was all about."

As pressure mounted in late 1976 to get the Apple II ready for market and to continue building the company, Steve Jobs showed an awareness of his own limitations, combined with an almost uncanny ability to hunt down exceptional people and cajole them into joining the effort. He had a salesman's enthusiasm for the product, an evangelist's bible-thumping passion, a zealot's singularity of purpose, and a poor kid's determination to make his business a success. In that stew of characteristics lay both the seeds that would make Apple a success and the poison that would turn so many people into Steve Jobs's enemies.

One unanswerable question is, Where does good taste come from? That fall, the semiconductor company Intel ran a clever, attention-getting advertising campaign that ignored the usual technical claims for its products and instead relied on symbols—poker chips, hamburgers, and race cars. Steve Jobs was immediately struck by the imagination that this represented and the way it spoke directly to the reader. This one ad would shape his attitudes toward advertising for all the years ahead. He called the Intel marketing department and managed to find out that the Regis McKenna Agency had created the campaign.

Steve called the agency and asked to speak to McKenna but was instead shunted to the man responsible for handling new accounts, Frank Burge. Frank listened politely to Steve's description of his company and where he wanted to take it, and then he tried to explain why Apple wasn't yet ready to be represented by an agency with the stature of McKenna.

Undissuaded, every day for the next week Steve called Burge and badgered him about coming over to see the new Apple product. Finally, Steve simply wore him down.

"As I was driving over to the garage, I was thinking, 'Holy Christ, this guy is going to be something else. What's the least amount of time I can spend with this clown without being rude and then get back to something more profitable?'

"For about two minutes I was just thinking of escaping. Then in about three minutes, two things hit me. First, he was an incredibly smart young man. Second, I didn't understand a fiftieth of what he was talking about."

"Incredibly smart" wasn't enough, however, and the agency still turned him down. Steve was determined, though. He called McKenna's office three or four times a day. McKenna's secretary probably got fed up answering the calls and, just to stop the persistent young man from bothering her, pressured her boss. McKenna took the call and was persuaded to let Jobs come in and talk to him.

The two Steves went together. During the conversation, Jobs mentioned an article that Woz had been working on for a hobbyist magazine, and McKenna asked to look at the draft, advising that it not be too technical. Wozniak, bristling, blurted out, "I don't want any PR man touching my copy!" To which McKenna retorted that then they had both better get out. Jobs calmed the ruffled feathers and convinced McKenna that they were indeed a viable company, with a superb product, and that he should take them on. When McKenna proved reluctant, Jobs pulled his now-customary tactic of refusing to leave the office until McKenna consented to handle the account.

Steve was so persuasive that Regis McKenna, in a decision that would turn out to be hugely beneficial for all of them, agreed to accept Apple Computer as a client.

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For Regis McKenna, it was clear from the beginning that Apple would be able to grow its sales only by reaching beyond the hobbyist market. And this path would require advertising in a widely seen, visible publication where no electronics company had dared to go before. McKenna wanted national attention, to make the media sit up and take notice of the little company with the garage-built computer. Where would you advertise to achieve a goal like that? Regis had the answer. All of his studies showed that computers were bought by men, so the advertising should go somewhere with a high male readership. He chose *Playboy* magazine.

Apple Computer now had a capable, brilliant agency and an astute media selection. There was just one problem: the company didn't have enough money to advertise in *Playboy*.

Money means something different in Silicon Valley; it simply does. The annals of the Valley are filled with stories of people who were at the right place at the right time. Still, finding working capital was another matter. Getting those lucky enough to become wealthy in Silicon Valley to open their wallets was a dance of an altogether different kind, which eventually would be called Venture Capital. Back then it was just difficult. McKenna suggested that Steve talk with a board member of his agency, a man who was also on the board of Atari: Don Valentine.

Jobs called Valentine and convinced him to come over and look at their garage operation. A self-made man, the son of a truck driver, and an ex-Marine, Valentine had successfully headed the marketing departments of both Fairchild and, subsequently, National Semiconductor. In the early seventies, he quit working for others and started a venture capital group. His reputation in the closed world of Silicon Valley was as a no-nonsense guy who knew the electronics world and wasn't about to be taken in by any hype. He also knew that some of these strange engineering start-ups were going to redefine the world.

Don drove a Mercedes Benz and was neat, well-heeled, and well-tailored, wearing Brooks Brothers suits in a business filled with engineers dressed in open-necked polyester shirts. When he showed up at Jobs's parents' house, the pair of scruffy thinkers he encountered were not his idea of a good business bet. After looking at their newest product and listening to their plans for selling a few thousand computers a year, he told them that neither one knew anything about marketing, neither had any sense of the size of the potential market, and they

weren't thinking big enough, as he recalled later. He would be willing to talk about investing only if they brought in someone who had marketing expertise. Jobs, with characteristic directness, asked him to recommend some of the people he had in mind. Valentine demurred. After a week of three or four phone calls a day from the persistent Jobs, the venture capitalist finally cracked open his Rolodex. Valentine suggested three names to him; one of them was Mike Markkula. (The venture capitalist learned his lesson, however—many years later when Valentine was approached by an equally odd couple, the founders of Cisco Systems, he agreed to put up the money to start the company.)

At the time that Steve Jobs called him, Markkula was enjoying a life of leisure. While a marketer at Intel in the early seventies, he had acquired stock options from other employees, in addition to the ones he himself had earned. When Intel went public, those options made Markkula rich overnight. He was casually looking around for other ventures to involve himself in, but with two small children, houses in Cupertino and Lake Tahoe, and enough money to keep him going indefinitely, he was in no hurry. Nonetheless, he agreed to come to the Cupertino garage.

When Markkula arrived, Jobs and Woz found him to be a short, slender, lithe man—he'd been a gymnast in high school. He was quiet, reserved, and precise, with wire-framed glasses and a diffident manner. He played the guitar, wore an expensive gold watch, and drove a gold Corvette. Like Woz and Jobs, he was a loner.

There was one very big difference: Markkula understood the effect that the microprocessor might have on the world. He understood that it was only a matter of time before someone came up with the right computer—one that made use of the microprocessor and did something more thrilling than display the time or add lines of numbers. And because he had worked for a company that supplied the consumer electronics world, he sensed how explosive the development of a new item could be. When the partners showed him their new machine and ran through a few displays, Markkula forgot about how Jobs looked. He forgot about where the company was headquartered. He forgot about all the reasons he shouldn't get involved. And he offered to help them draw up a business plan and get the venture off the ground. Woz was leery about bringing someone new into the venture, but Jobs knew that

he needed help to make Apple into the kind of successful business he had imagined at the Personal Computing Festival. And in Markkula, he recognized the type of quiet, relaxed, unassuming guy that he knew he could overpower.

Steve Jobs showed Markkula the vision and convinced him that they could change the world by selling computers to homes and offices. Markkula decided that he was right. He started to come by the garage. An engineer by training, he soon became intrigued by writing software and quickly developed into a full-fledged amateur hacker. He talked things over with Jobs, Wozniak, and Rod Holt, the power-supply engineer who had decided it was worth hanging around. (Ron Wayne, their original partner, had long since departed. "Steve Jobs was an absolute whirlwind," he said, "and I had lost the energy needed to ride whirlwinds." He's never had any regrets. "I made the best decision with the information available to me at the time." As of 1999, he was living in Tucson and still working in technology.) Pretty soon, Markkula was convinced that they could put Apple onto the Fortune 500 in less than five years. Time would prove him right.

Richard Melman, who had gotten to know Markkula when they were both at Intel, remembers a lunch the two shared late in 1976. "He told me that he had these two kids, and they were going to build microcomputers." Markkula pulled out his business plan, and Melman remembers it distinctly. "He told me that the company was going to be a billion-dollar business, and he showed me all his charts and graphs proving it. I remember walking away, thinking, 'That guy is crazy! How could anybody have the gall to say that he was going to build a billion-dollar company? That was bigger than Intel. He was nuts.'"

Markkula was convinced and very sure of himself. He started by offering Steve Jobs business advice, drew up that business plan mostly on his own, and stayed on to become Apple's principal early investor. His initial backing amounted to $91,000 in cash, with a personal guarantee on a bank line of credit for another $250,000—in return for equal one-third ownership with Woz and Jobs and 10 percent to Holt, who became a company engineer.

The founders gathered poolside at Markkula's home on January 3, 1977, where Mike and the two Steves spent the day arguing before finally signing the papers that turned Apple Computer Company into

a corporation. Part of the deal that Markkula insisted on was that Steve Jobs and Woz would become full-time Apple employees; Woz would finally have to bite the bullet and leave the security of his job at HP. But there wasn't any need to discuss the name: "Apple" was already too well known to even think about changing it.

Markkula introduced the team to Mike Scott, an executive at chipmaker National Semiconductor. Quite the opposite of amiable Markkula, Scott had the rough edges and sharp qualities of a street-smart guy who had succeeded on guts and determination. He and Jobs were cut from different cloth. Jobs didn't like Scott, and what loomed ahead was years of management struggle.

Nonetheless, Scott was hired with the title of president. Because there was already a Mike, he took the nickname Scotty and joined Bill Fernandez, Randy Wigginton, Chris Espinosa, and Rod Holt as the earliest employees in the trenches. The presidential salary would be $20,001. This was $1 more than any of the three major shareholders earned, but the power resided with Woz, Jobs, and Markkula, and Scott knew it.

Jobs and Scott fought over many things, some important, some trivial—who would sign the purchase orders, how the offices would be laid out, the color of the workbenches. They even fought over the awarding of employee numbers. Jobs was upset that he was designated employee number two, to Wozniak's number one. In tears, he demanded that he be given "number zero." (Jobs finally won that round, but not until a good deal later, when Scott was fired.)

At one point, Scotty took Jobs out into the parking lot for a walk, which was where most of the company's important decisions were made. But this wasn't about a company decision. Scotty brought up the delicate matter of body odor. Jobs, deeply dedicated to the fruitarian diet, was sure that because of the fruit, he didn't need to shower. The gist of the message was that no one in the office could stand to work near him.

As Apple sprang to life as a corporation, two Steve Jobs traits came into focus: his drive for perfection and the twin trait of impatience. He couldn't understand why everything he wanted seemed to take so long. This was especially true about the mysterious art of writing software—an even greater problem because Steve had so little understanding of the

process and even less awareness of the equally demanding chore of combing the lines of code for bugs. Worse, the company's entire programming staff was made up of two kids who were even younger than Steve.

Randy Wigginton started programming for Apple while still in high school, and he remembers, "I was just this kid to him. I was working for $2.50 an hour. And I'd get up at 3:30 in the morning and work from then until I went to school, then come back after school and work until 7 or 7:30 at night." But Randy had his eyes open when things started to come unglued between the two Steves. "The friendship between Woz and Jobs dissolved in that period. By the time of the Apple II introduction, there was not much pretense left. [Steve Jobs's] strength was that he was always concerned with the end-user—how things would look onscreen, what the case was like. But the way he went about telling us was so superior that we hated him."

If they couldn't agree on much else, at least Jobs, Woz, Markkula, and Scotty were all in accord that the company needed to make a major splash at the upcoming West Coast Computer Faire, the first major trade show on the West Coast. Jobs had had the foresight to sign up early—early enough to capture a booth position directly opposite the entrance doors, the first thing people would see as they walked in.

Markkula spent $5,000 on booth design alone, which was a lot of money for a small company in 1977. It featured a smoky back-lit Plexiglas panel with the company name and logo on it. Black velvet draperies wrapped the booth, which held three brand-new Apple IIs (the only three in existence) and one large-screen monitor displaying the antics of the games and the demo programs that Wigginton, Wozniak, and the other programmer, Chris Espinosa, had written. The contrast would be enormous between the Apple display and the folding tables with handwritten signs that other companies would be using—the same kind of makeshift arrangement that Jobs and Woz themselves had set up at their first show with the Apple I only six months earlier.

At the last minute, the new plastic cases for the Apple IIs were finally delivered. Steve had decided that the Apple II had to look like a KLH stereo—an integrated dorm unit then popular that had an appealing physical design. When he saw the cases, he was furious: they looked dreadful. He set the small crew of the faithful Apple employees to work sanding, scraping, and spray-painting.

The next morning, when the doors to the Faire were thrown open at 10 A.M., the first visitors to stream in found themselves face-to-face with the sleekest, most handsome, most professional-looking personal computer the world had ever seen. And when the guys manning the booth pulled the cases open, the hobbyists, the nerds, media people, and others saw the most advanced motherboard anyone had ever dreamed of. Woz had outdone himself once again, with a design that crammed onto the board sixty-two chips and ICs—an unheard-of achievement. And Jobs's overbearing demands that every solder connection be done with a neat, attractive straight line gave the workmanship a quality look that was as pleasing and surprising as it was unsurpassed.

People crowded around, unwilling to believe that the electronics in those small boxes could possibly be responsible for creating the dynamic images in vivid color on the giant television screen. Steve Jobs, looking almost dapper in his first suit, had to continually whip away the draperies to prove that there was no big computer hidden out of sight.

"After the Faire, we had a sense of exhilaration for having pulled off something so well, not just for Apple, but for the whole computer movement." That was the view of programmer Espinosa, at the time still a junior in high school.

Within months, Apple had received three hundred orders for the Apple II, already triple the number of Apple Is ever sold. But Steve saw to it that owners of the original Apples could upgrade; it was the kind of issue he intuitively understood. For all of his personal complexities, he always held to the ethic of "what was right," even when it was costly to the company. The upgrade policy would remain in place until Steve left Apple.

That summer, Steve Jobs lived in Cupertino with his friend Dan Kottke. Steve's on-again/off-again girlfriend, Chris-Ann, who by this time worked as an assembler at Apple, moved in with him. But an old problem followed them, a problem that has plagued many entrepreneurs and would plague thousands in the high-tech industry in the years ahead: the difficulty of a wife or a girlfriend competing with the mistress called "work." Chris-Ann was low on Steve's list of priorities. The problems between them grew worse when late in the summer she became pregnant.

For reasons that have never been clear, for years Steve Jobs denied that he was the father and refused to have anything to do with the idea of being a father to a child. Chris-Ann smashed the dishes, wrote on the walls, and broke doors and windows. Steve put up with her justified but unruly behavior until at last she adamantly refused to have an abortion. At that, Steve gave up on the relationship, and Chris-Ann quit her Apple job and headed up to the apple farm in Oregon.

Dan watched all this in disbelief. Through the years, he had listened to so many anguished distress messages and sermons from Steve about being abandoned by his parents. Now Jobs was willing to let one more fatherless child come into the world? To Dan, it just didn't make sense. Their friendship cooled.

On top of the battles with Chris-Ann at home, Steve continued his battles with Scotty at work. The standard warranty in the electronics business was ninety days; Steve insisted that they needed to sell the Apple II with a one-year warranty, understanding instinctively that you built a loyal body of customers by treating them well. Scotty was adamant. Steve started to cry. Scotty took him outside for another walk around the parking lot. When they returned, both had cooled down, but Steve prevailed: the warranty would be for one year.

Steve could infuriate his employees but at the same time stand on a pedestal as the creator of the dream and the culture, the crusader leading the charge. He was the guy who kept the Apple polished.

He could be the toughest son of a bitch in town, able to outmaneuver smart, experienced men twice his age. One day programmer Wigginton, working feverishly on a new version of BASIC, found that his six weeks of work had vanished from the Call Computer time-sharing system where Apple maintained an account. On its own, the firm could not yet afford the large computers needed for storage. Wigginton tried frantically to recover his work but couldn't. The time-share center had done a routine back-up, he learned, and somehow thousands of lines of his code had simply disappeared. He phoned the company and asked its employees to mount a tape reel with the previous back-up; though it wasn't very recent, it would at least mean that he wouldn't have to start from scratch. Alex Kamradt, the head of the company, refused. He hadn't liked the way that Jobs and Woz had treated him in the past.

Worse, Apple was going through a cash-flow crunch and hadn't paid its bill for several months.

Steve Jobs stepped in, cooled Kamradt down, and offered to pay him on the spot if he would come over and pick up the check. Kamradt agreed. Just before Kamradt hung up and started out the door, Steve convinced him to load the tape reel so that Wigginton could go back to work.

While Kamradt was driving over, Wigginton downloaded the back-up file, signed off the system, and left the building, followed by the rest of the staff, who guessed what was about to happen. When Kamradt showed up, Steve told him there was no check, he wasn't going to get paid because his computers had wiped out weeks of work, and he could go to hell.

It took guts for Steve Jobs to talk that way to a man like Kamradt, an ex-boxer with cauliflower ears, a mashed nose, and a short temper. Jobs, the skinny vegetarian for whom Zen meditation was the closest thing to exercise, stood his ground; if he ever knew fear at moments like this, he never showed it. Kamradt backed down and stalked out, furious but empty-handed.

When Steve had needed to make a decision about a case for the Apple II, he figured on selling about the same number of units they had with the Apple I, and he chose a less expensive process. Now the decision came back to haunt him: the machine tooling for the Apple II case gave out, and just at a time when customers were demanding machines, suppliers were demanding payment, and cash flow had dwindled to a trickle. Scotty had tried his best to juggle by making purchases on forty-five or sixty days' credit to delay the outgo, while selling to customers on thirty-day terms. But no cases meant no computers, and that meant no income.

Steve showed his usual business acumen by coming up with a scheme to solve the crisis. He offered the case manufacturer a bonus of $1,000 per week for every week ahead of schedule that he delivered. It worked. The new tooling was quickly finished, Apple had cases again and went back to shipping, and the desperate cash situation soon cleared up. The company had been within a hairbreadth of bankruptcy, only a few days from closing its doors.

Disaster had been averted, but Markkula realized that he'd have to find venture capital earlier than he'd intended. Between them, he and Scott loaned the company more than $200,000 as a stopgap while Mike "went to the well," searching for venture capital.

At the same time, Steve Jobs was undergoing a change—at least, in outward appearance. Though twenty-three years old, he was rich, if only on paper. His hair was just as long but now carefully styled, as he grew into the "wonder boy" role that the media labeled him with at Regis McKenna's urging. When Markkula and Scott flew to New York to present Apple's venture capital pitch in front of the Venrock investment group, they took the newly presentable Steve Jobs along with them.

The early computer boards—the kind that Woz and Steve showed at Homebrew meetings—had zero appeal to anyone but a hobbyist. Now, in 1977, with Apple sales humming along, the company still faced the main challenge that had plagued Apple and its competitors from the start: what's a computer good for? A number of people and groups were working on software packages that would begin to provide an answer, but until those useful packages appeared, consumers continued to see the computer as a toy.

Another problem was more fundamental. In operation, a computer must carry out streams of instructions in sequence, handle lots of incoming data, and spew out reams of results. At the very beginning of the computer age, instructions and data had been entered by throwing switches or plugging in patch cords. Advances had brought first the punch card, then reels of magnetic tape. Woz's earliest designs had involved typing in everything by hand, then using a cassette tape to store data. For personal computers, the disk drive, which used a big floppy disk made of magnetic material encased in a paper or plastic sleeve, was beginning to look like the solution of choice for storage.

At a landmark meeting of the Apple staff in December 1977, Mike Markkula turned to Wozniak and told him that Apple had to have a disk drive ready in time for the upcoming Consumer Electronics Show (CES) in Las Vegas. The show was one month away.

No one would have even presented such a challenge to anybody but Wozniak. The timetable was impossible, but *impossible* was a word that

Woz didn't seem to have in his vocabulary. With the kind of gusto he relished, he tapped young Randy Wigginton as a teammate and threw himself into the project.

"Christmas Eve of 1977," Randy said, "Woz and I finally got the disk drive to write and read something. And to celebrate, we went out and got a milkshake.

"The night before CES, we got to Las Vegas and it still wasn't finished. The hardware was working, but the software wasn't. So Woz and I would work on it for an hour, then go out and gamble for an hour. I was seventeen at the time, and we were out there throwing craps. We did that all night long, and I got no sleep. About seven o'clock in the morning I finally got it working, and Woz said, 'You had better back it up,' and I backed it up in the wrong way and destroyed what we had done in the last hour, and we had to do that over again."

Somehow they got it working in time, and the drive became the runaway sensation of the show. As usual it had the Woz touch: it used far fewer components than anything else on the market. The emcee of the Homebrew meetings, Lee Felsenstein, remembers seeing it there. "I nearly dropped my pants," he said. "It was so clever. I thought, 'We better keep out of the way of these guys.'"

On May 17, 1978, at the All-One farmhouse in Oregon where Steve Jobs liked to hang out with his Zen buddies and pick apples, Chris-Ann gave birth to the baby that Steve had tried so hard to deny. Steve appeared a couple of days later, stayed long enough to help select the little girl's name (they decided on Lisa Nicole), and promptly left. Over the next few months, he voluntarily contributed child support, then stopped. Chris-Ann let it be known that she would agree to a settlement of $20,000. Markkula encouraged Steve to up the figure to $80,000 and be done with it. Steve again insisted that he wasn't the father and refused to let Chris-Ann have any settlement at all.

Steve Jobs was a young man who had set the rules in life from a very early age. By refusing to go to high school, he had forced his parents to move to a new neighborhood. He had convinced them to let him attend a more expensive college than they could afford—then he dropped out. In business, he had coerced one established professional after another to work for him, extend terms that he insisted on, or in

some other way yield to his demands. Now he was faced with someone who wouldn't let him set the agenda. Chris-Ann had refused to get rid of the child, refused to acknowledge someone else as the father, and refused to disappear. This was bitter medicine. With the birth of the child, Chris-Ann had tied him down and thrown her anchor around him, and no matter how far Steve might run or climb, this child would always be there to remind him of that period of his life. For the first time, Steve was powerless.

He was still living in Cupertino in the house he shared with Dan Kottke, where they had had a long string of roommates, including a pair of strippers and a gun enthusiast who liked to shoot his Colt .45 pistols into the air.

Locating another lady to prove to Chris-Ann that their connection was broken became Steve's priority. Finding a new woman, however, was harder than finding a roommate. Steve had never been a womanizer. He found dating uncomfortable, small talk difficult, and the whole dating scene unappealing. So, instead of dating, he simply chose a woman he had already been thrown into contact with.

For Steve Jobs, the offices of his public relations guru, Regis McKenna, were proving an attractive place to visit. Any good PR man knows about keeping his clients happy, and Regis wasn't just one of the good, he was one of the great, continually coming up with strategies that broke the mold.

Part of the Regis formula for keeping his clients in a positive frame of mind dictated his staffing policy. Regis wasn't bashful about being obvious: if elegant, unusually attractive young women could help keep a smile on the clients' faces, then that's who he would hire. The McKenna staff was well supplied with head-turners. As part of the required uniform, McKenna demanded a cashmere blazer. One touch would signal the luxurious, sensual elegance of success.

One day Steve Jobs met a member of this McKenna harem, Barbara Jasinski, a striking beauty with a heritage that combined Polynesia with Eastern Europe. The combination was stunning. It wasn't long before Steve began heading to Barbara's tiny bungalow in the hills on most evenings.

By this time, while he still considered drugs an essential element in gaining perspective, he had all but given up using them. That

represented quite a change. Chris Espinosa, recalling how it had been at first, when he was still a teenager, said, "Every time I saw him, for years, he asked me if I had a girlfriend yet, or if I had dropped acid. That was all he cared about. It got so that I would be embarrassed before he even opened his mouth because I knew what he was going to ask. And since I had done neither, I dreaded it."

But if Steve's attitude toward drugs had now changed, his relationship with Apple president Scott had not. Things had grown so bad that their knock-down, drag-out confrontations had come to be known around Apple as "the Scotty Wars." One typical example: for Apple's first Christmas party, in 1977, Steve went wild when Scotty refused to tell the caterers that they should plan a vegetarian menu.

Scott got some of his own back when he learned that to relax the tensions of a tough day, Steve liked to immerse his feet in the toilet bowl and flush. The tale spread throughout the company, making Steve the butt of many jokes.

By 1978, the company had grown to a workforce of about sixty people, orders continued to pour in, and cash-flow problems were a thing of the past. Steve Jobs and Mike Markkula were looking ahead. They thought that the Apple II had about reached saturation; it was time to think about a new machine.

Customer feedback had already pointed out some needed improvements. Though it's a little hard to grasp this concept now, the Apple II displayed only capital letters, on rows that were only forty characters wide. Both of these shortcomings would need to be corrected if the machine was going to be considered a serious business computer. Plans were laid for an interim machine, dubbed the Apple II Plus, and for a major upgrade that would be released as the Apple III.

Steve would later say that you could start a new company with A players, and they would hire other A players, but that as soon as you hired a B player, he would hire others, and before long you had a company filled with B players and C players. In the view of Apple marketer Trip Hawkins (who went on to cofound Electronic Arts, the game maker), that was already happening. Apple had become a company that could do no wrong, Trip believed. "It was the Camelot of business. Basically, market demand propelled the growth of the company, and it

covered up a lot of mistakes. So you could have incompetent people running around spending a lot of money and it wouldn't be noticed because the demand for the Apple II was so strong." Inside the company, old timers called it the Bozo Explosion.

That problem of incompetent people infected the Apple III but wasn't the main source of difficulty. "Steve Jobs got involved in the Apple III in a way that was really disruptive," Trip explained. Steve had taken it on himself to design the external package, but he'd made it too small for everything the team had designed to go in the box. Steve refused to consider changes in the configuration of the case. When the Apple IIIs were shipped, they never worked properly. The fault was at least partly Steve's, but by then he was off to other things and had washed his hands of anything to do with the new product. The blame fell on the engineers.

In late summer of 1979, Apple sold $7,273,801 worth of stock privately, purchased in large blocks by sixteen buyers, among them some of the largest venture capital and merchant banking companies in the world.

One of the investors was Xerox Development Corporation, the strategic planning, acquisition, and venture capital arm of Xerox, where two men shared the task of finding venture-investing opportunities. One of them, Stevan Birnbaum, remembers that Jobs "projected the feeling that he was going to succeed with or without us and we'd better get on board." Despite the scruffy appearance of Steve and his partner Woz, the Xerox men decided to take part. Birnbaum's recollection is that "we invested $1,050,000." It proved to be a decision they wouldn't regret.

With a market now available for his shares, Steve Jobs sold just over a million dollars' worth of his personal holdings. At twenty-four years old, as a result of his own drive but partly despite himself, Steve Jobs was a millionaire.

He bought a house in the hillside town of Los Gatos, nestled up under the Santa Cruz mountains, and left it practically undecorated except for a painting by Maxfield Parrish, a well-known illustrator whose works now hang in New York's Metropolitan Museum of Art and elsewhere. The house was testimony to Steve's asceticism. It had no furniture other than cushions and a mattress on the floor of his bedroom.

He also bought the first of his Mercedes coupes. He added a BMW motorcycle with orange pom-poms on the handlebars, and he and Kottke went for extended spins through the mountains and back roads behind Stanford, skinny-dipping in a reservoir that was hidden by a slight rise from the stream of nine-to-fivers whipping past along Route 280.

The money Steve spent did not all go toward self-indulgence. He generously financed a charitable organization that provided assistance to blind people in Nepal and India.

The change in lifestyle was accompanied by a change in his outlook. Steve made a conscious decision to become more of a businessman. He was determined to learn what he could about running a company by paying closer attention to the business side of Apple and trying not to buck the system. He didn't give up Zen meditation, but he continued to keep his hair as neat as it had been for the investment bankers' session in New York, and he wore suits when he needed to.

By the late 1970s, most high schools in the country, in a perhaps misdirected effort, were attempting to prepare their students for the computer age by teaching BASIC programming as a standard part of the curriculum. A vast educational market developed for the Apple II, a market completely unanticipated by the company and never even mentioned in the original business plan. After students used the computers at school, the Apple II quickly became the brand of choice for most high schoolers bent on convincing Mom and Dad to buy them a computer for Christmas. In the early years, this surprise market sustained Apple.

It was also the year that a word processing program finally made it onto the shelves of computer stores. Called AppleWriter, it was created by a man named Paul Lukas, a hippie sitting in a cabin high up in the mountains of Oregon. The program worked hand-in-hand with the company's first printer, the Silentype, and heralded the start of a loosely comprehensive set of products. A Dow Jones stock market package had also been finished, as had a checkbook-balancing effort that Mike Markkula had worked on. At last, there were a few reasons for a businessperson to start thinking about owning a personal computer.

By now, the company had grown into a bureaucracy—albeit a benevolent one, with humanistic values, where no one was fired and where topics like the official company culture could be endlessly debated.

That summer, Steve Jobs agreed to a paternity test. In the days before modern DNA analysis, the report came back showing a 94.97 percent chance that he was the father of Lisa Nicole. Steve still refused to accept it and still refused to pay consistent child support. Chris-Ann ended up on welfare. It took a court order the following year, in an action filed by the County of San Mateo, to force his hand. Steve finally agreed to pay support, to reimburse the county $5,000 for welfare payments, and to provide medical and dental insurance.

He could be forced to pay, but the county would not force him to spend time with the child, and he steadfastly refused. Against all reason, he insisted that "twenty-eight percent of the male population of the United States could be the father." He justified his capitulation by saying, "I settled because we were going public, and it was consuming a ton of emotional energy. I had to get it resolved. I didn't want to defend a suit for ten million dollars."

For Halloween in 1978, Apple threw the first of what would become an annual extravaganza: the company Halloween costume party. Steve showed up decked out as Jesus Christ.

He thought it was funny. Most of the rest of the company thought so as well, but not for the same reasons. Those who believed in omens and destiny might have said it was a symbol that Steve Jobs's personality issues lay just ahead.

3

We would have these management retreats at spectacular resorts. There would be a couple of days of meetings and at night we would open the bar and dance until we dropped. This wasn't like working.

—Phil Roybal

Let's Be Pirates!

In January 1979, the last of several crucial elements fell into place.

A time would come later on when Steve Jobs would be tightfisted about letting anyone in the company give product away to contractors and supporters who contributed something to the company. In the early days, he was more generous. He sold an Apple II at cost to a man named Dan Fylstra, a Boston-based would-be software entrepreneur. Now, at the beginning of 1979, Dan returned with a program that two of his colleagues had produced. It allowed the user to enter numerical data in cells, rows, and columns and then manipulate it—multiplying the numbers, finding the average, and so forth. A whole table of numbers could be constructed—say, the sales figures for each month of the quarter for every sales rep in the region. You recognize the description: it was the first of the now-familiar computer spreadsheets. Perhaps most striking for people who saw the program was one essential feature that would make the electronic spreadsheet an immediate success: when the user changed a single number, every result was almost instantly recalculated.

Along with the Apple II's built-in programming language, expansion

capability, and disk drive, Fylstra's program, Visicalc, became the last of the essential elements that turned the personal computer into a must-have machine. When Visicalc shipped in the fall of 1979, it transformed the computer into a useful product for business, and it ran only on the Apple II. By the time versions came out for other platforms, Apple had taken over as the unchallenged dominant player in the personal computer market.

In the next year, sales doubled again. Apple Computer effectively had no competition.

Despite the successes, Steve Jobs wasn't happy. The Apple II was Woz's machine. Steve wanted a machine that everyone would know had been created by Steve Jobs. He wanted to show that he could do it, that Woz wasn't the only computer genius at Apple Computer.

Steve had in mind a new machine that would go well beyond anything anyone had ever seen or even dreamed of. He already had a name for it. In one of the strangest, most difficult-to-understand choices possible, Steve Jobs decided to give the computer the same name as the baby he at the time refused to accept as his own: Lisa. For many years, one of the great Apple insider games was for employees to outdo each other in coming up with plausible-sounding explanations for what the letters LISA meant in computerese. Few people were fooled.

The early Apple software developer Bruce Tognazzini understands the powerful frustration that must have driven Steve toward leaping into a project of his own. "Markkula never let Jobs have any power. No one in the early days thought that Steve was running anything. He would show up every once in a while and go on a tirade. But the reason we stayed at all was that none of us were working for him. We were working for Markkula, or Scotty, but not for Steve. If we had been, most of us would have left."

To write the Lisa business plan, Steve turned for help to Trip Hawkins, the marketer who had been hired by Apple with his MBA fresh in hand. The plan, he said, "called for a $2,000 system that would be based around a 16-bit architecture," and was to be a high-end office computer following the model of well-engineered Hewlett-Packard systems. With that vision in mind, Steve hired two HP engineers to take charge of the design.

Fine intentions. Steve's list of must-haves was long and continued to grow. Because he carried the title of vice president of research and development, his demands had clout whether they were reasonable or not.

Meanwhile, he conceived a scheme to pry open the door to Never Never Land, the Holy Grail of computer research: the highly secretive Xerox Palo Alto Research Center, referred to by everyone—often in awed tones—as "Xerox PARC." One apocryphal story says that he approached the Xerox Development Corporation (XDC), the company's venture capital arm, and told its representatives, "I will let you invest a million dollars in Apple if you will open the kimono at Xerox PARC." XDC's Stevan Birnbaum says that didn't happen. However he did it, Steve managed to get an invite for himself and several others. The $1 million that XDC had agreed to invest, in exchange for 100,000 Apple shares, may have been the key.

At the time, PARC was breaking new ground in personal computer technology, but no one within the company had been able to figure out how to build his or her great ideas into an inexpensive personal computer. They were hoping that Apple's interest might lead to some kind of joint effort. It didn't turn out that way.

After several meetings to lay the ground rules for admission to the inner sanctum, the day came when Steve, Scotty, computer scientist extraordinaire Bill Atkinson, and four other Apple guys were escorted into the demo room. PARC scientist Larry Tessler figured that "these were a bunch of hackers, and they didn't really understand computer science. They wouldn't really understand what we were doing, just see pretty things dancing on the screen."

Instead, Tessler witnessed a very different scene. "Atkinson was peering very closely at the screen, with his nose about two inches away from it, over my left shoulder . . . looking at everything very carefully. And Jobs was pacing around the room, jumping up and down and acting up the whole time. He was just very excited.

"Then when he began seeing things that I could do onscreen, he watched for about a minute and then he was just jumping around the room, shouting in the air, saying, 'Why aren't you doing anything with this?! This is the greatest thing! This is revolutionary.'"

Tessler was just as bowled over by the Apple crowd as they were by the PARC technology. "Nobody else who had ever seen the demo cared as much about the subtleties. Why the patterns were there in the title of the window. Why the pop-up menus looked the way they did."

Atkinson explained the group's awe. "I was aware of the theories behind most of what they were doing from the trade press. But the thing was, it was working. It looked nearly complete. If they could do it, then we could do it. It energized us. It gave us something to strive for."

What Apple saw that day was a display on which the user made selections, not by typing out cryptic commands, but by moving a pointer to designate the desired onscreen object. And individual windows for different documents. And onscreen menus. Today, this is the standard way that most people interact with computers, but then it was extraordinary. Up until that time, computers were controlled by typed commands, and the screens generally displayed nothing but letters and numbers. Here was a graphical user interface (GUI, as it would later become known) unlike anything ever seen on a computer screen before, and better yet, it was working. As if that wasn't enough, the computer (the Alto) also had a word processing program that displayed pages as they would look on a printer, had an art and drawing program, and featured a new kind of networking scheme—called Ethernet—that allowed many machines to share files and information in an office.

Most startling of all, a gadget was moved by hand across the desktop to control the insertion point onscreen: a mouse. While this wasn't brand new—a visionary named Douglas Englebart had created the prototypes in the 1960s at a project for the Stanford Research Institute (SRI) and the Defense Advanced Projects Agency (DARPA)—it was the first time it had been refined into an electronics product as opposed to a demo.

Larry Tessler had put on demonstrations for a lot of folks since arriving at PARC, but this crowd was truly different. "What impressed me," Tessler said, "was that their questions were better than any I had heard in the seven years I had been at Xerox. From *anybody*—Xerox employee, visitor, university professor, student. Their questions showed that they understood all the implications, and they understood the subtleties, too.

"By the end of the demo, I was convinced that I was going to leave Xerox and go to Apple." He did, becoming a vice president with the additional title of chief scientist.

On the drive back to Cupertino, Steve Jobs, still pumped and supercharged from the visit, turned to Bill Atkinson and asked how long it

would take to bring what they had just seen over to the Lisa. Atkinson, a brilliant programmer but short on experience with operating systems and user interfaces, guessed. "Oh, about six months." He was off by five years.

The enthusiasm generated by that visit to PARC would prove to be a blessing for everyone who uses a personal computer today, but it was not very good for the fledgling Lisa project at Apple.

The people who came together to build the Lisa manifested an elitism that was quickly obvious to the rest of the company; unless you were wearing an orange badge, you couldn't even enter their quarters—a spanking new building along Bandley Drive in Cupertino. But elitism doesn't guarantee results. "We just went crazy," said Hawkins. "Everybody. Steve included. Lisa became a kind of kitchen sink where we were trying to do everything that could possibly be done with a computer, and suddenly the cost factor, which in the original document was set at $2,000, just went out the window. The computer was eventually $10,000 when released.

"We made two radical underestimations: one was of how much things were going to cost; the other, how long it was going to take to do them."

Here, that stunning contradiction in Steve Jobs's personality was in full play. He could infuriate people he worked with every day, he could change his mind with startling frequency, yet he could keep the fires burning in the heads and hearts of the brightest people in the company. "One of his favorite statements about Lisa," Trip Hawkins said, "was, 'We'll make it so important that it will make a dent in the universe.' Now, on its face, that is a completely ridiculous idea. But people would rally around stuff like that, especially engineers who've spent their lives bottled up in a lab somewhere, missing out on all the fun.

"Steve has a power of vision that is almost frightening. When Steve believes in something, the power of that vision can literally sweep aside any objections, problems, or whatever. They just cease to exist."

The reason that Apple succeeded, Hawkins insisted, "is that we really believed in what we were doing. The key thing was that we weren't in it for the money. We were out to change the world."

That would happen, of course. But not with the Lisa.

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By 1980, Apple had burgeoned to 200 employees, then 600, then more than 1,000, with plants in Texas, Ireland, Singapore, and California. For most of the employees, it was no longer a place powered by passion but something that looked good on the resume.

In the late summer, Apple's organization suddenly changed again. The company had grown so large that the structure was unwieldy. Working in secret, Scotty and Markkula, together with only a couple of key managers, plotted a new structure of three divisions. There would be an Accessories Division, handling printers, add-on circuit boards, and especially a new disk drive the company was developing. The Apple II and Apple III product lines would be combined in a group to be called Personal Computer Systems.

Finally, there would be a Professional Office Systems division with one flagship product, Steve Jobs's Lisa. After the trip to Xerox, Steve had come back determined to build all he had seen into the new Lisa. But the team of "professional" computer scientists disagreed, and they fought him tooth and nail. Eventually Steve would win that battle, but he lost the war. Instead of putting Steve in charge of the Professional Office Systems division, the plan handed the responsibility to John Couch, who until then had been the vice president of software. The plan was announced to the management team, including Steve, at an executive retreat in late summer, and it came as a public slap in the face. Steve had been gunning for the title of vice president, New Product Development, which would have made him the unquestioned commander of the Lisa project. Now it had all been taken away from him, removing him from any day-to-day operating role in doing what he loved to do, the only thing he knew, his only real skill: building new machines by inspiring, and infuriating, small teams of hand-selected engineers.

To soften the blow, the new plan made Steve the chairman of the board. Scotty and Markkula tried to tell him he was needed in that position for the public stock offering now in the planning. Having a twenty-five-year-old as the head of what was by now a hundred-million-dollar company, especially a good-looking, media-darling twenty-five-year-old, could generate enormous publicity and pump up the stock price for the IPO.

Trip Hawkins remembers, "Steve's feelings were really hurt. He was unhappy about the way that Scotty had pulled this stunt without informing or consulting him—it was his company, after all! And he was really upset about losing direct involvement with Lisa. He was just really bent out of shape."

Worse, John Couch made it clear that he didn't want Steve meddling in the affairs of the Lisa any longer. Period.

It was Steve's first great humiliation. There would be others to come, but for someone to whom life had been so sweet, someone who was already becoming a media star, that first one must have tasted especially bitter. In another sense, though, his fortunes were about to change. Literally.

The second week of December 1980 was a time that seemed to have no anchor for Steve. On Monday, ex-Beatle John Lennon was murdered by a crazed fan. On Friday, Apple stock became publicly traded.

Apple Computer's 4.6 million public shares were sold within an hour. It was the most successful public stock offering in history up to that time and the most oversubscribed initial public offering since the Ford Motor Company went public in the mid-1950s.

The early private investors did very well. Among them, Xerox sold its Apple shares not long afterward. Xerox venture capitalist Stevan Birnbaum said, "Normally, a company provides us with a five-year plan as part of the investment process. The good companies accomplish the five-year plan in seven years. In the case of Apple, they had more than accomplished the objectives in eighteen months." The Xerox investment of $1 million brought a return of "over $30 million," Birnbaum said. To this day, he's still impressed with "how two very young men without college degrees, money, or experience" went on to build a Fortune 500 company in less than five years.

Overnight, Steve Jobs was worth $217.5 million dollars, making him one of the country's richest self-made men. He had moved into the rarefied territory of storied wealth. In a much-repeated quote, with no source ever cited (in other words, maybe he never said this, but it's so good that if he didn't, he *should* have), Steve supposedly announced, "When I was 23, I had a net worth of a million dollars. At 24, it was over ten million dollars. At 25, it was over a hundred million."

When Steve was later asked about the effect of so much wealth, he named "visibility" as the principal factor. "There are tens of thousands of people who have a net worth of more than $1 million," he said. "There are thousands of people who are worth more than $10 million. But the number who have more than $100 million gets down to 100."

He was not only super-rich, but the youngest of the super-rich. To the public he was an icon—a handsome young bachelor with a winning smile, a technology groundbreaker who was defining the new world we would all live in. He was doing it with an exuberance that was still a little coarse, but this would smooth out before too long. It could even be seen as one of his charms.

In material terms, Steve could now have whatever he wanted. More important, the money carried power. Before, Steve had been only as strong as his ideas; if he couldn't convince Scotty, Markkula, and the executive staff, his product ideas and goals came to nothing. Now it would be different. Now he had a cudgel to wield. He would cement his position and gain loyalty. He understood the power of greed, and he would use it.

Somehow, the people who had already given him loyalty were not part of the equation. Steve denied options to many of his peers who had founded the company with him. It was a bizarre, virtually incomprehensible decision that fired up a stream of anger and disgust among the crew who had with little complaint put in the painfully long hours, week after week and month after month, to make the company successful in the early days. Bill Fernandez, the company's first employee, was also first out the door when he discovered that he wasn't getting stock while newly hired engineers were. "I felt I was doing all the donkey work and that I would be a technician forever," he said. (Eventually he returned.)

Chris Espinosa and Randy Wigginton didn't receive any options from the company, either, but they fared better. Out of generosity, as well as a sense of fairness, Woz in 1980 started a private sale and giveaway of his stock that he called the "Wozplan." Under it, he distributed about eighty thousand shares, roughly one-third of his holdings, to his family and a long list of deserving (and even some undeserving) friends and acquaintances, including a real estate developer who had befriended him.

Tightfisted Steve tried to make it sound as if it was his cofounder who had it backward. "Woz ended up giving stock to all the wrong people. Woz couldn't say no. A lot of people took advantage of him." Strange criticism from a man who was incredibly stingy about giving shares that could have made his family and closest friends fabulously wealthy. He even shut out Chris-Ann and Lisa, after making sure that the legal agreement calling for him to support his daughter was signed and sealed in advance of the public offering. For years, on occasions when Chris-Ann found money tight for herself and her daughter and gathered the strength to ask Steve for a little help, he invariably refused.

Steve's longtime college friend Dan Kottke, who had journeyed with him to India and had shared the Cupertino house with him, was still a technician at Apple in 1980. Kottke asked Steve about stock options a few times. "He told me to go see my supervisor." Kottke was so distraught over the situation that early in the countdown to going public, he appealed to Markkula and Scotty. They agreed that he was deserving and granted him two thousand shares. But that was a pittance compared to the rank-and-file engineers, the guys who had come in after Kottke, who were given one thousand shares of "founders stock," which after splitting several times amounted to thirty-two thousand shares on the day of the public offering.

Steve had intentionally kept one of his oldest friends from receiving any stock. It was as if he needed to demonstrate the power he had, to prove that he really was the boss. But there was another, more powerful reason. Kottke, with his gentle manner, had provided Chris-Ann with a shoulder to cry on after the break with Steve.

Somehow, Steve had decided that a sense of *loyalty* was a virtue of overriding importance. Intelligence and loyalty—these were the two qualities he had come to measure people by. Kottke passed the first test but perhaps, as far as Steve was concerned, had failed the second. If Kottke wasn't going to be loyal to Steve, the door would be closed to him.

Freezing Kottke out of the IPO was an early example of the demands that Steve made then, and still makes today, on his friends, associates, and employees. If you are part of Steve Jobs's world, you will be loyal to Steve in all things. In some cases, that has meant being sentenced to a Jobsian Siberia for life.

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As the holiday season arrived in 1980, Steve felt personally unsettled. He had just signed his child-support papers but had not made any effort to see his daughter since her birth. He couldn't seem to finish remodeling the Los Gatos house, and it remained nearly empty of furniture and interior decorations. At work, he could make snap decisions about aesthetics, but when it came to his personal life, he was indecisive. Worse, he was learning that his new role as company whiz-kid-without-portfolio was unsatisfying and unrewarding as the Lisa project scurried along without him.

Then a computer in the R&D phase—one that he had tried to bury several months earlier—caught his attention. The experimental machine was the brainchild of a Renaissance man and computer scientist by the name of Jef Raskin. Raskin had been hired at Apple to create its technical documentation and manuals. He was a former professor at the University of California at San Diego (he had taught Pascal [a computer language] programming to Bill Atkinson) and was a world-class organist. Eventually, with the stock options he received from Apple, he built a concert hall on his property in the Santa Cruz Mountains and hosted small recitals.

Jef was driven by the possibility of creating a small, inexpensive computer for the masses. He had formed a small group and with amazing speed had produced a working prototype over the Christmas holiday of 1979. In keeping with the spirit of the company name, he dubbed his invention "Macintosh," after his favorite type of apple. Yet he had made a mistake: the name of the fruit is spelled McIntosh. He had misspelled it. In the long run, it didn't matter. The computer became far better known than the apple ever was, and since the introduction of the computer, the name of the apple has been misspelled.

Raskin had a vision of a computer that would be a complete "canned" solution and saw his Macintosh as a "toaster," a self-contained appliance with no add-ons. What you bought was all you needed. He also had very strong ideas about ease of use. You would switch on the machine and begin working immediately, without the bother of loading software or entering arcane commands. The machine would be easily portable and would sell for around $1,000, which meant that Apple

had to be able to build it for about $300. He saw no need for graphics, however, and certainly no need for a mouse. Of the system he had seen at Xerox PARC, the only thing he liked were the windows.

The circuit board for the new machine had been created by Burrell Smith, a gnomish, self-taught digital hacker who had been discovered wasting his talents in the company's service department. He was the kind of eccentric, off-the-wall talent that serious computer designers disdained. Secretive and aggressively self-assured, he was cut in the mold of Woz, a designer in the hurry-up mode. He also had the raw mental capacity to keep all the elements of a circuit board design in his head at once and then, again like Woz, to minimize. This was the essence of great digital design, and it was close to being a black art.

Burrell was just one example of the kind of people Raskin surrounded himself with. Raskin had assembled a rat pack of computer engineers with fire in their bellies, the kind of talent most companies would not put up with, the kind of talent that made Apple great. Working on the fringes of the corporate freight train that was Apple by late 1979 and 1980, spiriting parts and scavenging components out of engineering labs in the dead of night, Raskin's group made incredibly fast progress.

What they were doing caught the attention of Apple II hacker Andy Hertzfeld, who was working for the company writing programs. He visited their lab in February 1980, saw the Macintosh prototype for the first time, and was captivated. He sat down at the bench and in a single, manic session that same night managed to bring up the first images on the prototype's screen. He wasn't then free to join the team but had instantly become one of them in spirit.

The Macintosh had been in and out of favor for the better part of a year. Raskin's pipe dream would be canceled and then reinstated. Steve was one of the first to abandon the project in mid-1980, when he was in the midst of designing Lisa as a real product. "Jobs said, 'No, you can't do this,'" recalled Raskin. "'This is wrong. Apple needs Lisa, and this will interfere.'" Steve lost that battle; Scotty kept the R&D project alive by hiding it from Steve.

Raskin's team was clustered in the same suite of offices where Apple had started, the space behind the Good Earth restaurant on Stevens Creek Boulevard. Meanwhile, many of the other employees—a still

rapidly expanding number—had moved to a row of low-slung, adobe tilt-up buildings along nearby Bandley Drive, under constant construction after 1979.

By early 1981, Steve was looking for a new product to pour his enormous energy into, and despite his earlier resistance, Raskin's Macintosh now caught his eye. Ousted from the Lisa team, and with his money from the IPO and his new role as chairman, Steve needed to find something to do. He was intrigued by Raskin's concept of an appliance computer that was as easy to use as a toaster, but he started pushing for the machine to be built around a different computer chip, the Motorola 68000. The idea of a change at this stage annoyed Raskin, but Steve saw advantages in using the 68000—primarily that this was what the Lisa team had used and it would enable Apple to move the new Lisa graphical look to the machine—and commanded that the new prototype be built with it. Raskin was the sergeant to a lowly squad of soldiers and was greatly outranked by Steve. He could do nothing but smolder inside as his project was hijacked.

In fact, the personal attention of General Steve inspired Raskin's team, but it was a double-edged sword. One Mac team member complained of the change that had taken place in the work environment. Steve Jobs, he wrote in a memo to Raskin, "seems to introduce tension, politics, and hassles."

By Christmas, the tireless Burrell Smith had already managed to get a new design working with the 68000 chip. Steve came by and was pleased to find Burrell at work over the holidays. He appreciated employees who worked ridiculous hours, as he did himself. Smith explained to Steve how his prototype, supposedly for a machine that would be a more affordable baby brother of the Lisa, had a clock speed nearly twice as fast.

With that, the bells went off in the company cofounder's mind.

As Steve looked at the crude working model that Smith had produced, it suddenly became clear that the Macintosh could be the Apple II of the eighties, a computer that could deliver the technology of the future—the ease of use that a graphical user interface and a mouse heralded—at a remarkably low cost. It was an extraordinary design. Iconoclastic, unique, and uncommon, but it worked.

The Lisa, an official project on Apple's books with a workforce of twenty-four hardware engineers and countless software programmers, was slogging forward. Their combined efforts had managed to produce a single working prototype, hidden away in a closed lab in one of the Apple buildings along Bandley Drive. The machine was built around five circuit boards and a number of custom components. Meanwhile, over in a tiny suite of rooms sequestered away from the rest of the company, a long-haired engineer had made a new computer in a few weeks that was twice as fast and could be sold for one-third the price. It relied on a single circuit board and contained nothing but off-the-shelf parts. *And yet it had a graphical user interface, too!*

Marketer Joanna Hoffmann recalls the time vividly. "It didn't take long, once you saw the gleam in Steve's eye, to see the writing on the wall for Jef. Steve was going to get what he wanted."

It wasn't just the machine that fueled this new fire in Steve Jobs's gut. It was the team, this little band of kindred souls, these five people who were working on the Macintosh with such enthusiasm and renegade spirit—the same kind of passion that had created the Apple I and the Apple II. Steve no longer had to subjugate his outlaw spirit to the corporate process, rewarded with little but his unceremonious booting off the Lisa project; here was the kind of dedication he understood, the kind he loved. These were crusaders like himself who thrived on the impossible.

Steve would inspire this little-noticed team in a corner of a forgotten building. He would show them all—Scotty, Markkula, the whole company, the entire world—that he could lead them to produce a remarkable computer. Not the way that the newly bloated bureaucracy had mismanaged the Apple III and threatened to mishandle the Lisa. He set off with guns blazing to make the Macintosh the world's next groundbreaking computer.

Steve began his campaign with Jef Raskin, pitching him the idea of the Macintosh becoming *the* computer, the next giant leap. He made it clear that he wanted to get more involved in the project. Raskin was flattered but worried: the two had already butted heads.

When Raskin took his complaints to Scotty about Steve's interference, the company president saw it as a way to separate the disruptive

Steve from the rest of the company, even at the expense of sacrificing Raskin. At the corporate level, Markkula and Scotty were only too happy to let Steve get involved in Raskin's project. With the Macintosh group housed in an isolated location—an arrangement Jef had originally requested precisely to keep Steve from sniffing around—now that very isolation could work perfectly to keep Steve caged up and out of everyone else's way. Raskin had asked for support and instead got sandbagged.

One of Steve's first acts as general manager of the Macintosh project was to hire the key people who made the Apple II happen: Woz (though this was primarily for show and to lend legitimacy to the team), Rod Holt, Randy Wigginton, Jerry Mannock (who had designed the Apple II case), and even Dan Kottke and Bill Fernandez. The Apple veterans joined Burrell Smith, programmer Bud Tribble, Stanford electrical engineer Brian Howard, and marketer Joanna Hoffmann on the infant project. Steve also commandeered a new space, relocating the team into another building that Apple was leasing, a place known to everyone as "Texaco Towers" because of its proximity to a gasoline station.

The entire group moved into the new quarters in early 1981 and tackled the work of turning the Macintosh prototype into a bona fide computer product. Steve, the master of unrealistic goals, announced that they were to have the machine ready for market in a year. All they had were the basics of the hardware. No operating system, no applications, nothing but a few demos. It was a ridiculous timetable.

Yet Steve had that magical, uncanny power of persuasion. The team drank his Kool-Aid and accepted his timetable. "He has the ability to make people around him believe in his perception of reality," said Bud Tribble a few years later. "It's a combination of very fast comeback, catch phrases, and the occasional very original insight, which he throws in to keep you off balance."

When Steve set up camp with the Macintosh group, the project gained a halo that Raskin never would have been able to bring to it: their own evangelist, someone with the mantle of celebrity who made everything he did seem a little larger than life. Steve had the religion of personal computing, and he was a true apostle. He could rattle the windows, shake the pulpit, and make the congregation stand up and shout, "Praise the Computer!"

But he was more than just a preacher in the religion of Computer; he was chairman of the board of the whole corporation. He could get funding, he could get scarce equipment, and he could protect his team from other managers. If someone from outside the project hassled team members, they had only to mention it to Steve. "All we had to do was complain about someone," one team member said, "and it was like unleashing a Doberman. He would chew the guy's head off so fast that our heads would spin."

Jef Raskin was treading on thin ice and knew it. All through January, Raskin and Steve skirmished with each other. Raskin was no fool; the Macintosh held the prospect of turning into the project of a lifetime. He had conceived the notion of a small, neatly packaged, affordable computer. He had pulled together this remarkable team that had breathed life into the concept. Now an outlander was trying to replace him as head of the team.

In the middle of the Jobs-Raskin wrangle, everyone at Apple was brought up short. Early in February, Steve Wozniak suffered a serious accident. An enthusiastic pilot, he had begun a flight in his single-engine Beechcraft Bonanza when, he now says, he "tried to take off without adequate airspeed." The aircraft stalled—the wings losing their lift—and he crashed. The company waited breathlessly as he lay in the hospital, moving in and out of consciousness. Steve Jobs hired a limo to ferry Woz's distraught parents to the hospital. He could make grand gestures; it was the small ones he had more trouble attending to.

When Woz eventually gained consciousness, he suffered from amnesia and had no recollection of what had happened. He had to ask his wife why he was in the hospital. Though he doesn't like to talk about it these days, he acknowledges that it was five weeks before he could recall the event.

Back at Apple, Steve Jobs continued in his attempts to wrest control of the Macintosh from Raskin. At one point, he had tried to undermine an in-house presentation that Raskin was scheduled to give by trying to convince his rival that the session had been called off. Raskin responded with a closely reasoned memo to Mike Scott, detailing nearly a dozen ways in which Steve wasn't competent to run the Macintosh project. Typical was the item that read:

> 9. Optimistic estimates. Jobs was wrong on his Apple III schedule, wrong on the LISA schedule, wrong on the cost and price estimates, and he will be wrong on Macintosh. He is a prime example of a manager who takes the credit for his optimistic schedules and then blames the workers when deadlines are not met. His cost estimates are often based on unrealistic assumptions about the elasticity of prices of parts.

Someone showed the memo to Steve, who became furious. That afternoon Markkula got Jobs and Raskin to sit down in the same room with him to find a resolution. Steve was in tears—he was always quick to cry when he couldn't have his way—and announced that he couldn't possibly work with Raskin any longer. Raskin, who must have sensed that the chips were stacked against him, said that he couldn't work for Steve.

By the time the meeting was over, Steve Jobs was the new head of the Macintosh project. Jef Raskin didn't even get a consolation prize; he would take a vacation, probably to save himself embarrassment in the humiliation of defeat.

If the world were always just, Jef Raskin would be remembered as the genius behind the Macintosh. The world is not always just, and history does not always remember those who should be its heroes. In this case, the computer that Raskin imagined was very different from the Macintosh that was eventually produced. The true father of the Mac as the world knows it was Steve, its adoptive father.

It was a couple of days before Steve Jobs's twenty-sixth birthday. He had won yet another battle.

By the winter of 1981, Apple was a four-year-old swollen bureaucracy where the employees acted as if they, not the stockholders, owned the company. Some senior executives felt that too many new hires were taking it easy, assuming that Apple would never get rid of anyone; so far, no Apple worker had ever been formally fired. In the Valley, working at Apple was now looked on as a guarantee of lifetime employment.

First thing in the morning on a dark and rainy Wednesday that February 1981, employees were notified of an all-hands meeting in the

company's underground parking garage. Programmer Donn Denman recalls, "Scotty stood up and started talking about how Apple had grown too fat, and he was going to have to fire some people. He was going to be calling people into his office through the morning, he said. And then he dismissed us. The whole place suddenly went silent. Who was on the list? None of us had any idea if we would make it through the day or not."

Employees soon discovered that those who still had their jobs at the end of the first hour weren't in the clear. The firings happened in spurts. Everyone walked around wondering if that day would be his last. Gradually, it became obvious that if your manager got fired, you might as well start packing. Incompetent department heads weren't just fired; their entire workgroup was wiped out, no matter how valuable the contribution that some of the individual workers had made.

Steve Jobs had been consulted in advance about the firings and had given his stamp of approval, but now he tried to distance himself, leaving the impression that Scotty had acted on his own.

The bright young programmer Andy Hertzfeld was devastated. His cubicle neighbor and software project partner had been fired. How could he go on with his project when the other guy working on it was gone? He went to see Scotty the following morning and told him that he was leaving. Scotty asked Hertzfeld what could make him stay. He mentioned several projects, but the only one that mattered to him was the Macintosh. Steve Jobs went to Hertzfeld and shanghaied him: ignoring Hertzfeld's objections that he had to finish up what he had been working on before he could leave, Steve unplugged Andy's computer, put it in the trunk of his car, and drove the bewildered programmer to the Macintosh building. Andy wanted Macintosh, and Steve wanted Andy. It was a done deal.

By February, Woz had been released from the hospital but hadn't fully recovered, and it wasn't clear whether he'd be coming back to work.

Bill Atkinson was the closest thing that Apple had to a mad scientist. With wild blue eyes, a shock of unruly hair, a gentle voice, and retiring manner that often gave way to a prankster's hearty laughter, Bill fervently believed that the computer creator's mission in life was to

design machines that would make computing continually easier for the user. Most of all it had to be *fun*.

Unlike the tasks that most people perform to earn their daily bread, programming can be utterly absorbing. A programmer who's truly worthy of the name, when confronted with a particularly arresting challenge, is likely to work straight through without stopping until he has defeated the devils that have hidden the solution from him. Bill Atkinson was that type of programmer. One morning after an all-night session when he had made major breakthroughs, he dozed off in his sports car, drove into the back of a big rig, and sheared off the top of the car.

When he came to several hours later, he was lying in a hospital bed. Sitting at his bedside was Steve Jobs, asking, "Are you okay?" It's not that Steve was worried about possible delays to his beloved Macintosh project—Atkinson was working on the Lisa where he was creating the graphics primitives (essentially the programming routines to draw things onscreen, eventually called QuickDraw) that would allow Apple's next generation of computers to look like Xerox's. Steve revered Bill because he was a certifiable genius; Bill was the first of the superstars. From that day on, Bill Atkinson's heart was with Steve and the Macintosh.

Steve had not wavered from his deadline, still holding to the demand that the Macintosh be ready for the market in twelve months. Because no one had ever written software that displayed graphical images onscreen, the amount of effort required to manipulate every dot (that is, picture element or "pixel") all the time turned out to be prodigious. What made the job so frustrating for the team members was Steve's apparent total inability to overlook any detail of the project. He was a micromanager to the nth degree. He cared passionately about the smallest of items. Eventually the final result was better for it; however, the path was tortuous.

Donn Denman, the young programmer who was working on a Macintosh version of the programming language BASIC, called it "hands-on management." Steve, he said, "would march right into your cubicle, invade your space, sit right down, and start playing with whatever you were working on. He'd make comments and suggestions about making something easier to use or better looking. He didn't really know what you were doing on the technical level, but he was real interested. Then he'd be gone, and you wouldn't see him for a long time."

The team members found that they had to develop a strategy for dealing with Jobs. "The goal," Denman said, "was to do something neat to show him by the next time he came by.

"We all had a joke about Steve. If you wanted to get him to agree to a new idea, something that was a good idea but that he hadn't thought of, you told him the idea, and then just let him reject it. A couple of weeks later he would come rushing over to you and tell you how he had just had a great idea and would proceed to tell you the same idea you had told him before." As far as Steve was concerned, it was now *his* idea, so he had no problem with it being incorporated into the design.

Though the whole team recognized this trick of Steve's, of playing your own idea back to you, no one knew whether it was calculated or something Steve did without even realizing it. A phrase sprang up in the group to describe this annoying tactic. Jef Raskin said, "We called him the 'reality distortion field.'" Who first used the phrase is shrouded by the mists of time; Andy Hertzfeld thinks it was Bud Tribble. But it's colorful enough that writers ever since have continued to regurgitate it to explain a wide variety of Steve's decisions and mistakes.

Yet even though Steve didn't understand the details of the technology, he was still determined to put his own personal stamp on some significant part of the project. The single area that didn't require technical knowledge was the case. He took that as his own domain.

Steve's style of working on a problem was to think about it constantly. If you started up a conversation with him, or, more likely, he started one with you, he would immediately launch into a question about how you thought the problem should be solved. As soon as you reacted, he decided one of two things: either you knew nothing significant that could help him solve the dilemma, which meant that he would say nothing further on the issue and would march away, or you had some insight into the situation. His answer, even if he thought your reply offered a valuable insight, was usually a variation on the phrase "That's s——t"—his stock reply to either situation. If he considered you a worthy person, he would explain why your ideas were garbage and his were the only right way to look at the situation; if he didn't think you were worthy, you'd be left just with the garbage.

One day Steve went into a design meeting with a telephone book, and threw it on the table. "That's how big the Macintosh can be. Nothing any bigger will make it. Consumers won't stand for it if it's any larger.

"Hey, and there's something else. I'm tired of all these square, squat boxy-looking computers. Why can't we build one that's taller, rather than wider? Think about it." And he walked out.

People in the room took a look at the book and blanched. That phone book was about half the size of any computer ever built. It was impossible, Burrell Smith decided—the electronics he needed could never be put into a box that small.

Steve wasn't someone who took no for an answer, at least not from people who worked for him. His demand, unreasonable as it sounded, was a wakeup call for everyone on the team. Steve expected a revolutionary machine; they would create one for him. It was the same dichotomy all over again—finding Steve annoying, frustrating, intolerable, and yet answering his clarion call, marching to the beat of his drum, willingly, even gladly.

Over the next weeks that spring, various Macintosh case mock-ups were tried out on the team, vertically oriented designs lined up for their inspection and comment. The basic look of the machine was quickly set, and it changed very little over the years. It met Steve's requirements of small and vertically oriented. The basic model that was to become so popular would offer a black-and-white screen and one built-in disk drive with a provision for adding another. In a decision that became the source of continuing controversy throughout all the years of the machine being on the market, there would be no expansion slots to add to the machine's capabilities with hardware cards.

It was as if he had taken part of the toaster idea from Raskin's original concept—after all, there aren't any upgrades to those—and held onto it religiously, even though it was a bad one in light of the computer that the Mac became. Worse, it rejected one of the crucial reasons the Apple II had been a success: expandability. For Chris Espinosa, "rejecting everything Woz" was a big part of Steve's motivation on the Mac. Steve knew the answers, even if they were totally wrong some of the time, and the combined force of his personality, wealth, media fame, and arrogance set them in stone. Of course, what made his abrasive personality acceptable was that more often than not he was right.

. . .

In the aftermath of Black Wednesday, a whispering campaign built up against Scotty, with the flames being fanned from the human resources group, which was appalled by Scotty's treatment of people in meetings. The water-cooler gossip saddled him with sole blame for the firings, while Jobs and Markkula, who had both acquiesced, had left him to take the heat alone. When people turn against someone, little things that they do get blown up into major grievances and add fuel to the fire. Scotty had made a comment one day that Black Wednesday "was just the beginning," leaving a lot of employees walking on eggshells and wondering if they should be updating their resumes. And Scotty probably thought he was showing enthusiasm and encouraging devotion to the company with his little stunt of looking over a cubicle wall and asking, "Are you working your ass off?" The natives were thirsting for blood. Scotty seemed to be sealing his own fate.

When he returned from a Hawaii vacation in late March, Mike Markkula called Scotty to a Sunday evening meeting and told him that the executive staff had requested his resignation. Markkula would take over as interim president.

The decision played right into Steve's hands. Scotty was a potential roadblock for a Macintosh project that had Steve at the helm. Markkula, on the other hand, while smart and shrewd, would never be successful in standing up to Steve's drive and determination. For a chairman of the board with limited real control, Steve couldn't have asked for a better turn of events.

Still as determined as ever to get the Macintosh finished and on sale by his original target date, Steve Jobs demonstrated his commitment to his already frenzied team by betting the Lisa project manager $5,000 that the Mac would ship before the Lisa did. It only made the atmosphere in the Texaco Towers offices even more insane.

Then, in May, Steve came to a decision that in hindsight probably made all the difference between a late, overblown project (or possibly even a complete failure and cancellation) and the stunning success that the Macintosh eventually turned out to be. Instead of developing software for the new machine in-house, Steve turned to outside

sources. Like all such pivotal decisions, this one also sowed the seeds of the Mac's losing battle with the IBM PC family of computers for marketplace dominance.

In part, the decision may have grown out of a selfish, power-hungry motivation. On both the Apple III and the Lisa projects, Steve had been pained to discover that the larger and more bloated the teams became, the less control and influence he had. It was standard at this point to have Apple people develop Apple software, but that might mean he would lose control of the Macintosh project as he had of the earlier ones. He was determined not to let that happen. This meant enlisting other companies in the industry to help him write software.

Steve was surrounded by young people. Some of the best Apple talent was even younger than he. Youth seemed to equate with ability, dedication, and forward thinking. When Steve thought "young" and "software" in the same sentence, the name that first came to mind was Bill Gates. Sure, he was something of an enemy, but it's better to know your enemies.

Microsoft was already a success, but compared to Apple it looked more like a wannabe, and Gates himself looked like a wannabe who might be dreaming of being as rich as Steve Jobs someday. Gates had a streak of the daredevil about him and an arrogant show-off attitude that made him appreciate Steve's willingness to espouse the unconventional. He was a reserved and intensely focused young man, but with the twinkle of the Homebrew hacker about him as well.

Up to that point, Microsoft's most important product was a programming language—BASIC—that ran on many computers. It enabled programmers to create applications, but its most successful platform was the Apple II. Woz had included a version of BASIC, licensed from Microsoft, on the motherboard of the computer, and as the machine became the dominant computer, Microsoft's revenues soared. When IBM looked for a partner to help it write the software for its new personal computer—as yet unannounced in 1981—the company's engineers headed to Microsoft.

Steve invited himself up to look around and to sit down with Bill Gates and Paul Allen at their corporate headquarters—then, as now, in Redmond, outside of Seattle. At an early spring meeting, the three talked about their goals for their companies. Then Steve launched

into his pitch. He waxed poetic about accessibility, the mouse, and the desktop metaphor.

The two young whizzes disagreed violently about the market for the personal computer. Steve foresaw a loose intellectual coalition of college students and educated, progressive homes, maybe combined with a still-fuzzy constituency of middle managers and secretaries. Gates, on the other hand, was strongly influenced by IBM's centrist view that computers were utilitarian business tools. There was no room in that scene for the emotional attachment to computers that Steve Jobs described.

Steve insisted that words couldn't adequately convey the essence of the machine. Gates and Allen would have to visit his lab in Cupertino and see this remarkable new computer for themselves.

After Steve left, Gates and his team decided to go for it. They were too sharp not to play both sides of the fence. They could see the Lisa as a possible winner, and Steve Jobs's low-cost version just might be a runaway hit.

The Microsoft crowd arranged to troop down to Cupertino and stayed there till late afternoon, now convinced that Apple was onto something special. Bill Gates committed his company to writing major programs for Steve's machine. Their work for IBM involved creating system housekeeping software—essential, but not sexy. Now, application programs—those were the sexy projects that could get a programmer's heart beating fast. Developing the "killer app" was where the glory lay. And that's what Steve dangled in front of them like a carrot. They snatched at it. Microsoft named their project Sand. It was based on a vision that Steve spun for them about a factory sitting on a beach, where sand would go in one side and finished computers would come out the other. (Silicon, the key component of most transistors, is present in sand.) As they were working for the relentlessly unpoetic IBM personal computer, which was about to be released that summer, the Mac gave them something to dream about.

The next month IBM introduced its version of the personal computer. It was exactly the kind of computer that everyone on the Mac team was expecting. It was large and clunky. It introduced no new technology. It was difficult to learn to use. It was the furthest thing possible from Lisa or Macintosh. The Mac guys went out and bought one as

soon as it was available, late in August. Then they tore it apart. All of them were relieved that it was as inelegant and unwieldy as it was. They were sure that their new computers would destroy IBM's challenge as soon as theirs were announced the following year.

For his part, Steve saw it as a battle, a race to save the world. It felt right for him to be the underdog, the unlikely David to IBM's Goliath. "It is coming down to Apple and IBM," he said once. "If, for some reason we make some big mistake and IBM wins, my personal feeling is that we are going to enter sort of a computer Dark Ages for about twenty years. Once IBM gains control of a market sector, they always stop innovation. They prevent innovations from happening.

"If you look at the mainframe marketplace, there's been virtually zero innovation since IBM got dominant control of that marketplace fifteen years ago. The IBM PC fundamentally brought no new technology to the industry at all. It was just a repackaging and slight extension of Apple II technology, and now they want it all.

"Apple is providing the alternative."

While Steve downplayed the technology of their computers, Apple also took out a famous ad in the nation's newspapers that combined an elitist sense of the company's destiny with an overblown prose style that was just a teensy-weensy bit too self-righteous and self-serving:

> WELCOME IBM.
>
> SERIOUSLY.
>
> Welcome to the most exciting and important marketplace since the computer revolution began 35 years ago. And congratulations on your first computer. Putting real computer power in the hands of the individual is already improving the way people work, think, learn, communicate, and spend their leisure hours. Computer literacy is fast becoming as fundamental a skill as reading or writing. When we invented the first personal computer system, we estimated that over 140,000,000 people worldwide could justify the purchase of one, if only they understood the benefits. Next year alone we project that well over 1,000,000 will come to that understanding. Over the next decade, the growth of the personal computer will continue in logarithmic leaps. We look forward to responsible competition in the

massive effort to distribute this American technology to the world. And we appreciate the magnitude of your commitment. Because what we are doing is increasing social capital by enhancing individual productivity. Welcome to the task.

It was a very smug ad, especially, coming as it did, from a firm less than one-tenth the size of IBM. As events would work out, IBM's release of a personal computer was very good for Apple. It legitimized the market. It brought enormous amounts of publicity to Apple as the only real competition to IBM. It strengthened the company's role as the underdog, a role that many wished to identify with. The year 1981 was the watershed for Apple in terms of name recognition. As the year started less than 10 percent of Americans knew what Apple was. By the end of the year that figure was up to 80 percent. IBM's introduction of its machine, no matter the technology, was the best thing that could have happened. The fact that the two firms were so very different—one Californian and liberal, the other East Coast and buttoned-up—only served to further highlight Apple. The introduction gave the Macintosh and Lisa teams even more impetus to make sure that they brought out their revolutionary new machines soon, to show the world just how stodgy IBM was—and how brilliant Apple was by comparison.

Of course it didn't quite work out that way in the end.

By July, the Macintosh was beginning to shake down. The basic design and the circuit board layout were close to final. The machine would come with an internal disk drive, the same one that was used in the Apple II. It would have 64 kilobytes of ROM—the read-only memory used by the hardware. It would also have the same amount of RAM (random access memory, used by the software), though Burrell Smith had devised a way of doubling the RAM to 128 kilobytes. That was secret knowledge, however, talked about in whispers because it had been done in defiance of Steve Jobs, who had decreed that there could only be one memory configuration.

That same month Steve completed the first draft of the Macintosh business plan. It called for introducing the computer in mid-1982, at the same time as the Lisa and the new model Apple II. The price of the Mac 1 would be $1,500, including software, falling to $1,000 for the

Mac 2. The Macintosh would achieve first-year sales of 500,000 units; Steve had made up the number out of thin air and had repeated it so often that it became accepted as fact.

People around the company were beginning to wake up to a problem that Steve had tried to hide, a problem that now began to smell like a mackerel rotting in the closet. He was targeting the Macintosh for the office environment, the same segment of the marketplace that the Lisa had been designed to reach. It was a disaster in the making: two computers reaching the market at the same time, targeted to the same customers. That was bad enough, but one of them, the Macintosh, would be more compact, faster, and far less expensive. It wasn't a game that any sane product manager would want to play.

The Macintosh was still being carried on the Apple books as an experimental project. The time had come for Steve to go hat in hand to Mike Markkula, still serving as president, and argue for the Macintosh to be accepted as a serious project. When he came to the question of markets in the plan, Steve slighted the topic with a dismissive "Macintosh is aimed at the markets Lisa does not address." To Markkula, who had apparently not yet gotten wind of the problem and besides was no marketing guru, the explanation apparently passed without notice. The power of Steve's vision and the good business sense of selling an inexpensive machine that offered all the power and the features of Lisa carried the day. Backed by Markkula's approval, the executive staff and the company's board approved the change of status. Macintosh was a real product. Macintosh was official.

Steve accepted the need to push back the first shipment date to October 1, 1982. Even with that delay, the schedule was still as unrealistic as ever, but Steve couldn't see it. He still wouldn't let practical realities get in the way of his determination. He was convinced in his own "feel" for the marketplace. Much later, he explained, "We think the Mac will sell *zillions*, but we didn't build Mac for anybody else. We built it for ourselves. We were the group of people who were going to judge whether it was great or not. We weren't going to go out and do market research. Did Alexander Graham Bell do any market research when he invented the telephone? Of course not."

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In February Steve took the Macintosh team to Pajaro Dunes, a posh seaside resort on the ocean a hundred miles south of Cupertino, for the first of what would become a continuing series of retreats. Steve Jobs opened his appearance in front of his group by writing a slogan on the board, a kind of rallying theme for the meeting. This time it was "The Journey Is the Reward." When he was done, he sat down and for the most part just listened. Each group in turn updated the rest of the team on what it had recently accomplished and what challenges it was currently tackling.

These events were already something of a tradition at Apple. "Apple was very much like a club," according to Phil Roybal. "We would have these management retreats at spectacular resorts. There would be a couple of days of meetings, and at night we would open the bar and dance until we dropped. This wasn't like working." In later years, the Macintosh retreats would be imbued with a kind of magic for all participants.

By early 1982, the team was filled with the kind of computer-niks who could find work anywhere in the Valley. Most of them were male, white, and middle class—there were no blacks, few Hispanics, and, other than Steve's personal assistant, no Asians. They were all college educated, bright, and homogeneous. Every new candidate for the team had to pass muster with everyone already in place. Forget the human resources–style psychological tests; Steve had his own set of questions. Two of them were, "How many times have you taken acid?" and "When did you lose your virginity?" He didn't care about the answers; the idea was to weed out the wimps who were no good at thinking on their feet. The other key test was to play one of the videogames in the common area of the Bandley building with Burrell Smith or Andy Hertzfeld: if you were good enough to keep up with them, you were a viable candidate.

Steve was not only very rich but pulling a quarter of a million dollars a year out of the company in salary, yet he refused to let any of his engineers receive more than $30,000 a year, the lowest salaries of any engineers at Apple. He considered anyone working less than eighty hours a week to be wimping out.

They all shared one attribute: they cared more about building an amazing computer and shocking the world with it than they did about anything so ordinary as money, career paths, or tradition.

At the same time, they could laugh at themselves. "One of the requirements for employment was a love of pineapple pizza," Chris Espinoza recalled. "We actually asked that. I mean, if they didn't like the same kind of pizza as we did, how could they come out to dinner with us?"

The relationship between Steve and the team always had plenty of rough spots. He rarely liked people's wives or girlfriends—he thought they could do much better and said so. It had become a running joke within the group that eating out with Steve was an exercise in embarrassment. First, there was the issue of sending plates back. He rarely accepted the first plate brought to him; he would find some reason to send it back. It would be "s——t," or dirty, or not what he thought the waitress had described. Another plate would be brought, and often that one would go back, too. It was like a power trip gone mad. Some screwy internal need made him play out the same pathetic scenario over and over. The waiter had to grovel. It was as though the gods had showered this young prince with money, power, and adulation but had failed to grant him humility or grace. He was an unmannerly brat with $200 million in the bank.

Then there was the uncomfortable ritual about paying a restaurant check. Andy Hertzfeld remembered one typical occasion: "When the bill came, Steve said something like, 'Well, I don't have any cash. All I've got is a credit card.'

"That was all I had as well, so I said so, and he replied, 'Great, you can pay for it then.' It took him years before he paid for anything. He never had cash with him, and whenever we went out with him, we had to pay. I think it had something to do with not wanting to be taken advantage of. Or maybe he was just a skinflint."

Mike Murray offered a bit of his own psychological analysis. "Steve just doesn't have the limits that the rest of us do. Because of his background and his early success, he doesn't have any boundaries. He doesn't know that anything is impossible because, well, he's always been able to do anything he wanted. So even as he's being a jerk, he's got this incredibly seductive aura around him that keeps you bound to him, keeps you near the flame, keeps you on the team."

If Steve hadn't become much more sophisticated in his approach to business, his personal life was a different story. He was managing the

transition from rich kid lacking in polish to a smoothly groomed young prince. In 1982, he was named by Governor Jerry Brown to the California Commission on Industrial Innovation, which provided an opportunity for Steve to hobnob with the likes of the chairman of the Bank of America and his childhood idol, David Packard of Hewlett-Packard. The rich are treated deferentially by maitre d's, car salesmen, and other ordinary folk; the very rich are treated deferentially by everyone, even by presidents. Steve found that prominent people wanted to hear what he had to say. He was considered a great innovator. Steve Wozniak, by returning to college to complete his degree, had left the scene of the action, leaving Steve Jobs to garner the praise, the acclaim, and the attention.

On the romantic front, Steve had split up with his long-term girlfriend the year before and was making the rounds with one after another in a string of girlfriends. Mostly blond, not overly made up or aggressive, and often students at Stanford, they were the typical California beauties that a young millionaire might be expected to pursue. Steve was always the center of attention, and the woman lasted only as long as he was interested.

Then singer Joan Baez entered his life. She was older—old enough to have been involved with the Beat Generation and the early counterculture, but, more to the point, with Bob Dylan, Steve's only enduring cultural fixation. Furthermore, she was a little wild and a little scandalous, having publicly announced, in the midst of the frenzied but still considerably more conservative seventies, that she had slept with a woman. Steve was always trying to be as different as possible, and the entirely distinctive Baez was a good catch. For Baez, always looking for a new experience, Steve and his wild crew were an interesting diversion.

A part of Steve badly wanted to settle down and have children, but another part of him was constantly at war with the notion. He liked his life as it was and didn't want anything to do with a traditional family life. He had at last begun to see his daughter Lisa, however. According to a fictionalized version written by a novelist who hews closely to real life and was in a position to know the true story, the girl at age ten was discovered one day in the yard, curled up asleep, dirty, and ragged. An envelope was pinned to her sleeve, addressed to her father. Nearby sat an old Ford truck, "rusty as something in a junkyard," which she

claimed to have driven there herself. The child accepted "Tom"—the Steve Jobs stand-in—as her father, and he didn't deny it.

With Bill Atkinson, Steve admitted to occasional feelings of wanting a family. Over dinner one night with a group of the Macintosh gang, Steve agonized over Baez, lamenting, "If only she were of child-bearing age, I'd marry her." In fact, she was forty-one, an age when many women still have babies.

Steve came to see his Macintosh crew as a gang of pirates, and he was the pirate king. He had shanghaied the best people from the rest of Apple to join his renegade crew. And from the Lisa project he and his gang had stolen everything worthwhile, taking the best ideas worked out by that team over three years, while profiting from the team's worst mistakes by avoiding unproductive paths. His guys worked in splendid isolation, and they did so at a pace that put the rest of the company and the entire computer industry to shame. They would bring the greatest computer ever to market in less than two years.

By the end of June, they had the entire design on a computer wired up on the lab bench, ready for full testing.

"About then, Steve was getting nervous," said Martin Haeberli, a chip designer Steve had personally hired away from Xerox to develop an integrated chip for the Mac. "And Burrell was getting nervous because we still had nothing to show." Steve, though, instead of being frightened by the ticking clock, asked Burrell to investigate whether he could possibly design a Macintosh using a different kind of chip, called a PAL, that would create a greater number of dots on the screen.

"Burrell disappeared for about a month," Haeberli said, "and when he came back had a working design. Meanwhile, I had been shepherding [the original chip design] and we were about to get our first test chips back. Unfortunately, they ran about 40 percent slower than necessary. Ultimately, the decision was to go with the design Burrell had created by himself in a single month."

The company that would have manufactured the original chips, VLSI, was notified that Apple would not be using its chips after all. VLSI had already incurred huge development costs, overrunning the budget by more than 50 percent, because being a supplier to Apple seemed so valuable, and the company wanted to ensure that it would be

a long-term relationship. Steve had originally signed the letter of intent committing to a deal worth $250 million; now he offered to settle for $100,000. The offer was an insult, but Jobs was adamant, and VLSI ended up taking a bath and writing off a huge loss.

The Macintosh team that showed up for the second retreat in late September, again held in Pajaro Dunes, was nearly one hundred strong.

The slogan Steve wrote on the blackboard this time accurately captured the spirit of the group: "Let's Be Pirates." It brought a roar of approval. Then he wrote another line that goaded the group, yet fired up their dedication: "Working 90 hours a Week and Loving it!" He could probably have made the slaves building the pyramids or the rowers in a Roman galley thrilled to be whipped, as a reminder that they were taking part in a noble effort.

With the stagecraft of a magician, Steve then pulled out a sweatshirt that had the "pirates" phrase emblazoned on it and pulled it over his head. Soon everyone at the retreat had one.

Of course, no one pretended this was a democracy. A handful of the sweats also had a tiny line of type over the left breast: "Macintosh Staff." They might have been a merry band of pirates, but there was still a distinction between those who swabbed the decks and those who ate at the captain's table.

The retreat was a sharing of information, to bring everyone up-to-date on how each aspect of the development was proceeding. It was also designed to keep the ardor at a fever pitch. Despite all setbacks, Steve was determined that they would ship the Macintosh the following May, no matter what. The schedule had slipped, but he was certain that it was now on track.

Meanwhile, in the fall of 1982, back in Cupertino, the Lisa was nearing release for the following spring. Journalists were brought in for an early look, and their reactions were encouraging. At the same time, dealer orders poured in for Apple II Christmas sales, leapfrogging ahead of any earlier Apple Christmas, even as the company readied the Apple IIe in the wings. Revenues continued to soar, and Steve was in the midst of his infatuation with Joan Baez. The world looked very rosy.

On the downside was the still-unresolved question of the Apple

presidency. Steve Jobs didn't doubt that he was fully competent to run the company, but he was the only one on the board who thought so. A lengthy search had not produced any interested candidates strong enough to please the board. Late in 1982, news came that a feeler had been put out to the president of Pepsi, John Sculley. He was told that working in Silicon Valley was the "equivalent of being in Florence during the Renaissance," but it hadn't been enough to convince him even to consider the position.

Another problem was the name: "McIntosh" turned out to be a name already in use by McIntosh Labs, a manufacturer of high-end audio systems. Despite the different spelling, both companies were in the business of manufacturing electronics gear, which meant that the trademark office would not allow Apple's use of a name that, although spelled differently, was pronounced the same. The head of McIntosh Labs, a white-haired gent in his seventies named Gordon Gow, declined to sell the rights. Steve's troops had coalesced around the product named Macintosh; they were emotionally invested in the name, and it had come to symbolize everything they had dreamed of. Having to find a new label for their computer was bitter medicine.

The first issue of *Time* magazine in 1983 featured Steve Jobs's face on the cover. Late in 1982, Time, Inc., had advised Apple that the magazine, for its traditional New Year's issue, would honor the personal computer as "the machine of the year." The magazine's San Francisco correspondent, Michael Moritz, had been given carte blanche by Apple and spent several months around the company researching the story. On New Year's Eve, a courier showed up to hand Steve Jobs the first copy of the magazine to appear on the West Coast. He flipped through the magazine and found a full-page portrait that carried the title "The Updated Book of Jobs."

As Steve started to read it, he felt something was very wrong. The text was clever but barbed with phrases like "a blind faith that would have been the envy of the early Christian martyrs," which seemed to be making fun of him. Wozniak was quoted as saying that "Steve didn't do one circuit, design or piece of code," and someone identified only as "a friend" was quoted as saying, "Something is happening to Steve that's sad and not pretty, something related to money and power and

loneliness." Bad enough that this unnamed "friend" was attacking him, but *Woz*—his old companion in pranks, his cofounder. Here was disloyalty in spades.

As if to underscore its point, the article was illustrated with a photo of Steve sitting alone, cross-legged, meditating in a sparsely furnished room of his house. An anonymous employee turned the knife with an incisive, highly quotable phrase: "He would have made an excellent King of France." Any reader would finish the piece convinced that Steve Jobs was a man without creative or design skills who had contrived to make his fortune on the backs of others. (Moritz turned the article into a book about Apple called *The Little Kingdom*; it was the first of the Apple books, excellent and heavily researched, and it fleshed out the unflattering portrait of an unfeeling wunderkind. The author ended up a venture capitalist with Don Valentine's firm, Sequoia Associates, and was instrumental in the start-up of both Yahoo! and Google.)

Few could take such a blow and keep right on going. Steve couldn't, either. He canceled his New Year's plans, stayed home, and spent the night thinking. He wouldn't let it get to him. He would prove they were wrong. He would bring out the Macintosh, and they would eat their words.

At the same time, any thoughtful, introspective person would have paid attention to the criticisms, decided which seemed to have validity, and given some serious thought to making changes in his life. Or at least trying to. But not Steve Jobs.

At 8 A.M. the next morning, New Year's Day 1983, Steve called Jef Raskin. He wanted a shoulder to cry on, and Raskin's was the one he chose. It gave him no pause that Raskin was the man he had forced out of the Macintosh project after a bitter fight. For Steve, the past was irrelevant. Only the present mattered.

He had learned nothing.

May 16, 1983, was another tough day for Steve. From the previous retreat, months earlier, it had been the date that Steve had pinned all his hopes and dreams on—the date that he had promised himself and sold to his loyal team members as the ship date for the Macintosh. It was a date written in stone—or at least on T-shirts, but it wasn't to be. The

Lisa was released then, and the company insisted the Macintosh not be released before its big-sister machine. The delay turned out to be a good thing.

The third Macintosh retreat lacked some of the sizzle of the previous two. For one thing, it was not being held at the fancy Pajaro Dunes but at a motel in Carmel. It also came on top of news about the delayed ship date and a critical problem with the disk drive: the floppy drive for the Lisa, and destined for the Mac as well, was fatally flawed.

For Bill Atkinson, though, the big issue of the day was something quite different. Atkinson now had the title of chief software architect for Apple's graphics and pixel-based displays, and he deserved much of the credit for what made the Lisa and the Macintosh so different from an IBM PC: their on-screen appearance. Now Atkinson was fuming, absolutely beside himself with rage, frustration, and bitter disappointment that he couldn't keep bottled up inside.

Ordinarily mild-mannered and soft-spoken, Atkinson had gained Jobs's trust years earlier when he stood up in a meeting where Steve was spewing some outrageous technical gobbledygook, and yelled, "Steve Jobs, you're an asshole!" and then walked out.

Steve had reacted exactly the opposite from what everyone expected. He called Atkinson the very next day, invited him to dinner, and the two became close friends—or at least as close as Steve ever allowed anyone to become.

Now Atkinson had had enough. "Bill told Steve that he was quitting," said Hertzfeld, the only witness to the screaming match that erupted. "He was upset because in all the publicity about the Lisa, in the hours of interviews, the pages of articles, there wasn't a single mention of his name. He was the guy behind it. Without him, there would have been nothing. Without his breakthrough routines to allow us to quickly and easily draw the screen, there would have been no Lisa and no Macintosh. But it was as though he didn't exist.

"He was crying and screaming. And Steve was screaming back at him. It really tore me apart. Here were the two people I respected more than anyone else in the world, and they were completely out of control."

Steve walked out of the shouting match, down the hall, and into the room where the team was assembled for the retreat. It was like the

argument had never happened. He was Steve the magician; Steve the preacher, leading the prayer meeting of the faithful; Steve the drummer, sounding the beat for everyone to march to.

At the front of the room alongside him was the first working big-screen Macintosh, a prototype of the machine they were going to ship. Steve picked up a half-empty bottle of Perrier, walked over to the Mac, and dramatically announced, "I've just been talking to the folks at McIntosh Labs. We got the name.

"So I christen you Macintosh."

And with that, he poured the bottle of mineral water over the machine. The room erupted in pandemonium. Everyone stood and started cheering.

It was absolutely the right thing to do. He hadn't been talking to people at McIntosh Labs, however, and they hadn't agreed that Steve could use the name. He simply knew that he needed a big gesture to galvanize his team for the final stretch, and he was right. It worked.

For once, though, Steve Jobs must have admitted to himself that what he had done was wrong; either that or he recognized that Bill Atkinson was too valuable to lose. He pulled some strings behind the scenes, and within two weeks, Atkinson was named an Apple Fellow—the highest recognition for scientists within the company. The designation brought more than just an honor; with it came a significant jump in salary, a handsome pile of stock options, and the freedom, like a "university professor" at Harvard, to pursue whatever he was interested in.

After the retreat, the "pirates" theme proved to be a powerful glue for holding the team together. It captured a sense of "us against them" that emphasized how different these people were and how different their computer was, setting them apart from the rest of Apple. Someone even tacked up a Jolly Roger pirate flag, complete with skull and crossbones, on the inside of the Macintosh building.

Late on a Sunday night not long afterward, one of the young software engineers on the team, Steve Capps, along with team member graphic artist Susan Kare (who created the look of all the icons for the Mac), came up with the in-your-face idea that the pirate flag should fly from the roof of the building. They found a spare board lying around, fastened the flag to it, climbed up, and mounted the board so the flag was prominent, unmistakable. The next morning it caused a sensation.

To the Macintosh crew, it was a symbol of their uniqueness. To every other Apple employee, it was a challenge. Some found it an insult—especially to the Lisa team, which was located across the street.

Here was a tiny group of people with, yes, smaller salaries but an inordinate number of enviable perks—fruit juices, leased cars, larger office cubicles, video games, Ping-Pong, their own basketball court, and free massages! Here they were looking down their noses at the people who brought in the money that allowed them to have all of those goodies. It was a prescription for internal chaos.

In early March 1983, Steve was in Manhattan, which he had decided to make a second base by purchasing an apartment overlooking Central Park. On one brisk late-winter day, he rounded up John Sculley and the two of them spent an afternoon meandering through the Metropolitan Museum of Art and sharing ideas over coffee in a café.

If the board wouldn't let Steve run the company, the next best choice from his perspective would be someone he felt comfortable with, whom he might be able to control. John Sculley fit the bill on both counts. He was a top-notch, proven marketer who would be highly valuable to Apple. He knew nothing at all about technology—which to John was a drawback but to Steve looked like a blessing. If John were running Apple, who would he look to for technology guidance? Who more likely than the man who had recruited him?

John had been adamantly opposed to the idea from the time it was first broached to him. Now he was wavering. Referring to Pepsi, Steve asked a question that has become part of the legend of U.S. business: "Are you going to sell sugar water for the rest of your life when you could be doing something really important?"

Before the end of the month, the board had laid a deal on the table. John would receive $1 million a year in salary, a $1 million bonus for accepting, and up to $1 million in stock options, performance incentives, and low-interest loans to enable him to purchase a $2 million house.

John Sculley already had a good deal at Pepsi—a powerful position and a stable job at a stable company in a stable industry. To his credit, he chose the challenge over the sure thing. Apple had a new president—and, more important for Steve, a new president who worshiped him.

A month later, when the appointment was announced by Mike Markkula, John Sculley made a statement in which he said, "If you can pick one reason why I came to Apple, it was to have the chance to work with Steve. I look on him as being one of the really important figures in our country in this century. And I have the chance to help him grow. That in itself is exciting."

Wall Street approved of the appointment. In spite of a declining market share and falling profitability in the face of the challenge of the IBM PC, Apple's stock boomed to a high of $63 per share. But the company's corporate insiders were looking at a different story. The previous year, another development project, the Apple III, had flopped, a victim of Steve Jobs's inflexibility and the design-by-committee syndrome. (Randy Wigginton said, "The Apple III was kind of like a baby conceived during a group orgy, and [afterward] everybody had this bad headache and there's this bastard child, and everyone says, 'It's not mine.'") The product had been introduced in 1980, suffered a 20 percent failure rate, and never sold more than a handful of units.

Now the Lisa, too, was a flop. By early summer, orders had fallen to a thin trickle for the $10,000 business machine. When compared to the $3,000 IBM PC, with its Microsoft software and utilitarian focus, businesses were voting with their checkbooks. Cool didn't cut it. Following on the heels of the disaster that was the Apple III, the company had yet another disaster in the making. It looked like John Sculley had arrived in time to be captain of a sinking ship.

He would soon discover the truth about the Macintosh. The dark picture was described by Joe Shelton, a marketing manager who was to promote the Apple-labeled Macintosh software products at the introduction. "When I joined the group," he said, "I heard these ridiculous projections of 70,000 computers in the first one hundred days, and 500,000 Macs in the first year. And I thought it was crazy." Since then, he had been drinking the Steve Jobs Kool-Aid. "Within a few months, I found myself saying the same thing—and believing it. Steve had the most remarkable effect on all of us. We knew what he said was impossible to achieve rationally. But, emotionally, he had us all wanting it so badly to come true that we came to believe it as well."

The handsome price the stock had achieved with the news of Sculley's appointment didn't last. One of John's early duties was to

approve the press release acknowledging that the Lisa was not selling anywhere near projections, and that the company would report a loss for the final quarter of the fiscal year. (Apple's financial year runs from September to August.) With that bombshell, the stock price plummeted from $63 to $21.

Not that it affected Steve's lifestyle any, but with the fall in stock price, his net worth dropped, in a matter of weeks, by a *quarter of a billion dollars.*

In November, Apple's *1984* ad for the Super Bowl was completed under the direction of Ridley Scott, who had already directed the films *Aliens* and *Blade Runner* and would go on to do a series of blockbusters that included *Thelma & Louise* and *Black Hawk Down*. Even after Apple moved the production to England to save money, the ad was budgeted at more than $750,000, according to Andy Hertzfeld. Buying the air time on the Super Bowl cost even more; this was to be a one-shot, million-dollar moment. John Sculley later called it a "bet the company" proposition.

A print of the TV spot was flown in and messengered to Apple to show at the monthly board meeting. Steve wanted to share recognition with Mike Murray for his work in creating the piece and arranged for him to come in and present it. Mike said, "I was really proud of it. This was my crowning achievement, and I was finally going to be recognized for my contribution. Afterward, I looked around the room and Phil Schlein had his head on the conference table and was banging his fist on it. I thought, 'Wow. They really liked it.'

"Then he looked up at me, and I realized that he hated it. Right there, they voted to have us sell the time and pull the ad. The board thought it was the worst ad Apple had ever made."

The board wanted nothing to do with it. "The chilling reception from the board compelled John Sculley to ask Chiat-Day to sell back both time slots that they had purchased," Murray said. "But [agency cofounder] Jay Chiat was true to form, and only sold off the thirty-second slot, telling Apple that he wasn't able to get rid of the longer one at so late a date. Apple considered using the slot for a more conventional commercial but in the end decided to take a chance on the *1984* spot."

Steve was ecstatic. It was all going his way.

. . .

All that money would be worth it if the commercial started conversations and drove thousands of people into stores to see the Macintosh. Obviously, the money would be largely wasted if for some reason the Macintosh wasn't in the stores when the crowds arrived following Super Bowl Sunday. Nothing could stand in the way of getting the finished product into the stores, and not just the hardware itself but the software as well.

On Sunday, January 8, the West Coast software programmers and testers assembled for a conference call with the East Coast product introduction team. Shortly before that, the programming team had faced the hard truth: it had barely more than a week left to finish the software and deliver it for disk duplication, and the team simply wasn't going to make it. The alternative was ugly: ask consumers to buy a great new computer with buggy, unstable software labeled "demo."

During the phone call, when the team announced that the software wouldn't be ready, the reaction wasn't what they anticipated. They expected a typical Steve Jobs explosion. Instead, they got an ego massaging. He told them how great they were and how all of Apple was counting on them. He said that they could make it happen, that they could get the software finished. It was simply impossible to send out demo disks; it would send the wrong message to the marketplace. He was counting on them, and they could do it. And with that, he hung up before they had a chance to argue.

The people in the conference room in Cupertino were stunned. They had pushed so hard already that they were near the point of total exhaustion. There comes a time in mountain climbing when strong men would rather sit down and cry than try to continue. Working for Steve Jobs had the challenges of climbing a difficult mountain, but, like the proverbial Saint Bernard arriving with brandy for the mountain climber, Steve had given them new energy. He had challenged them to rise to the occasion, and he had chosen his people well. They would not let him down. There was little to say. Silently, they got up and went back to their cubicles and back to work. Few of them slept that week.

At the last moment, in the hours before dawn on the morning of the sixteenth, the team arrived at a combination of System and Finder software (the operating system for the Macintosh) that seemed to work. Randy Wigginton feverishly attacked the last few bugs; each time he compiled a new version, it seemed to have worse bugs than the one before. Desperate, unwilling to give up, he kept going until, at last, with minutes to spare, he succeeded. They had software that could go to duplication.

Stories about the soon-to-be-released Macintosh began to appear all over the United States. The computer hit the cover of more than twenty magazines, made it onto the nightly news of the three major networks, and was covered by all the major papers in the country. It marked the first time that the introduction of a new computer was considered national news.

Both Steve and John spoke about "betting the company" on the new Macintosh. Talk like that was guaranteed to appeal to an America where the go-for-broke syndrome had always been a birthright.

When the Super Bowl commercial aired, viewers were treated to an ad unlike any they had seen before. The spot depicted scenes of men with shaved heads dressed in gray, prisonlike garb, sitting in rows on long benches, hollow-eyed, watching as a Big Brother–like figure lectures to them from a giant screen. An attractive young blonde woman, running from goon oppressors, dashes into the chamber, approaches the screen, spins around to build up momentum with the huge sledgehammer she's carrying, and then lets it go, smashing into the center of the giant screen, which explodes in a blinding flash of light. At that point, the brief voice-over begins, emphasized by the same words appearing on-screen:

> On January 24th Apple Computer will introduce
> Macintosh. And you'll understand why 1984
> won't be like *1984*.

The ad was so spectacular, so distinctively different, so stunningly original that television stations all over the country replayed it on their evening news, giving Apple millions of dollars' worth of instant free advertising.

The Macintosh itself was unveiled to the world as promised, on January 24, 1984, at the company's annual meeting, in front of a packed

audience of employees, stockholders, and the press. Steve dressed for the occasion in an elegant double-breasted jacket offset by a polka-dot bow tie. This was to be one of his finest hours.

When the lights dimmed, he appeared in a spotlight at the podium, opening the meeting with a shrug of his shoulders and a soft-spoken, flat recitation of a few lines from his favorite poet, Bob Dylan, and the song "The Times They Are a-Changin'."

He was followed by John Sculley, who was greeted with hearty applause as he described Apple's strong cash position with no long-term debt and the strong sales of the Apple IIe, which had broken all records in December.

Then Steve came back out and said he had done enough talking, and it was time to let the Macintosh speak for itself. He lifted a Mac out of a bag. With a prototype voice synthesis program, it said to the audience:

> Hello, I am Macintosh. It sure is great to get out of that bag. Unaccustomed as I am to public speaking, I'd like to share with you a maxim I thought of the first time I met an IBM mainframe: never trust a computer you can't lift!
>
> Obviously, I can talk, but right now I'd like to sit back and listen. So it is with considerable pride that I introduce the man who's been like a father to me—Steve Jobs.

That was dynamite stuff. The audience erupted with applause, both for the amusing speech by the little computer and for the return to the stage of the man most people would forever think of as the creator of the Macintosh, the icon himself, Steve Jobs.

Steve launched into a performance as flawless and seamless as any he had ever given. His presence was powerful, his charisma enticing, his intensity captivating. The only thing missing was a sense of humor.

In the days that followed, customers flocked to shops to see for themselves what all the hype and hoopla was about. Orders poured in, and the critical first hundred days racked up the seventy thousand sales Steve had touted.

It looked as if Steve's overblown sales figures might be on target, after all.

4

We're going to have to do something about Sculley. He can't stay. He doesn't know what he's doing.
—Steve Jobs

Learning to Fail

John Sculley's vision was clouded. Steve Jobs could be captivating, exuding an aura that blinded people to his faults. John still thought that Steve walked on water, and he bought into the vastly overblown sales forecasts for the newly released Macintosh. The accepted number was still 500,000 for the first year, 1984, and the early sales reports gave no reason to doubt it. Two company executives tried to bring some sanity to the subject: Floyd Kvamme, the executive vice president of sales and marketing, and Ken Zerbe, the executive vice president of finance and administration. They were removed.

While the world looked at Apple and thought that it was seeing the model of how corporations of the future should be run, a power play was shaping up inside the executive suite that promised to split the company apart.

After the Macintosh introduction, John had decided to consolidate the Mac and the Lisa groups under Steve Jobs's leadership. From there, it all started to go bad. The first day under the new setup, as both groups gathered in the atrium of the Lisa building, Steve's first words to the Lisa people were, "You guys really f——d up." It went downhill from there. "I was embarrassed to be part of the Mac Team," Donn Denman said,

remembering that day. "I looked over at the Lisa people as he was going on with his tirade, and there was pure hatred in their eyes. And I couldn't blame them."

Not all of the Macintosh people felt that way. The tirade generated emotions that were unhealthy for everyone involved. Some of the Mac people thought that Steve's comments were absolutely correct. "I thought it was his finest hour," Andy Hertzfeld said. "It was just what he needed to say. They *had* screwed up."

Steve's willfulness and self-centeredness were rapidly proving to be his undoing. His performance that day was like the prediction of a seer, foretelling of things to come. It bespoke an essential lack of humanity in his vision for Apple and flew in the face of the humanistic values that the company was supposedly founded upon. It announced that he believed he was meant to run all of Apple and that his time was fast approaching.

Jay Elliott, Apple's vice president of human resources and the only other member of the Mac team to sit on the company's executive staff, was a keen observer of people, and he watched the relationship between Sculley and Steve with increasing alarm. "John was the president," Elliott said, "but all the power was with Steve. At exec staff meetings, all you had to do was watch the body language. Steve and John would talk to each other, but everyone else who was supposedly reporting to John spent all their time talking to Steve. He was in charge."

"We hired John to be Steve's mentor," explained Elliott, "and it ended up being the other way around. . . . [I]t was Steve who taught John."

John Sculley was quiet and cerebral, reserved, and clearly unable to stand up to Steve. That inability was compounded by Steve's seeming Midas touch, as the Macintosh looked poised to be the best-selling computer of all time, dominating the marketplace. Meanwhile, Steve himself was reaping the benefits of Regis McKenna's ongoing publicity campaign, which was designed to make the world believe that Steve Jobs was "the inventor of the personal computer." The campaign had succeeded.

Steve, meanwhile, was about to walk straight into the eye of the storm.

The ancient Greeks had a word for Steve's behavior. They called it *hubris*, the insolent pride that humans exhibited when they thought they could challenge the gods. The gods' response was always the same: to strike down the arrogant human with a bolt from the heavens.

In 1984, the catchphase of the year was the line from a Wendy's hamburger commercial: "Where's the beef?" Buyers were beginning to ask the same thing about the Mac. The first hundred days it had stood up on sizzle and flash, but on closer inspection, there didn't seem to be much steak. The machine had no software to speak of. The joke on release was that the machine had six software programs: Macintosh Write, Macintosh Paint, and Microsoft Word—and Write, Paint, and Word. The boys in Redmond had done their work, but no one else—including Lotus, which had the best-selling spreadsheet for the IBM family, Lotus 1-2-3—had been able to master the arcane art of writing software for a visual display–based computer. The Mac was competing with the IBM PC, a computer that had thousands of programs on the shelves. The Mac was seen as a toy, a flaky machine that you could love, but you wouldn't buy.

A massive round of market research provided chilling insight. Retail sales people were showing the IBM PC first; even shoppers who asked about the Mac were steered away from it, back to the PC. Customers disliked the idea that it was not expandable, that it had a small screen, and that there was no color.

One freelance speechwriter remembers sitting in front of a Macintosh with Apple manager Betsy Pace, trying to use the machine to write the speech she was to give the following morning at the general session of Apple's all-important annual sales meeting. He would write a sentence or two and try to save. The machine could save only onto a floppy, but at this point it would spit out the floppy and display a message requesting that the disk containing the Microsoft Word program be put into the drive. That would be done, the floppy would spin for some moments and then be ejected, accompanied by a request that the floppy with the speech file be reinserted. And back and forth, sometimes for minutes on end, to the frustration of the writer and the increasing anxiety of the speech-less manager. The problem was that the computer didn't have enough memory, and the internal hard drive

didn't have enough storage space. Apple executives were getting a taste of what their customers experienced. It was called the "Disk Drive Olympics" among the Mac team.

The blame for these problems is not hard to assign. Field and market testing wasn't a part of Steve's makeup. He believed in his intuition and his marketing savvy. Especially in early 1982, when he was flying high and truly felt that he had the golden touch, no matter what anyone else might say, Steve simply decided what the box should contain, and that was it. As Mike Murray said, "Steve did his market research by looking into the mirror every morning."

It would prove to be the Mac's one Achilles' heel. By closing the computer to the outside, by predefining its features, by deciding that he—this kid who had never had a job, who had never worked in a menial office occupation, who had no touch for the common clown struggling to make the mortgage payment and buy food for his kids—knew exactly what the world of buyers needed, he revealed his megalomania. He truly believed that he was in touch with the consumer, that he understood both computers and the public with such clarity that he could single-handedly decide on the configuration of the machine. It came from an arrogance of youth and power—an insolence and a presumptuousness that went far beyond anything he had shown before. It was the first indication of hubris in the project's leader, hubris that eventually led to disaster.

The sales figures for July 1984 were frightening. Macintosh sales appeared to be slowing. At first Steve refused to believe it; he thought it was simply a case of summer doldrums. But when the figures for the second month in a row showed the trend accelerating, panic started to set in. Their nearly thousand-strong organization—a group built to reflect the outrageous optimism of the sales forecasts, not the reality of actual sales—was in no way supported by income. Suddenly Apple had a serious problem, and Steve was a big part of it.

In having kept himself totally isolated from the typical user, he had failed to grasp the most basic fundamentals of the buying equation. He didn't understand that when faced with spending a couple of thousand dollars on a computer, most people didn't care what it looked like, whether it had a mouse or not, or what color it was. All they cared about was whether it did the job.

Resentment began to germinate in Apple's corridors. The Apple II organization—responsible for the popular and brisk-selling Apple IIe and IIc lines—was constantly getting hold of the wrong end of the policy stick, with its members becoming near untouchables in the corporate caste system. Meanwhile, Steve and the rest of the company royalty—the undisputed Brahmins—were in a nosedive with their product, and John Sculley still wasn't reining them in. The company's reputation for industry leadership was rapidly being undone by the erratic behavior of its chairman.

An even bigger blow came when the Mac members began to get wise to what their Lisa counterparts were being paid. Engineers in the Lisa division routinely made more than $50,000 a year, while in the Mac group only Andy and Burrell were in that range. Steve had managed to drum up near blind allegiance to the concept of the Mac, while paying salaries $10,000 to $20,000 less and still expecting his days, nights, and weekends, his "90 hours a week." The situation created not only "extreme depression among the engineers," as one manager wrote in a memo, but also a minor uprising among the Macintosh folks that grew even more heated when some of the more senior Macintosh people began to discover that the people reporting to them, hired later, were being paid more than their bosses.

Steve tried to restore some balance by paying extremely generous bonuses to his Mac people, but that only rankled the Apple II division, since it was the Apple II products that brought in almost all the revenue to pay everyone's salary. Human resources director Jay Elliott tried to convince the Macintosh insurgents that the lower salaries were a reasonable counterbalance for the value of the perks they received, which in some cases even included the cost of a nanny. It didn't wash; the Mac people felt betrayed and used. They had given their hearts to Steve and the Mac, and he had treated them badly. Steve was never able to regain their trust. (In coming years, few of the Mac team worked for Steve Jobs again.)

The battle for the hearts and minds of Steve's own people was only part of the problem. Though Apple was universally considered a leader and an innovator in the world of personal computers, it was widely distrusted as a result of its inconsistent performance, not to mention the behavior of its chairman. In the battle for survival against rival

IBM, Apple was becoming less of a big gun and more of a loose cannon. For consumers, IBM was a name that could be trusted. Apple was not.

Apple had established a tradition of holding an elaborate annual bash for its international sales force—four or five days of entertainment, pump-up-the-troops, technical lectures, and drunken carousing into the wee hours, held at some elegant resort. This sort of affair is well known in the corporate world, and it's important for reinvigorating the sales force with product knowledge and enthusiasm. In some years, the Apple meetings were dazzling in their splendor, but the 1984 meeting, to be held in Hawaii at a resort on tourist-crowded Waikiki beach, presented special challenges.

With Macintosh sales faltering, Steve saw that it was vital to put on an extravagant week to get the sales reps—many of them brand new to Apple—fired up and committed to guaranteeing the product's success. Over on the other side of the house, Del Yokam faced a different challenge. Now running the Apple II product group, Del realized that all the focus would be on the sexy new Macintosh that was making all the headlines but bringing in no money, while his Apple II products produced all the revenue that kept the company afloat. Worse, the Apple II group had no forthcoming products to beat the drums about. The money-making part of the company was in danger of being lost in the shadows of the Mac.

For the highlight production of the Macintosh session at the conference, Steve Jobs greenlighted the concept for a mock-documentary entitled *1944*, both a reminder of the hugely successful *1984* commercial and a parody of every B-movie about the war ever made. The Macintosh army lands and takes the beachhead, presumably against the implacable foe, IBM. Meanwhile, on a set built to look like the Oval Office, President Roosevelt (seen only from behind) gives orders to "the General," played by Mike Murray. The eight-minute, $50,000 production wowed the audience, who greeted the unfolding story with roars of appreciation and howls of laughter.

The capper came at the very end, when the president swiveled his high-backed chair around to the camera, to reveal a man whose makeup gave him a remarkable resemblance to Franklin Roosevelt. The actor held up a cigarette burning in Roosevelt's familiar long-stemmed holder. He was instantly recognizable, despite the impressive makeup: Steve Jobs himself. The sales troops loved it, stomping and whistling in appreciation.

That show was a triumph, yet the Apple II show outdid it. As the two thousand sales people walked into a large auditorium, they immediately recognized the setting: the room was designed in the style of a major political convention, whose members had assembled to choose between two candidates for their party's nomination: the Apple IIe and its smaller cousin, the Apple IIc. In a broadcast booth above the floor sat two commentators who would narrate the meeting: "David Brittle" (a take-off on NBC anchorman David Brinkley) and "Connie Chunk" (NBC reporter and host Connie Chung). The laugh-packed script had the audience roaring almost from beginning to end.

Steve Wozniak agreed to take a short role in the production and showed his own inspired sense of humor. He threw away the professionally written comedy piece that had been specially crafted for him and instead ad-libbed several minutes of on-target gags that fit in perfectly with the theme of the session and kept the audience laughing.

One moment in the twenty-five-minute spectacle became part of Apple legend. A short "nomination speech" was presented for each of the two "candidates." The company's vice president of sales, ex-Columbia University football coach Bill Campbell, delivered the nomination for the IIc. Partway through, he spoke a line that no one reviewing the script had picked up on—but the audience did. Describing the smaller of the Apple IIs, he said, "It's not size that counts, it's performance." The immediate outburst of raucous laughter was deafening.

For the sales force, the Hawaii meeting had been a week of fun, revelry, and carousing. For the executives, returning to Cupertino headquarters was enough to bring on the heartburn. "Steve was incredibly depressed," Jay Elliot recalled. "He thought John [Sculley] was screwing up. He was going to have to take charge of the company because John didn't 'get it,' which was Steve's phrase. He didn't understand the business." It's as if an airplane runs out of fuel and the pilot, who didn't check before takeoff, blames everyone else for the accident.

The sales figures continued to slide, and Steve's mood darkened

with each successive report. He became convinced that the only solution for Apple was to form a strategic alliance with another major company. He looked at AT&T, General Electric, and even Coca-Cola for a co-merchandising program. At one point, Steve approached General Motors. He invited Roger Smith, the company's CEO, to tour the Macintosh Division. Steve suggested a buy-in, a strategic alliance, and Smith replied that he knew very little about computers but would send a member of his board out to talk with the board.

The board member who showed up was a guy named Ross Perot, and although they were an odd couple—the young, wild Steve and the straitlaced Texas patriot couldn't have been more different—they got along like a pair of ranchhands at a cookout. Still, in the end, Perot was impressed but couldn't see a fit between the two companies.

Steve then flew a team to Japan to visit Epson, a business machine manufacturer that might provide a better match. The ride out from Tokyo was extremely frustrating; the road was blocked due to an earthquake, so they switched from their limousine to a train, only to learn that the train tracks were blocked as well. When they arrived, the Epson people were gracious even though they had been standing by at the ready for hours. Steve was in a foul mood.

The Epson president stood up to make the product presentation himself. The gentleman had hardly started, having spoken for little more than a minute, before Steve interrupted. According to Jay Elliott, who was part of the team and witnessed the incident, "Steve turned to the president of the company and said, 'This is s——t. Don't you have anything good?' And with that, he marched out."

Later, on the train heading back to Tokyo, Steve began to vent. Rather than using the opportunity to explore the difficulties within Apple, he talked about the problems he was having with his latest flame, the designer of the Vietnam Veterans' Memorial, Yale architecture student Maya Lin. "He couldn't understand why things were always so difficult for him," Elliott said. "He didn't care about the little scene at Epson—that had meant nothing to him. He had forgotten it as soon as it was over. What really counted was love, and he couldn't understand why he couldn't make it work."

The multimillionaire founder of Apple Computer poured out his heart as Japan sped by outside his train window. He was nearing his thirtieth birthday and still longed to start a family but was afraid of what the future held. Finally, he turned to Elliott and blurted out a complaint that might have made sense if spoken by a Rembrandt or a Beethoven: "I'm just an ordinary guy. Why can't they understand that?"

The maelstrom continued to swirl. Sales dipped below ten thousand a month, Steve was having enormous mood swings, and Sculley hadn't taken charge. People weren't buying Macintoshes, in part because there was still no serious software available. By now, the initial Apple IIc rush had died out. Worse, Del Yokam had put in a production order based on the earlier strong sales, and the company found itself stuck with a huge inventory of unsold units. Apple had to announce a write-off of the unsold inventory, which gave Wall Street the jitters. Two hundred thousand of the machines had to be liquidated through a bartering company. Apple was stalled and sinking.

Even so, the Macintosh Division was on a takeover binge, grabbing control of the internal groups responsible for companywide functions like advertising, public relations, distribution, and peripherals. Steve's rationale was that it was the only way that he, as chairman of the board, could be sure that the "right" thing would be done. But it was the inordinate amount of power centered in the Macintosh division that was at the root of the company's problems. The situation was all the worse because it was Steve who wielded that power.

A week after the 1985 annual meeting in Phoenix, Arizona, most of Apple's executive staff headed for another retreat. One morning the company's marketing boss, Mike Murray, found Sculley and PR maven Regis McKenna attending a session. He told them that it was essential he have a private meeting with them, and the urgency of his tone convinced the two to hear him out.

On their way to the elevator, Steve saw the three of them together and asked what they were up to. Murray, trapped, said they were going to have a meeting. Steve indicated that he wanted to join them. For the first time in his three years at Apple, Mike Murray said no to Steve Jobs. Steve was insistent, but Murray stood his ground. Eventually, they left the chairman standing there as the elevator door closed, and headed

upstairs. It was Steve's first inkling that something might be up, and he decided he would find out what it was.

Meanwhile, the three conspirators were holed up in Sculley's hotel room, with Murray telling the company president that he thought Steve had to be removed from his position as head of the Macintosh Division. Sculley and McKenna listened carefully while Murray, a trusted lieutenant, an insider, and a loyal subject to Prince Steve, ticked off the reasons behind his conclusion. Finally, the lightbulb started to flicker in Sculley's head: if Murray, who was closer to Steve than almost anyone else, was telling him that Steve had to be removed from the head of the Macintosh Division, then surely something was seriously wrong.

Under Steve's recent power grab, the Macintosh group that had started as a tight-knit clan of pirates committed to the cause had now swollen to a mondo-division of seven hundred people, with barely a trickle of revenue to pay their salaries and driven by a leader who made decisions on the spur of the moment and changed them just as quickly.

It would have been easy to lay blame for these problems at least in part on Murray himself, and perhaps in some ways it was right to do so, because as director of marketing he certainly had a large hand in the decisions that had led to the current mess. After all, the fundamental trouble was that they had missed the market. They thought they could sell machines into the office environment, and they didn't know (or didn't bother to find out) that those computers were normally purchased in groups. Apple had always sold to individuals, tailoring all of its marketing to making a person feel good about choosing to go with Apple.

Steve had convinced them all that their plan was on the money, and he had Sculley completely bamboozled as well. They had all been sure that the strategy was correct, and that the dropping sales were simply a reflection of the computer shakeout, the seasonal softness, or the nonexistent software. "He could see the horizon out there, a thousand miles out," explained Jay Elliott, "but he could never see the details of each little mile that had to be covered to get there. That was his genius, and his downfall."

After Phoenix, Steve and his original cofounder, Woz, traveled to Washington for a ceremony at which President Ronald Reagan presented them with the first National Technology medals for their contribution to American technological advances. It was an uncomfortable moment for both Steves, however; they couldn't stand each other anymore and could scarcely contain their dislike.

When Jobs returned to California, he found that Wozniak had publicly quit Apple. In a blast of uncensored comments, Woz berated the company for its lack of support for the Apple II product line and its chaotic management. Clearly relishing the dig at his former friend, Woz ripped the way that the company had ignored the Apple II at the recent annual meeting, even though it was the firm's only money-making product. "We had a shareholders' meeting last week," he said, "and the words 'Apple II' were not mentioned once. I made a very strong complaint about it."

By February 1985, Elliott and Murray had decided that the only person within the organization with the marketing muscle and the vision to replace Steve at the helm of the Macintosh Division was a forty-one-year-old Frenchman by the name of Jean-Louis Gassée.

At the time the head of Apple France, Gassée was a mathematician and a charismatic leader, with several books of murky pop philosophy under his belt. With a reputation as a philosopher and a future-thinker, he was also the head of the only international operation for Apple that was solidly in the black. In the software doldrums of autumn 1984, when nothing other than MacWrite and MacPaint were available for the Macintosh in Europe, Gassée had shown his ingenuity and business sense by sending an employee to New York with tens of thousands of dollars in cash to purchase as much software as possible, which he then distributed to dealers throughout France.

While others were plotting to replace him, Steve was busy drafting a memo offering solutions to the problems of the Macintosh Division. His proposals amounted to offering a Band-Aid to a man having a heart attack. The remedies he suggested included eliminating free beverages and catered food, and flying business class instead of first class.

At the end of that month, Steve celebrated his thirtieth birthday, honoring himself with the kind of bash that only multimillionaires and heads of large companies even aspire to. In the ballroom of the St. Francis Hotel in San Francisco, he treated a thousand of his closest

friends and employees to a black-tie dinner-dance; entertainment was provided by Ella Fitzgerald.

By the week of March 11, revenues for the Macintosh were just over 10 percent of the projection. Steve obviously had no grasp of how desperate the situation was, and someone needed to step in fast.

Sculley finally had no choice but to act. He stepped up to the plate and announced the closing of several production facilities. Fortuitously, IBM announced soon afterward that it was ceasing production of its ill-conceived lowball version of the IBM PC, the PCjr computer, which had been a flop all along. The business press had another victim to flog for a change, leaving Apple with a temporary bit of breathing space.

At the same time, Mike Murray was circulating a memo to key members of the executive staff, summarizing the fears he had first expressed to Sculley and McKenna in Phoenix. Under the heading "DO NOT CIRCULATE, COPY, OR SHARE," he described what he saw as the company's "major philosophical problems," laying blame squarely on Steve for "espousing vision . . . at the clear expense of corporate survival."

In fact, Steve was one of the first people he showed it to. Now, with his most loyal people questioning his role as the head of Macintosh, Steve finally began to come to his senses about the reality of the situation. Steve and Murray met constantly throughout that month, with Steve trying desperately to convince his director of marketing that only Steve Jobs understood how to save Apple, and that Sculley should be removed and Steve himself installed as president and CEO. Murray, of course, wasn't buying. He believed in his heart that the only answer was to put someone else at the head of Macintosh and to give Steve a new role in research and development, with an eye toward developing a project that would be as breathtaking as the Macintosh had been three years earlier.

The world of Apple was crashing down around them. People were defecting en masse, and Sculley was worried. With research in hand showing that the Macintosh was *still* being perceived as a yuppie computer and not a serious business machine, Sculley allowed himself to be convinced of the idea that Gassée should take over for Steve. Steve's response was to tell Sculley that he "didn't know a damned thing about computers"—failing to understand, even at this juncture, that the need was for someone who understood business, not technology.

Steve continued to live in his own reality distortion field, unaware of the hurricane that was about to blow him over. Late in March, he appeared at the offices of the German design firm frogdesign—the outfit that had successfully crafted the look of the Sony Walkman. When Steve had first seen the Walkman, he was so taken with the creativity that he gave frogdesign a large contract to create the look of all of Apple's future products. When he arrived in March, he discovered that the company was doing work for Steve Wozniak's new company, Cloud 9, building a universal remote control device that could run any television or stereo equipped with infrared signaling gear.

When Jobs saw the designs lying around on their drafting boards, he hit the roof. In a rage, he demanded that they either send the designs to Apple or destroy all the work. In fact, he was partially within his rights: a clause in Apple's contract allowed the company to approve other frogdesign clients. And Steve Jobs's former partner wasn't acceptable.

The press pounced on the story, making Apple and Steve Jobs look petty and mean-spirited. "Steve Jobs has a hatred for me," explained Woz. The manager of the frogdesign office, Herbert Pfeiffer, offered an apt description: "It's a power play."

The board finally took action on April 11, led by a taciturn investor who had been there from the start. Board member Arthur Rock was a quiet, tall man with a taste for the finer things and an absolute abhorrence for prevarication or hype. Faced with a string of resignations, enormous unsold inventories of both Apple IIs and Macintoshes, and sales of the Mac that continued below one-tenth of forecast levels, he felt compelled to make John Sculley take charge. Sculley's first decision was to cancel development of the Macintosh XL in favor of the less ambitious Mac II. The next was to cancel the struggling, never successful Lisa. Finally and officially, the Lisa was dead for good.

Turning to more pressing matters, the board in effect told Sculley to stop acting like a Steve Jobs sycophant and to assume his proper role of man-in-charge. Sensing the changing winds and realizing that he was close to being cut loose to swing in the breeze, Sculley decided to lay his cards on the table. Mindful that he was speaking in front of Steve Jobs, who as chairman was, of course, at the meeting, Sculley responded that he could turn things around only if he were given the

authority to handle the company the way he saw fit. He said he found it hard "to act like a CEO when you're meant to boss the chairman of the board."

Within minutes, the ax had fallen. Steve was no longer running the Macintosh group, the position would be offered to Gassée, and power was consolidated in Sculley's hands.

Steve, shocked and bitter toward Sculley, brushed past him and left the meeting without saying a word.

Looking for a way to recover control, Steve once again displayed his ability to overlook anything in the past. He recruited his close friend, marketing director Mike Murray—the same man who not long before had infuriated Steve by adding fuel to the fire with his memo arguing for Steve's removal. Steve could overlook the past, and he could cast a spell that made others overlook it as well. Together, the two concocted and wrote up a bold billion-dollar plan that would have had Apple becoming a parent to four separate companies. One would be a retail organization, formed by buying up several major computer retail chains, including ComputerLand, with Sculley as its president—shunting him aside and out of Jobs's way. Steve would remain chairman of Apple Computer, Inc., the parent organization.

Saturday morning Murray showed up at his office for a meeting and discovered Gassée sitting outside the door. The Frenchman had, after all, not been offered the position as head of Macintosh but a different post altogether. Standing there face-to-face with Murray, Gassée was embarrassed that no one had yet told Murray and explained that as of Monday morning, he, Gassée, was the new marketing director. He'd been given Murray's position. Murray felt faint; his head was spinning. He'd been working long hours with his good friend Steve on their new grand plan, while at the same time, behind his back, Steve took his job away and didn't even mention it. When Murray had a chance to confront his friend, the only explanation Steve offered was that it "must have slipped my mind."

Sculley, unwilling to lose the talented Murray, arranged a get-together for the three of them—Murray, Steve, and himself—and settled on creating a new position for Mike as vice president of business development. When Sculley excused himself to attend briefly to other

business, Steve changed gears and tried to make Murray a confederate again, telling him, "We're going to have to do something about Sculley. He can't stay. He doesn't know what he's doing."

News of Gassée's new position swept through Apple like wildfire that Monday. Not a word was said about Murray's promised new job as vice president of business development.

When Sculley left a couple of days later for a trip to China, Steve continued to plot his overthrow. "I thought they were both being incredibly childish," contended Elliott. "Steve was trying to pull off a palace coup, and John was acting like a spoiled child. The two of them were going to take Apple under." When Steve saw Sculley's reorganization plan at a high-level strategy meeting on Monday, May 20, he became even more frantic. The proposed reorganization consolidated the company under two executive vice presidents—Apple II's Del Yokam heading up operations and Bill Campbell taking over marketing and sales. Steve was listed as vice president of new product development, but that was it.

Steve and Murray took a stroll along Bandley Drive that afternoon, and Murray was amazed to find that Steve was still trying to figure a way to unseat Sculley. Incredibly, Murray offered whatever help he could give. Steve had also clued in Gassée to his designs, albeit vaguely, out of a liking for Gassée and a mistaken trust in him. The Frenchman understandably had greater loyalty to Apple than to Steve. He told Steve he'd think it over, but Gassée had a well-established friendship with the company's chief lawyer, Al Eisenstadt. Over a barbecue dinner that same evening at Eisenstadt's home, Gassée shared the news that Steve was still brewing plans for a coup. Eisenstadt wasted no time in sharing the news with Sculley.

The CEO called an emergency meeting the next morning. He was livid. "I'm running this company, Steve, and I want you out for good. Now!" Caught red-handed, Steve was uncharacteristically silent for once in his life. He stayed under tight control and didn't blow up once during the three-hour ordeal.

As Steve sat there, Sculley polled the executive staff one by one, forcing each man to publicly pledge allegiance to either him or Steve. Jay Elliott remembers being disgusted by the whole thing: "I told John that I thought he was being an ass, and I refused to do it. Right then, I thought they both should get out."

Steve and John both spoke of resigning that day, John to his wife and Steve to his most loyal lieutenants, with tears in his eyes. As he headed for the door, Mike Murray said, "You had better make sure you know what you're doing. The minute you walk out that door, the world will change." Steve finally listened to his friend, and they then spent several hours reviewing his options. They decided that instead of acting hastily, it would be better to give things a few days to calm down. It was the Memorial Day weekend anyway; why not think it over, maybe even talk to Sculley?

Steve drove over to Sculley's house the next morning. Following Mike Murray's advice, he sought to convince John that he had only tried to do the right thing for Apple, and that it wasn't meant to reflect on Sculley himself. Steve was at his most charming, remarkably composed, and not at all strident or aggressive. The two men walked along the winding lanes surrounding Sculley's house as Steve tried to explain himself. He really did want only what was best for Apple, he insisted, and if that meant he had to leave the company, then so be it. He would abide by whatever decision Sculley ultimately made, but he wanted one more chance to stay with the company that he had founded.

The nonconfrontational Sculley was persuaded, saying that he was willing to give it one more go if Steve would vow allegiance to him and agree to work for the good of the company as a public spokesman. No problem, Steve said, that was what he wanted anyway. Several hours later, the two shook hands and parted, Sculley with the impression that he had agreed to consider the role that Steve would play at Apple.

Steve couldn't believe that Sculley had let him pull the wool over his eyes so easily. Before his Mercedes had pulled out of the driveway of Sculley's neo-Tudor estate, he was already plotting a final attempt at a coup. Sculley was a wimp and couldn't be allowed to run the company that Steve Jobs had founded, but Steve knew he had to act fast.

On that beautiful Memorial Day afternoon, Steve's lieutenants gathered and conspiratorially discussed how they would convince Mike Markkula that Steve should be kept as head of Macintosh. Markkula, a quiet, reticent, calculating man, showed up toward the end of the festivities. He was visibly uncomfortable and agreed to listen only as long as Steve didn't say anything. He wanted to hear what the people working for him thought. He listened, thanked them for their input, and left.

Sculley met Jobs in his office early the next morning and told him that he had heard from Markkula. He knew that Steve was again plotting behind his back, even after the assurances offered just a few days earlier. Steve, Sculley announced, would have to leave.

Afterward, Sculley called each board member individually and asked whether he had their support for removing Steve. One by one, they told him he did. At seven o'clock that evening, Sculley called Steve at home and told him that it was all over. He was going ahead with the reorganization and had the votes on the board to strip Steve of any operating role in Apple. Steve was welcome to stay on as a "product visionary," a compromise that was acceptable to die-hard loyalists like Apple vice president Debi Coleman, but he would not be in charge of a division any longer.

Steve, in tears, called Bill Campbell and Mike Murray to tell them the news. It was Tuesday evening, May 28, 1985. Murray's wife was on a long-distance call when an emergency interrupt came through. She told the operator that it "had better be important" and then heard Steve's voice saying, with almost no emotion, "It is." She called her husband to the phone, and Steve told him, "It's all over. John and the board have voted me out of Apple." Before the former marketing director could say anything, Steve hung up.

Murray called back but got no answer. Even though it was ten thirty at night, he was frightened enough to drive up to the house and make sure that Steve didn't do something foolish. With his life's work taken away from him, Mike feared that Steve would commit suicide.

He arrived to find a completely dark house. After climbing an outside staircase that led up to Steve's bedroom, he pushed open the door to discover the chairman lying on his mattress on the floor, completely alone. Silently, he sat down next to him and hugged his friend and former boss. The two of them cried and sat in darkness for an hour, saying little—"What was there to say?"—with Murray doing what he could to offer comfort. Finally, in the wee hours of the morning, convinced that Steve wasn't going to end it all that night, Murray slipped out of the house and drove home.

When Murray returned to check on the situation the next evening, Steve was talking comeback. The following afternoon, Steve finally showed up at work and immediately came to see Murray to discuss how

he should handle himself. Should he go away? Should he fight? Should he roll over and die? Should he make bitter public statements? Murray told him that he had two options: He could take the low road, get out now and be bitter, giving the press all the comments they would be looking for. Or he could take the high road, be a statesman, rise above it all, and refrain from backbiting or bitterness. Murray urged him to come to the meeting that Sculley had scheduled for the next day, May 31, Murray's thirtieth birthday, and lend his support to the reorganization. Show that he was behind it. Show that he was bigger than the petty squabbles that had been going on. Steve said that he would sleep on it.

At the companywide communications meeting the next morning, Murray was pleased to see Steve slip into the back row of the auditorium. He had obviously decided, against his most fundamental instincts, to be a team player. As the meeting proceeded, however, Sculley refused to acknowledge Jobs. He introduced all the key members of his new team, including both Gassée and Coleman, but no other members of the Macintosh Division. When he displayed the organization chart, one name was conspicuously missing. There was no mention of the company's former Macintosh Division leader, cofounder, product visionary, front man, and evangelist. The meeting ended without mention of him. For John Sculley and the new Apple Computer, Steve Jobs didn't exist.

One last time, Steve went to his office in a corner of Bandley 3—the building he had built to house his superstars, the Macintosh team. A few minutes later, he walked out to his Mercedes and drove away.

On Saturday morning, June 1, the *San Jose Mercury News* led its front page with the banner headline: "APPLE CO-FOUNDER JOBS DEMOTED." The story also made the front pages of the *San Francisco Chronicle* and *Examiner*. Throughout the rest of the United States, the tale of his fall from grace merited coverage but only on the inside pages or the business section.

Steve switched his answering machine on and spent the day listening to callers' voices as the phone rang continuously. He avoided reporters and editors and talked only to a few friends and family members. With the shades down and the house dark, he listened to Bob Dylan.

By 1985, he had given everything to Apple and the computers they

produced, and he wasn't about to fade quietly into the background. Steve was a fighter, a competitor who believed that he knew better than anyone what was right. For a week, he brooded and considered his options. Then he packed his suitcases and caught a flight to Paris to begin a long-scheduled business and pleasure trip. He was stumping throughout Europe for the Macintosh Office and planned to go on to Russia to promote Apple IIs, which had recently been approved for sale behind the Iron Curtain. Perhaps in action he might find some solace.

From Paris, after doing his corporate bit, he headed for the Tuscan hills outside Florence in central Italy, bought a sleeping bag and a bicycle, and camped out under the stars in an orchard in San Gimignano, a medieval village. No one recognized him as he bicycled through the little hill towns of Italy. As he pondered his fate, instead of coming to grips with it, he grew more depressed.

By late June he was in Sweden, still trying to do the right thing for the company. His attitude had mellowed a little. "Things don't always happen the way I want them," he told a Swedish journalist. "Just like Mick Jagger said, 'You can't always get what you want; sometimes you get what you need.'

"Five years ago this would have bothered me. Now I'm sitting back and thinking that maybe there is some wisdom in this. Henry Ford had a couple of difficult quarters, too, in the 1920s.

"I'm not a power-oriented person. I care about Apple a great deal. I put pretty much my entire adult life into building great products and building a great company. So I'm going to give what I can to further Apple. If that means sweeping the floors, I'll sweep the floors. If that means cleaning the toilet, I'll clean the toilet."

He was hardly chastened. "Woz hasn't done much in many years," he answered, in response to a question about the recent departures of several key Apple people. "Andy Hertzfeld is always complaining. He'll come back anyway. What I did with the Macintosh team was to give them recognition for their work: I'm not so sure it was good. I may have made a mistake. It was a good concept, but it went a little too far."

Steve Jobs was down but not out. He continued talking about his team, but it could have been a description of himself: "A lot of it went to their heads. For a few people, it is very difficult when things happen. You have to think very strongly about your inner values—what really is

important for you. When things happen very fast, you don't have the time. It can scramble your brain."

By July 4, Steve was in Russia but he felt ready to return to Cupertino. He wanted to patch up his differences with Sculley and get on with his new job, whatever that was. When he arrived back at Apple in the middle of July, however, he found that the corporation didn't want him.

"I was asked to move out of my office," he explained. "They leased a little building across the street from most of the other Apple buildings. I nicknamed it Siberia.

"So I moved across the street, and I made sure that all of the executive staff had my home phone number. I knew that John had it, and I called the rest of them personally and made sure they had it and told them I wanted to be useful in any way I could, and to please call me if I could help on anything.

"They all had a cordial phrase, but none of them ever called. So I used to go to work. I'd get there, and I would have one or two phone calls to perform, a little bit of mail to look at. But most of the corporate management reports stopped flowing by my desk. A few people might see my car in the parking lot and come over and commiserate. And I would get depressed and go home in two or three or four hours, really depressed.

"I did that a few times, and I decided that it was mentally unhealthy. So I just stopped going in. You know, there was nobody really there to miss me."

One person did—the still-loyal, pixieish former Macintosh marketing director, Mike Murray. He had moved into the office next to Steve's. One day Murray gathered his things and joined Steve in the empty offices. No one missed him for a week. In the reorganization, the job that the loyal lieutenant had been promised only weeks earlier suddenly evaporated. Sculley's new minions felt that Murray couldn't be trusted—he was too close to Steve. Nonetheless, ever the sloganeer, Murray had coined the phrase "One Apple" as his last effort to influence the new management. The phrase became Sculley's rallying cry that summer and fall as the company president tried to win back the Apple II corps and win over the remaining Macintosh partisans. Every time he heard it, Mike had to laugh at the irony of it all. (Murray eventually left and joined the archrival Microsoft.)

Still chairman of the board, Steve avoided corporate duties and

focused on supervising repairs being made to his house. Then he decided that he wanted to conquer a new dimension—space—and asked NASA if he could ride the space shuttle. He found that being a "global visionary" didn't cut the mustard with the government. He was turned down. Christa McAuliffe, an elementary schoolteacher, was selected instead.

Apple's stock continued to drop, eventually falling as low as $15 a share. Then, for the quarter ending June 28, the company announced its first loss ever: $17.2 million, with a drop in sales of 11 percent from the corresponding quarter a year earlier. It hurt, and he began to blame himself for the troubles the company was experiencing. A few days later, however, Steve was even more stunned by a comment that Sculley made to securities analysts at the company's quarterly meeting to describe Apple's most recent results and future plans. "There is no role for Steve Jobs in the operations of this company," Sculley told the closed meeting, "either now or in the future." The comment instantly leaked to the press, and a couple of days later the president reconfirmed it to a collection of reporters trying to interview him as he slipped into his limousine. Steve was staggered.

"You've probably had somebody punch you in the stomach," Steve explained, trying to describe how he felt. "It knocks the wind out of you, and you can't breathe. If you relax, you can start breathing again. That's how I felt. The thing I had to do was try to relax. It was hard. But I went for a lot of long walks in the woods and didn't really talk to a lot of people."

A few days later, he decided to sell a little more than 10 percent of his Apple shares—850,000—which was the maximum quarterly sale allowed under SEC regulations. The sale netted him around $11 million and squelched rumors of a leveraged buy-out that had been circulating since he had made a call to Morgan Stanley in late May. He just wanted to get out, and the rules of selling founder's shares were such that he had to sell off his stake piecemeal—he still had six million shares, which were worth about $90 million, even at the depressed price. Nonetheless, the sale started a flurry of rumors about his plans. Few people expected the thirty-year-old to quietly accept being sent out to pasture. Speculation centered on Steve either starting an investment fund, launching a new career as a venture capitalist, or starting

some sort of new company. He was known to have been pursuing the computer graphics division of George Lucas's empire in the months before the final reorganization. He now had the beginnings of a war chest, but what would he use it for?

The answer wasn't long in coming. With time on his hands, he hired a political consulting firm to help him find a way into politics. It was the same group that had worked with his sometimes role model and fellow Zen Buddhist disciple, former California governor Jerry Brown. But Steve had never voted or belonged to a political party. The group apparently told him that gaining a constituency would be difficult. He started to look in other directions.

"I think what I'm best at is creating new, innovative products. That's what I enjoy doing," he said later that summer, finally starting to understand what those around him had been saying for years. "I enjoy, and I'm best working with, a small team of talented people. That's what I did with the Apple II, and that's what I did with the Macintosh.

"I had a piece of paper one day, and I was writing down the things that I cared the most about, that I was most proud of personally in my ten years at Apple. There's obviously the creation of the Apple II and the Macintosh. But other than that, the thing that I really cared about was helping to set up the Apple Education Foundation. I came up with this crazy idea that turned into a program called 'The Kids Can't Wait,' in which we tried to give a computer to every school in America and ended up giving one to every school in California, about ten thousand computers.

"I put those two together, working with small teams of talented people to create breakthrough products and education."

That summer Steve spent a lot of time wandering around the semi-deserted Stanford University campus and the rolling hills that framed it, searching for an answer to the question that continued to haunt him. He had always felt at home there, starting as a high school junior hanging out in the cafeteria, then auditing physics classes, going to Homebrew meetings, and later preaching to small groups of interested MBA students. Apple photographed many of its Macintosh advertising shots along the covered walkways and bicycle paths of the eucalyptus tree–lined campus. Steve and Sculley had even posed there during happier times. Stanford meant something special to the college dropout and high-tech preacher.

He went into the libraries and began to delve into the world of biochemistry and recombinant DNA research, trying to understand the Bay Area's other rapidly growing industry. He had met Paul Berg, one of Stanford's Nobel Prize–winning biochemists, at a dinner for France's president, François Mitterrand, a year earlier. He called him up and invited him to lunch to ask a few questions. Over a meal in a coffee shop near the Stanford campus, he and Berg talked.

"He was showing me how they were doing gene repairing," Steve said. "Actually, it's straightforward. It's kind of neat. It smells a lot like some of the concepts you find in computer science.

"He was explaining how he does experiments in a wet laboratory, and they take a week or two to run. I asked him, 'Why don't you simulate them on a computer? Not only will it allow you to run your experiments faster, but someday every freshman microbiology student in the country can play with Paul Berg recombinant software.' His eyes lit up."

Berg, for his part, remembers the conversation a little differently. It was Steve whose eyes lit up. The scientist explained to the young entrepreneur that the computers used to run such simulations were presently too expensive and the software primitive. "Suddenly, he was excited by the possibilities," recalled Berg. "He had it in mind to start a new company. He was young and rich and had to find something to do with the rest of his life. This sounded like it."

It had been a long time since Steve felt the surge of energy that he had experienced with the blue boxes, the Apple I and II, the early Lisa, and the Macintosh. With possibilities of something on the horizon, the inspiration started to come through again. It was a new product, a new machine. A fresh love affair. A new trail to blaze.

Just as Steve was getting turned on by this idea of creating a new computer for the university market, in late August something happened at Apple that crystallized what would be the formation of his next project. Gassée canceled the fledgling Big Mac computer in favor of a much less ambitious Little Big Mac. When he took over the Macintosh Division that summer, Gassée expanded the development program for an advanced interim version of the Mac, based loosely on a computer that had been abandoned and was centered in that engineering group. Code-named Little Big Mac, it kept the basic design of the Macintosh and simply substituted a more powerful chip, the 68020.

This contrasted sharply with the Big Mac, which was an extremely powerful machine built around a custom chip set, code-named the Jonathon and created by Rich Page, one of the key designers of the Lisa. When Gassée canceled the Big Mac, Page was miffed. He talked about leaving Apple with his close friend Bud Tribble, the original Macintosh software project leader who had returned after medical school and was again in charge of software development for the Macintosh.

Tribble was one of the first people Steve thought of as he formulated his new venture. Over the Labor Day weekend at the beginning of September, Steve broached the subject of a new company to the soft-spoken manager and was encouraged that Tribble found his ideas intriguing. They discussed the "3M" machines that universities were settling on as the computers of the future: advanced workstations with one million pixels of resolution on screen, one million bytes of main memory, and the ability to process up to one million instructions per second—hence three "M"s. These would be the basis for the workstations of the future, and although machines of this caliber were available from workstation companies and IBM, they presently cost well over $10,000 apiece, much more than the target $3,000 that universities were willing to pay.

Tribble knew just who could build such a machine. He suggested a couple of people at Apple who might be willing to help get it off the ground, including Page and George Crow, an analog engineer who had been a member of the original Macintosh team. Steve also suggested Susan Barnes, the Macintosh controller, for the financial side of things, and Dan'l Lewin, architect of the successful Apple University Consortium, who had been promoted to marketing manager for all higher-education applications during the recent reorganization. When Steve asked each of them, sub rosa, they all agreed to join him. He was at his most inspired and persuasive as he wove the dream of his new enterprise. He was talking to a group of people who had never been at the heart of the Macintosh project—essential yes, but not the key superstars. They were all individualists who, like Steve, were searching for another chance to create something great, this time with their names indelibly linked to its creation, and Apple no longer seemed like the place to do it.

As Tribble said, "Everyone wants to be involved in a start-up." This would be a start-up with a bang that would return them to the roots of

Apple. The way Steve described it, how could it fail? Overnight, he had the kernel of a company.

"We have no business plan. We haven't done anything," Steve said a few days later, when their plans went public. "Now, you might say we're all crazy. But we've all known each other for four years. And we have an immense amount of confidence in each other's abilities and genuinely like each other. We all have a desire to have a small company where we can influence its destiny and have a really fun place to work."

With that, Steve realized that he had better tell Apple about the new venture. A board meeting was scheduled for September 12, and though he hadn't attended them for the last several months, as chairman he was still entitled. As the meeting was called to order, he briefly explained that he had done a lot of thinking about things over the summer and had come to a few conclusions. Although no one recorded the speech, when Steve described his motivations to *Newsweek* a few days later, it sounded like a speech he might have given before:

> I personally, man, want to build things. I'm 30. I'm not ready to be an industry pundit. I got three offers to be a professor during the summer, and I told all of the universities that I thought I would be an awful professor.
>
> What I'm best at doing is finding a group of talented people and making things with them. I respect the direction that Apple is going in. But for me personally, you know, I want to make things. And if there's no place for me to make things there, then I'll do what I did twice before. I'll make my own place. You know I did it in the garage when Apple started, and I did it in the metaphorical garage when the Mac started.
>
> I helped shepherd Apple from a garage to a billion-and-a-half-dollar company. It took a bunch of rambunctious upstarts, working with very little resources but a certain vision and commitment, to do it. I'm probably not the best person in the world to shepherd it to a five or ten billion dollar company, which I think is probably its destiny. And so I haven't got any sort of odd chip on my shoulder about proving anything to myself or anybody else. I had ten of the best years of my life, you know, and I don't regret much of anything. I want to get on with my life.

Phil Schlein recalled that it was one of Steve's finest moments, and he had seen the charismatic young man sway some mighty skeptical board members before. If the board were inclined to tears, there wouldn't have been a dry eye in the place. Steve was giving a farewell speech, and it was a great performance. He then went on to describe his still-inchoate plans for a new firm and assured them that he had no intention of taking any technology or proprietary ideas out of Apple. He mentioned that he would be taking a few people from the company, but by no means enough to disrupt operations or the products they were working on—and anyway, they would be people who were already leaving. He offered his resignation as chairman if the board thought that the new company would compete with Apple.

The board members asked Steve to step outside while they discussed it. They were sold on his candor and were favorably disposed to letting him take on the building of a quasi-Apple workstation computer. It could be a high-end Macintosh workstation for the educational market, a project that seemed perfectly suited to him and definitely in Apple's best interests. A few minutes later he was invited back in, and Sculley, very friendly, told him that Apple thought it sounded like a marvelous project. They were interested in buying 10 percent of his new venture while keeping him on the board, although not as chairman. Mike Markkula joined in and suggested that Steve and Sculley should discuss it further during the coming week. They made a date for Sculley and Apple's counsel, Al Eisenstadt, to meet with Steve. With good cheer all around, the meeting adjourned.

That night, at Steve's house, the new group met for the first time as a team, sitting beneath a tree in his backyard. Steve told them what had transpired in the boardroom. The group members decided that they didn't feel comfortable drawing things out. They wanted to tell Sculley their names right away and make a clean break. "We decided to cut the umbilical cord and go as a group so there wouldn't be one hit after another," said Susan Barnes. Furthermore, they wanted to sever ties completely with Apple. They didn't want any investment from the company.

At dawn Steve was up. He couldn't sleep that night, so he got into his car and headed for Cupertino. Sculley appeared at 7:25 that morning, Friday, September 13, and immediately encountered the chairman

of the board, who was sitting on a sofa outside his office. Steve told him that the group had decided it was best to leave en masse and handed him a handwritten list of the names. Sculley scanned it, said nothing for a moment, and then asked about the other two issues about which the board had inquired: an investment in the venture and Steve's staying on the board of directors. Steve told him that they all felt uncomfortable about committing 10 percent of the company to Apple and that he had no intention of staying on the board. With that, they shook hands, and Sculley said he really hoped they could work together. Steve was heartened and felt that they could split up on a friendly basis.

Although Sculley didn't appear upset to Steve, he claims that he was "absolutely taken aback when Steve walked in and handed me the list." The company president felt that "the board had been deceived. He said he was going to take a few low-level people not involved in anything Apple considered important." Instead, there were two senior engineers: Page, an Apple Fellow, the company's highest honor for scientists; and Crow, the top engineer for power circuitry. Then two key managers were on the list as well: Tribble was the manager of software development for the company's Macintosh computer line in toto, and Lewin headed marketing to all schools and colleges, the only bright spot in Apple's woeful financial picture during that quarter. By the time Sculley came out of his executive staff meeting that morning, Apple's attitude had changed.

"The executive staff has been stunned and shocked that this has happened. I had no idea Steve was forming a company," said Bill Campbell, executive vice president in charge of marketing and sales. "Losing those people was a shock. But losing the chairman of the board was even more shocking. We've had a good quarter; the organization has come together after the reorganization. This seems to highlight turmoil at Apple, and nothing could be further from the truth."

Campbell's counterpart in operations, Del Yokam, was incensed and hinted at legal action. "I'm quite surprised that all this was being done while he was chairman, and furthermore, it would concern me if he gets into a business that's competitive with Apple." Jean-Louis Gassée, Sculley's chief of technology, was even more furious, and his Gallic temper couldn't be contained. Later in the afternoon, he blasted Steve and his group of conspirators in front of a meeting of the two hundred people in his Macintosh new product development group.

An aroused Sculley informed the board of Steve's plans by telephone and had the five "traitors," as they were referred to at Apple, escorted unceremoniously off the property by security guards, who sealed their offices that Friday. At the board meeting the previous day, Steve had indicated that it was still a nebulous venture, but by presenting names the very next morning, he had demonstrated otherwise. The attempt to home in on the company's strongest market, education, with the defection of Lewin, caused considerable grumbling. The company's position was that the appearance of unseemly plotting while Steve was still chairman of the board gave Apple strong legal grounds to use against him and the new business.

By noon of that day, Friday the 13th of September, the company was in an uproar. The news of Steve's new venture spread like wildfire around Cupertino, and Apple was stunned. Group meetings were held throughout the company, and the news was passed along to employees. Black Friday quickly joined Black Wednesday—the day of Scotty's mass firings four-and-a-half years earlier—in the company's folklore. There was shock and dismay that the company's visionary could have abandoned it. And in the Macintosh group, many of the original Mac team were disappointed that Steve had passed them over when selecting his new group. It wouldn't be long before most of them departed.

Emergency meetings of the board were held by telephone over the weekend, and the company was uncertain how to proceed. By Sunday, the news hit the front page of the *San Jose Mercury News*, and this time the story was also front-page news across the country.

Mike Markkula, the largest shareholder other than Steve, released a statement after a Monday board meeting: "The board interpreted this action to be in direct contradiction to his statements of the previous day and began the evaluation which is currently underway." The reticent vice chairman still refused to meet the press in person. "We are evaluating what possible actions should be taken to assure protection of Apple's technology and assets."

Steve was silent throughout the weekend. He didn't respond to reporters' phone calls until he heard about the statement Markkula had made. It was time to take control of the publicity apparatus that he'd learned to play so well over the years.

On Tuesday evening, September 17, 1985, as the sun set with a particularly dramatic flourish, Steve Jobs, thirty years old, founder and resident visionary of Apple Computer, for ten years the primary worldwide evangelist for the coming of the personal computer age, an all-around mythic American figure, turned in his letter of resignation to the company he had founded. Composed on the Macintosh computer that he had muscled and cajoled into existence, printed on the LaserPrinter that he had aggressively championed, he drove the three miles to fellow founder Armas Clifford (Mike) Markkula's nearby Woodside house to hand deliver it. It closed a remarkable chapter in U.S. popular history.

Dear Mike,

This morning's papers carried suggestions that Apple is considering removing me as Chairman. I don't know the source of these reports, but they are both misleading to the public and unfair to me.

You will recall that at last Thursday's Board meeting I stated I had decided to start a new venture, and I tendered my resignation as Chairman.

The Board declined to accept my resignation and asked me to defer it for a week. I agreed to do so in light of the encouragement the Board offered with regard to the proposed new venture and the indications that Apple would invest in it. On Friday, after I told John Sculley who would be joining me, he confirmed Apple's willingness to discuss areas of possible collaboration between Apple and my new venture.

Subsequently the Company appears to be adopting a hostile posture toward me and the new venture. Accordingly, I must insist upon the immediate acceptance of my resignation. I would hope that in any statement it feels it must issue, the Company will make it clear that the decision to resign as Chairman was mine.

I find myself both saddened and perplexed by the management's conduct in this matter which seems to me contrary to Apple's best interests. Those interests remain a matter of deep concern to me, both because of my past association with Apple and the substantial investment I retain in it.

I continue to hope that calmer voices within the Company may yet be heard. Some Company representatives have said they fear I will use proprietary Apple technology in my new venture. There is

no basis for any such concern. If that concern is the real source of Apple's hostility to the venture, I can allay it.

As you know, the company's recent re-organization left me with no work to do and no access even to regular management reports. I am but 30 and want still to contribute and achieve.

After what we have accomplished together, I would wish our parting to be both amicable and dignified.

Yours sincerely,
Steven P. Jobs

Then, in front of the press gathered at his house, Steve burned all the bridges. The love affair was over. He faced the future with a kind of tough and brutal honesty that was immensely compelling.

He described the end in romantic, almost melodramatic terms that painted him as the aggrieved party. "My heart will always be there," he said, referring to Apple. "My relationship with the company is like a first love. I'll always remember Apple in the same way any man remembers the first woman he's fallen in love with.

"To me, Apple exists in the spirit of the people who work there and the philosophies and purpose by which they go about their business. If Apple becomes a place where computers are a commodity item, where the romance is gone, and where people forget that computers are the most incredible invention that man has ever invented, I'll feel I have lost Apple.

"But if I'm a million miles away, and all those people still feel those things and they're still working to make the next great personal computer, then I will feel that my genes are still there."

A few days later, Steve announced that he had settled on a name for the new venture. He named it NeXT and set about doing the paperwork to incorporate it. All week long, Apple and Steve's attorneys tried to come to some agreement to allow them all to part on, if not amicable, at least amenable terms. While Steve was willing to agree to a hiring freeze on Apple employees for a period of six months and not to use any proprietary Apple technology, he was unwilling to specify that his new products would not compete with Apple's present or future machines.

At the beginning of the following week, it looked like the company had done a little gene splicing of its own. On that day, September 23,

1985, Apple Computer filed suit in the Santa Clara County courts against Steve and Rich Page, contending that they had launched a "nefarious scheme" to use company research for a new venture, research that as chairman of the board Steve was privy to, and then deceived the company's board as to their intentions. With that legal action, the bridges were burned. Steve was incensed by the accusation and went back to the press, where once again he was treated royally.

"When somebody calls you a thief in public, you have to respond. I'm very surprised that Apple is suing me. We have spent an entire week talking with Apple lawyers, showing them that we have no intention of taking or using any Apple confidential information or proprietary technology in our new company.

"This sort of thing sure is hell and doesn't help Apple or its employees. We don't want to get involved with an unjustified lawsuit. We just want to build our company and invent something new." He went on to argue that Apple's suit appeared to assert that Steve would "not be able to practice my craft ever again in my life." That, he insisted reasonably, "seems odd."

He ended with a delightful capper: "It's hard to think that a $2 billion company with 4,300 plus people couldn't compete with six people in blue jeans." The press ate it up.

With that as Steve's parting shot, he and the new team headed across the country to visit universities, trying to find out what they should build into their new machine. The lawsuit degenerated into legal squabbles and one-upmanship over deposition scheduling and finally, in the wake of a record profit posted for the company during the final quarter of 1985, was quietly dropped. Apple was able to extract its pound of flesh, however. As part of the agreement NeXT was required to provide Apple with prerelease versions of its future products so that the company could ensure that they did not infringe on proprietary secrets and processes. But the relationship was over. Steve had sold most of his stock in the aftermath of his departure, and early in 1986 he completed the divestiture—retaining only a single share, which he said that he kept just so he would continue to receive the company's annual reports.

After so many battles won, Steve Jobs had lost a big one. This time it wasn't just a battle. This time he had lost the war.