



Bradley, Foster & Sargent, Inc.

Quarterly Market Commentary

April 2012

Steve Jobs and the Story of Apple Computer

He was not a model boss or human being, tidily packaged for emulation. Driven by demons, he could drive those around him to fury and despair. But his personality and passions and products were all interrelated, just as Apple's hardware and software tended to be, as if part of an integrated system. His tale is thus both instructive and cautionary, filled with lessons about innovation, character, leadership, and values.

Steve Jobs, Walter Isaacson, 2011

One of the best biographies of the past decade is Walter Isaacson's *Steve Jobs*. Published after Steve Jobs's death in October 2011, it is based on more than forty conversations that Isaacson had with Steve Jobs as well as a multitude of interviews with family, friends, and enemies whose lives intersected with Jobs. Jobs surprisingly gave him complete control over the book and did not even ask for the right to see it in advance. His wife also did not request any restrictions on the book. So it is a remarkably frank, unvarnished account of the life of Steve Jobs. It recounts the good, the bad, and the ugly. It chronicles the genius of Steve Jobs in detail but does not whitewash his many character flaws and his dark side. The story of his life reads like a modern day *Dr. Jekyll and Mr. Hyde*; only in Jobs's case, very little in his life was hidden. He was a business genius but also an extreme narcissist and a bully. In telling the story of Steve Jobs, Isaacson also paints fascinating portraits of the hippie revolution of the 1960s and 70s, the Silicon Valley culture, and the remarkable trajectory of Apple, Inc. – now the company with the largest market capitalization on the planet. In short, it is a superb book and a great read. This commentary is meant for those who do not have the time or inclination to read all 600 pages of the book but would like to fathom the man who changed modern culture, his genius in understanding the consumer, and his creation of the DNA of Apple.

Youth (1955-1985)

Steve Jobs was the son of Abdulfattah "John" Jandali and Joanne Schieble. Born in Syria, his father was a Muslim teaching assistant at the University of Wisconsin. His mother was raised in a rural Wisconsin family of German heritage and was an undergraduate student at the University of Wisconsin, where they met and fell in love. Her father threatened to disown her if they married. Pregnant, she went to San Francisco where a kindly doctor who sheltered unwed mothers delivered her baby, and then quietly arranged a closed adoption. Joanne Schieble had only one condition for the adopting parents: Paul and Clara Jobs must pledge to send her boy to college. They agreed, though neither of them had gone to college themselves.

The Jobs lived in the San Francisco area and were good parents. Some have said that Steve felt abandoned, which was one of the reasons that he was so reflexively cruel and hurt people. But, in discussions with the author, Jobs indicated that he never felt abandoned but rather felt special and chosen. His family moved several times to ensure that he went to good public schools in the

Silicon Valley area. At the age of 8 or 9, he said that he realized that he was “smarter than his parents.” Throughout his childhood, his parents went out of their way to please him. At the end of 4th grade, he was tested at school, and scored as a high school sophomore. A loner, he did not make friends easily.

High School and Reed College After his sophomore year in high school, Jobs started smoking pot. By his senior year, he had graduated to hash and LSD. Years later, he told John Markoff of the *New York Times* that “taking LSD was one of the two or three most important things he’d done in his life. People who had never taken acid would never fully understand him.” While still at high school, he met Steve Wozniak, the other half of the creative partnership that would ultimately change the world’s electronic culture. Wozniak was a brilliant math student. Shy and socially awkward, he never lied about anything. He and Jobs were opposites, but they worked well together. Jobs applied to Reed College, which had an unstructured lifestyle but was also academically demanding. Five years earlier, Dr. Timothy Leary had spoken at Reed, quoting his mantra: “Turn on, tune in, drop out.” In the 1970s, one-third of the Reed students did drop out, as did Jobs after only one semester. But he stayed at Reed and audited a calligraphy class which ultimately resulted in Jobs’s lifelong interest in fonts and his introduction of a range of fonts in Apple computers. At Reed, Jobs started his lifelong embrace of Zen Buddhism. He became a vegetarian and embraced extreme diets, purges, fasts, or eating only 1 or 2 foods such as carrots or apples for weeks on end.

India Jobs worked briefly at Atari before going to India. His fellow workers complained that Jobs, who came to work in bare feet, smelled bad. Jobs thought his fruitarian diet caused him not to have body odor, and thus he did not need to wash or shower. The CEO, Nolan Bushnell, liked Jobs and put him on the night shift in a solitary position where no one would be near enough to smell him. Soon thereafter, Jobs headed off to India where he spent 7 months seeking enlightenment. Jobs told Isaacson that he returned from India believing that intellect was not as important as intuition and experiential wisdom. This belief influenced his work and leadership at Apple where he refused to put up with straightforward PowerPoint presentations and demanded interactive discussions on all important Apple projects.

Teaming up with Wozniak In 1975, Jobs and Wozniak teamed up. Wozniak began to design a terminal with a keyboard and a monitor, which had one microprocessing chip. He created what would become the Apple I. Jobs was fascinated. He began to think about starting a company to make and sell these early PCs. Both sold some possessions, ending up with \$1,300 in working capital, and they had a design for a great product. They needed to find a name for the company. Jobs had just been to a hippie commune at an apple farm in Oregon, and he was on his fruitarian diet, so they decided to call it Apple (and it also came before Atari in the phone book). However, Wozniak had developed the Apple I on Hewlett Packard’s time and thought that he needed to offer the design first to HP, which he did. HP turned it down, viewing it only as a hobbyist product. This gave Wozniak the freedom to join Jobs to start the new company. They got started and presented their first Apple I to the Homebrew Computer Club, selling 50 units, which was at least a beginning. In 1976, they went to a PC exhibition in Atlantic City, and again, the Apple I did not impress anyone. But Jobs came away believing that Wozniak was the best circuit engineer there and was encouraged that their next model would be a blockbuster.

Key Events in the Life of Steve Jobs

1955	Born in California
1968	Went to Homestead High School (from which Steve Wozniak had graduated)
1972	Attended Reed College in Oregon for several semesters
1973	Worked at Atari, and again in 1975
1973	Traveled in India for 7 months
1975	Teamed up with Steve Wozniak
1977	Joined with Steve Wozniak and Mike Markkula to incorporate Apple
1980	Initial Public Offering of Apple with valuation of \$1.79 billion
1985	Forced out of Apple
1985	Founded NeXT Corporation to manufacture computer workstations
1986	Personally bought Pixar, a division of a George Lucas company
1996	Apple bought NeXT
1997	Jobs returned to Apple full time as CEO
1998	iMac launched
2001	iPod launched
2003	iTunes Store launched
2003	First bout with cancer
2007	iPhone launched
2009	Second bout with cancer resulted in liver transplant
2010	iPad launched
2011	Steve Jobs died
2012	Apple surpassed Exxon as firm with largest market capitalization in the world

Apple II Jobs wanted to take the basic idea of the Apple I and turn it into a simple and elegant design – unlike the clunky, gunmetal gray PCs that were being sold by other firms. Jobs began to craft the look and design of the Apple II, while Wozniak was responsible for creating the software. At this time, they also got a look at the graphic interface design and the mouse attached to the monitor that Xerox had developed, and when Xerox decided not to pursue these ideas, Jobs and Wozniak incorporated them in the design of the Apple II. But to roll out the Apple II, they needed money. Getting it into production would cost \$200,000. At this point Jobs was introduced to the premier Silicon Valley venture capitalist, Don Valentine. Valentine thought Jobs smelled odd and looked like Ho Chi Minh. But Valentine went beyond the hippie appearance and introduced him to someone who understood marketing, sales, and finance: Mike Markkula, who at the age of 33 had already made millions at Fairchild and Intel. Jobs liked Markkula who he thought was shrewd, decent, and fair. Markkula proposed that he and Jobs jointly write a business plan for Apple, and if they worked together well, Markkula would arrange the financing. The business plan that Markkula put together envisioned Apple going beyond the hobby market; he said it was the start of an industry. He was right.

Markkula said he would guarantee a \$250,000 credit line for the company. Apple would incorporate and Jobs, Wozniak, and Markkula would each own 26% of the company. The rest of the shares would be left to attract future investors. Jobs was impressed that Markkula was willing to risk his money. Wozniak hated going into management; he wanted to stay an engineer. This was fine with Jobs and Markkula. During the next years, Markkula took Jobs under his wing and taught him a great deal. Markkula believed that you should never start a company with the goal of getting rich; you should make something you believe in and create a company that will last. Markkula wrote his principles in a one-page paper titled “*The Apple Marketing Philosophy*.” It stressed three points: empathy with clients (truly understanding them); focusing relentlessly and eliminating unimportant opportunities; and that presentation and image count (people do judge a book by its cover). This became Jobs’s philosophy throughout his life.

For the rest of his life, Jobs understood the needs and desires of customers perhaps better than any other business leader. He focused on a handful of core products, and he cared greatly about the look, image, and marketing of Apple’s products. The Apple II was marketed in various models for the next 16 years with 16 million sold. More than any other machine, it launched the computer industry. Sales went from 2,500 units in 1977 to 250,000 in 1981. In 1980, Apple went public at a market valuation of \$1.79 billion, but money didn’t change Jobs. He saw himself as an anti-materialist. Despite his fame and fortune, he still fancied himself a child of the counterculture. Although he loved finely designed objects like Porsche and Mercedes cars and BMW motorcycles, the houses he lived in were simple and unostentatious. He was not at all philanthropic and disdained those who celebrated their own largess.

Jobs’s Firing from Apple and His Years at NeXT and Pixar (1985-1997)

His Character Jobs was 30 years old when John Sculley and Apple’s Board forced Jobs out of the company he had founded. By this time, Jobs’s character was largely formed. He had great talents and strengths. He was smart, yet operated largely on an intuitive basis rather than a logical approach. He was extremely intense, focusing with great concentration on anything he did. He had an incredibly strong will and was an obsessive perfectionist. In seeking the perfect color for the Apple II, he reviewed 2,000 shades of light brown and finally asked that a new color be created for the product. He would go to great lengths to get the right design for his products, often driving his engineers and product champions crazy. He was a minimalist and believed that simplicity was the ultimate sophistication.

Jobs also had tremendous character flaws. He was self-focused to the point of narcissism. He was often nasty and cruel in his relations with people. He was emotional. Early in his career at Apple, he would cry when he didn't get his way. He was a bully, operating without any kind of a filter in his words or his behavior. Everything came out. He was also fanatically detail-oriented and secretive.

Reality Distortion Field and Binary Approach to People and Things Colleagues said that Jobs would not accept any contrary facts. They said that the best way to describe this behavior was a term from *Star Trek*: "Steve had a reality distortion field. In his presence, reality is malleable. He can convince anyone of practically anything." The reality distortion field was a confounding mix of a charismatic rhetorical style, indomitable will, and eagerness to bend any fact to fit the purpose at hand. At the root of the reality distortion was Jobs's belief that the rules didn't apply to him. Sometimes this behavior had benefits, as when he was able to get his engineers to telescope production schedules from the 12 months they insisted they needed to the 6 months that he decreed. But the denial of certain facts also caused harm. For several years, he refused to acknowledge that he had fathered a daughter out of wedlock, until finally California used DNA tests in a paternity suit to prove Jobs was the father. He also had to pay the state over \$5,000 in back welfare. Another tragic example was in 2003, when he was diagnosed with cancer. He refused the surgery and chemotherapy prescribed by his physicians in favor of a self-prescribed series of homeopathic remedies including acupuncture and extreme diets. Finally, after nine months, Jobs agreed to have surgery.

Jobs saw things in black or white terms. Subordinates were either the "best" or "sh...y"; "Assh....s" or "enlightened." He couldn't control himself at Apple when he didn't get his way or when people disappointed him, throwing tantrums and calling people names. He created a culture of fear at Apple, according to *Inside Apple* by Adam Lashinsky.

In his 12 years away from Apple when he ran NeXT and Pixar, Jobs transformed himself from a creative entrepreneur into a more disciplined company builder. Jobs's strategy at building a company for the long haul was the following:

- No cloning of products from others
- Make the design user-friendly
- Enforce secrecy; plan big product launches
- Design and sell to consumers, not businesses
- Design products to work seamlessly together
- Make the design simple and elegant
- Maintain control of the primary technology
- No open source software or systems

Return to Apple (1997-2011)

In the year when Jobs returned to Apple, the company lost \$1 billion. Apple had only 90 days of cash on its books. The stock was at a split-adjusted price of \$3.50. As Jim Collins wrote in *Great by Choice*, Jobs brought discipline to the company, choosing to focus on core products, and axing the ancillary products that had been created in his absence (including the Newton). He cut overhead and fixed the financials, letting 3,000 people go. Then he went back to what Apple did right and launched the new iMac. It took four more years until Apple came up with a new product which began to change the culture – the iPod. When the iPod was introduced for the first time, it was a tentative step in a developing market, allowing consumers to download music legally at a modest cost. Then, they improved the iPod step by step over the next 3 years, creating the iTunes store. Finally, Apple made the iPod and iTunes available for Windows-based PCs, opening a market of 1 billion users globally. The iPod also had a "halo effect," drawing users into purchasing other Apple products. During this

period, Jobs also revolutionized retail stores by carefully, ever so carefully, designing, testing, and rolling out Apple retail stores in flagship locations such as Fifth Avenue in New York City. A skeptical Board of Directors reluctantly authorized Jobs to try four stores. Now there are over 300.

The product that had a profound effect on the consumer and the culture globally was the iPhone, introduced in 2007. This smart phone had remarkable functionality and a sleek, elegant look and feel. In addition to telephone and e-mail features, the first iPhone had a camera and the ability to store digital photos and send them by e-mail. It could download thousands of different apps at no cost to the consumer. But perhaps most importantly of all, the iPhone responded to the single touch of a finger, appealing to the human instinct for instant gratification. Finally, its multi-touch features allowed scrolling and changing the dimensions of an image. Android, Google's open source operating system for smart phones used by Samsung and other competitors, is running neck and neck with Apple for global market share, but each new release of the iPhone reaffirms Apple's leadership in this product category.

In 2010, Apple introduced its first iPad, followed by later versions of the iPad in 2011 and 2012. The impact of the iPad on the culture has not yet been fully developed, but the proliferation of iPad-like tablets is yet another example of how Apple's introduction of a product in an emerging technology can shape the culture.

Jobs's Legacy

Since 1997 when Jobs returned to Apple, its stock has grown from \$3.50 to \$590 a share at this time. Revenues have increased from \$7 billion in 1997 to \$108 billion in 2011. Cash on the balance sheet is approximately \$100 billion – \$106 per share. Apple has just declared a dividend which, on an annualized basis, amounts to \$11 per share. Can the man that Steve Jobs picked as his successor, Tim Cook, continue Apple's remarkable trajectory? There is little doubt that Jobs was *sui generis* – a man of his own kind, unique. Jobs was Apple. Apple's culture reflected Jobs's personality – intense, obsessive, secretive, competitive, product-driven, and brutal. Apple was not known as a fun place to work; it was a place where fear reigned but also a place where engineers and product champions could flourish. Cook ran Apple during Jobs's bouts with cancer in 2003 and 2009. Cook and Jobs worked for more than 10 years as a yin and yang team of discipline and creativity. Cook has a very different personality than Jobs – calm, phlegmatic, unemotional, and reasonable. But there is little doubt that Jobs's remarkable intuitive understanding of what the consumer wants, even before the consumer can express it, will be difficult to replace. Because Jobs had 15 years to mold and shape the product-driven, user-friendly, intense culture at Apple, and because Cook helped him implement this culture, there is a reasonable expectation that Apple can continue its successes for some years. That is what consumers and investors hope as Apple continues to go from success to success in 2012 and its share price climbs almost daily. At Bradley, Foster & Sargent, Inc., we believe that Cook can succeed, but investors need to be mindful of the pitfalls which can befall huge companies in a very competitive arena.

Bradley, Foster & Sargent, Inc.

Investment Management

Principals & Portfolio Managers

Robert H. Bradley • Cameron H. Burns • Nancy W. Donadio • Timothy H. Foster • Charles J. Herbert • David P. Korzendorfer • Keith G. LaRose • Felicia M. Lazor
Roger H. Manternach • Jeffrey G. Marsted • Gregory M. Miller • William R. Peelle, Jr. • Joseph D. Sargent • Thomas D. Sargent • Stephen L. Willcox