

**Steve Jobs and Apple, Inc.**

**Change Agents**

James C. Wehrenberg, MD

January 18, 2013

Steve Jobs was born in San Francisco on 24 February, 1955 to unwed parents Joanne Schieble and Abdulfatta "John" Jandali, a Muslim teaching assistant from a prominent Syrian family. Schieble's father was opposed to the relationship, and the baby was put up for adoption with only one request for the adoptive parents: that they be college graduates. The original couple wanted a girl, and backed out of the adoption. Job's was adopted by Paul and Clara Jobs, a lower middle-class couple. Schieble eventually signed the adoption papers with the stipulation that the adoptive parents pledge and fund savings for a college education. After her father's death, Schieble and Jandali were married and had a daughter named Mona, Job's full sister. It would be more than 20 years before the siblings would know of each other's existence.

Paul and Clara Jobs were always open about the adoption to their son Steve. They conveyed to Jobs an attitude and belief that he was chosen and special. An influential fourth-grade teacher, Imogene Hill, also saw Jobs' raw intelligence and ambition, and reinforced this powerful message. Jobs strongly held this belief of his uniqueness and it would prove to be a defining attribute of his life. Many would argue that it would cross the line into narcissism.

The family moved to Mountain View, California in 1960, which was rapidly developing into what would be known as Silicon Valley due to the concentration of electronics firms in the region. The neighborhood included successful engineers and employees for companies such as Hewlett-Packard, Fairchild Semiconductor, and Integrated Electronics, later to be known as Intel. One neighbor, Larry Lang, bought do-it-yourself electronic Heathkits for Jobs, which

gave him an understanding of the basics of electronics and more importantly, the self-confidence to understand seemingly complex things. Through a mutual friend, Jobs met Steve Wozniak at an electronic explorers club. Jobs observed, "I liked him right away. He was the first person I'd met who knew more about electronics than I did".<sup>1</sup> They also had a mutual, strong interest in music, especially that of Bob Dylan, and were both pranksters, which frequently kept them in trouble at school.

Wozniak read an article in the September, 1971 issue of *Esquire* magazine about a "blue box", that would permit free long distance phone calls.<sup>2</sup> They developed the box, and successfully tested it. Wozniak, with a hacker's mentality, wanted to give it away, but Jobs immediately recognized its value. This relatively simple venture imprinted the relationship between the two of them. Jobs admitted that "if it hadn't been for the blue boxes, there wouldn't have been an Apple. I'm quite sure that."<sup>3</sup>

After high school, Jobs told his parents he would only apply to Reed College, one of the most expensive liberal arts colleges in the country. Because of their commitment at the time of his adoption, his parents relented. Jobs dropped out after one semester, but continued to pursue his interests in Eastern philosophy, fruitarian and vegan diets, and LSD. He audited classes for 18 months, including more artistic offerings such as calligraphy and dance. At this time, he also moved to a commune in Oregon, where his primary responsibility was tending an apple orchard.

He returned to his parents home in Los Altos, California in February 1974.

His first regular job was secured at the video game maker Atari when he walked into their offices and announced "I'm not leaving until you hire me".<sup>4</sup> After working there for several months, he used the money he'd saved to take a seven month sabbatical to India to pursue his interests in Eastern philosophy and to "seek enlightenment." Jobs embraced and refined the concept of intuition during this trip, a principal more readily accepted in Eastern philosophies. He defined it as emphasis on experiential wisdom or cognitive understanding that is experienced through concentration of the mind. Jobs would embrace this concept the rest of his career.

During this time, Steve Wozniak's interest in electronics continued to grow, and he was regularly attending the Homebrew Computer Club, which began meeting in March 1975. Members of this club were the engineers and employees of Silicon Valley, and they were the real pioneers in the development of personal computing. Selling for \$495, the Altair 8800 was the first personal computer kit and was shown at the club when it became available. Wozniak, who had already been designing a terminal to connect remotely to a distant computer, realized that by putting a microprocessor inside his design, he could essentially make a small stand-alone computer that would work on a desktop. He began writing software that would get the microprocessor to produce output on a video screen. On January 29, 1975 a milestone of personal computing occurred, and nobody besides Wozniak observed it: "It was the first time in history any one had typed a character on a keyboard and saw it show up on the screen right in front of their eyes". Jobs realized that Wozniak's invention could be sold to software

enthusiasts who wanted to write software without the hassle of assembling a computer kit. Wozniak sold his HP 65 calculator and Jobs his Volkswagen bus to get working capital of \$1300, and started assembling computers in Jobs' parent's garage. The home computer had been born.

The name for their new company came from Job's recent stint at the apple orchard in Oregon. Back in the days when people still used phonebooks, it also occurred to Jobs that this name would place them ahead of game maker Atari. On April Fools' Day, 1977, Job's, Wozniak, and Ron Wayne, a middle-aged engineer at Atari with the only business experience of the three of them (a failed slot machine company) incorporated Apple Computer. Wayne would back out only 11 days later, eventually receiving \$2300 for his 10% share. Value of that stock at the end of 2012 would be over \$3 billion.

Wozniak was already working on a new design, the Apple II, which would be more powerful, expandable, and would support color graphics. They both began to think it could be wildly successful. Job's began to seek out venture-capital and eventually convinced Mike Markkula, a former Intel executive, to invest \$250,000. Markkula was a huge believer in the personal computer revolution and thought Apple might be a Fortune 500 company within two years. He was off two years in his estimate. He would remain with Apple for more than two decades.

Markkula had a strong relationship with Jobs and in many ways represented a father figure to him. He also served as an early business mentor for Jobs, and would emphasize that the goal of starting a company should not be

to get rich, but to make or do something you believe in and to make a company that would last. He had a strong business background and imparted three principles to Jobs. First, have empathy, recognize the internal connection with the feelings of the customer. Second, focus, by eliminating all unimportant opportunities and distractions. Third, impute, i.e., recognize that people form an opinion about a product or a company based on the signals and values it conveys, including outward appearance. In other words, people do judge a book by its cover. Jobs would learn to understand and apply these principles perhaps better than any other business leader.

Jobs purchased prime floor space when the Apple II was introduced at the first West Coast Computer Faire. They only had three working prototypes at the time, but stacked the booth with dozens of empty boxes in the back, giving the impression that hundreds of computers were available. With the ease-of-use of the Apple II and its beautiful design, the company quickly became a success. Another surge in sales occurred with the introduction of VisiCalc, the first successful spreadsheet program.

In light of its success, the investors decided to go public. When the company was first formed in January, 1977, the company was valued at \$5309. Less than four years later it was the most successful initial public offering since Ford Motor Company in 1956, and would be valued at \$1.8 billion by the end of December, 1980. Jobs, who was worth \$1 million at age 23, \$10 million at age 24, became worth over \$200 million at age 25 when the IPO was rolled out.

The next model was the Apple III, a miserable failure. They subsequently

decided to rest their hopes on a new business computer project called the Lisa, which Jobs initially believed in strongly. The acronym stood for Local Integrated System Architecture, but it was well known that Jobs had fathered a child named Lisa with his long-term girlfriend in May, 1978. Ironically, Jobs for many years vehemently denied fatherhood, though paternity testing was conclusive. Jobs did make certain that the issue of child support was resolved before Apple went public.

Apple's success in the world of personal computing had caught the interest of IBM, which at that time was only selling mainframe computers to large companies. In August, 1981, IBM entered the personal computer market, utilizing an operating system licensed from Microsoft. It was the biggest threat to Apple yet, particularly after the flop of the Apple three.

In December, 1979, Jobs and top Apple engineers made a seminal visit to the Palo Alto Research Center of Xerox Corporation. It had been established in 1970 as a spawning ground for digital ideas, and those in charge had the foresight to place it thousands of miles from corporate oversight. The door to the center opened because Xerox's venture-capital division wanted to invest in the second round of Apple's stock, and felt this could cement that opportunity. Jobs was immediately impressed, but more importantly, saw the commercial utility of what he was shown. Xerox's scientists had developed multiple breakthrough technologies, including the mouse, the Ethernet, laser printing, and most importantly, the graphic user interface, or GUI. When GUI was eventually introduced several years later by Apple, it revolutionized how people interacted

with their computers and was a quantum leap forward in personal computing. Jobs would later say, stealing a line attributed to Picasso, "good artists copy, great artists steal."<sup>5</sup> He would not be so charitable several years later, when Microsoft would do to Apple what he had done to Xerox.

The development of the Lisa was going poorly. Because of his ill temper and relative inexperience in technology, Jobs was removed as head of the Lisa project and made non-executive Chairman of the Board. He was crushed. He ended up taking over a small, personal computer skunk works project headed by an engineer named Jeff Raskin. Raskin had named the computer after his favorite apple, the McIntosh. But Job's and Raskin did not see eye to eye. Jobs viewed Raskin as a pedantic theorist without practical experience, or to use his more precise terminology, "a shithead who sucks."<sup>6</sup>

The three years that the Macintosh was under Job's leadership were some of the most productive and intense in his career. He had a top notch, dedicated team. Jobs thought he might be named Time's Man of the Year at the end of 1982, but the magazine named the computer as "Machine of the Year". It did run a non-flattering, several page profile of Jobs as part of the story. Jeff Raskin, who had been pushed out of Apple by Jobs, got the best quote in the article: "Jobs would've made an excellent king of France."<sup>7</sup>

By 1983, hope rested with the Macintosh, as it was apparent that the Lisa was another major flop. During the same time, Apple was actively searching for a new CEO to run the company and to groom Jobs into a future executive, as Jobs clearly did not currently have that skill set. Someone with marketing and



advertising experience was sought as IBM, after its introduction of the PC, was trouncing Apple. John Sculley, head of Pepsi Co., was courted for several months, with Jobs famously asking him, "Do you want to spend the rest of your life selling sugared water, or do you want a chance to change the world?"<sup>8</sup> Sculley accepted the position in April 1983.

Apple hinted at the introduction of the Macintosh with a particularly memorable 60 second commercial during the 1984 Super Bowl, invoking images of George Orwell's totalitarian novel "1984." Later that month the Macintosh was released. It was a true revolution in personal computing, and introduced a graphic user interface with various fonts, documents, charts, drawings, and spreadsheet. The audience roared its approval when Job's pushed another button, and it became the first computer to introduce itself: "Hello, I'm Macintosh. It sure is good to get out of that bag".<sup>9</sup>

As revolutionary as the Macintosh was, by early 1985 sales were plummeting because it was significantly underpowered. This created a great deal of tension between Sculley and Jobs, who continued to act as though he had saved Apple. In late May 1985, Jobs attempted a palace coup when Sculley was scheduled to go on a business trip to China. But Jobs made the crucial mistake of confiding to a division head who quickly informed Sculley. The trip was canceled, and a showdown occurred with the Board of Directors. They unanimously backed Sculley. Jobs was out.

After several months, Jobs decided to start a new company called NeXT, aimed primarily at the higher education market. He successfully wooed several

top Apple employees to join him. When Apple became aware of his plans, they sued Jobs for absconding with proprietary information, and on September 17, 1985, Job's submitted his resignation to the Board. Within five months he had sold over 6.5 million shares of stock, retaining only one token share so he could attend shareholder meetings if he desired. It would be over a decade before he returned to Apple. The coming years, which would notably consist of several high profile failures, were probably the most important in his personal development for future success.

Jobs jumped into his new venture headfirst. He wanted the best hardware, the most automated factory, and the best software. A new operating system was developed based on UNIX, a multitasking, multi-user operating system developed in 1969. H. Ross Perot, the billionaire businessman, was an early investor. He had previously failed to invest in Microsoft when he had a chance, and was determined to not make the same mistake. Jobs turned on the charm and salesmanship, and convinced him into buying 16% of the company for \$20 million. This was four times what venture capitalists had rejected just days previously.

Job's ambitious plans delayed release of the computer until October, 1988 and it was generally recognized as a great machine. But it also flopped, primarily because it was overpriced at \$10,000. The market was just too small. The company kept hemorrhaging money and investors, including Perot, began to pull out.

In the summer of 1985, a former Xerox employee who knew of Jobs

interest in the blending of creativity and technology, invited Jobs to visit the computer graphics division of Lucas Films, Incorporated. George Lucas, the highly successful motion picture director, was going through an expensive divorce and needed cash quickly. In January 1986, Jobs paid \$10 million for 70% of the company, a third of what Lucas wanted, with the remaining 30% going to the founding employees. Job's goal was to market high-end computer graphics workstations to higher institutions such as the military and radiology, for 3-D rendering of intelligence photography, CT and MR scanning. The animation side of Pixar was originally just a marketing tool for the proprietary graphics hardware and software, which Jobs considered to be the real assets. The animation group had won an Academy Award in 1989 for the short, animated film *Tin Toy*, but sales remained poor, and the company dropped its hardware and sold software only in 1990. By March of 1991, Jobs had laid off half of Pixar's staff and had taken back all of the stock as it was still substantially in the red after five years. All this was to change in May 1991, when Pixar signed a deal with Disney Studios to make a full-length computer-generated animated film, *Toy Story*. Both parties had script approval and Jeffrey Katzenberg, the very hands-on head of Disney animation, halted production several times due to creative disagreements with John Lasseter, the creative head of Pixar. Jobs remained uncharacteristically hands-off with Pixar, only going to the studio five times between 1986 and 1992. For him, it was more of a hobby, but he continued to protect the animated division of Pixar because it gave him a sense of artistry and creativity. When Disney shut down production of *Toy Story*, he continued to fund

it personally. This compelled Jobs to figure out a way to have more leverage with Disney in the future. Jobs real value and strength for Pixar was his strong intuition of the value of the company, and his formidable negotiating skills.

Back at NeXT, things continued to tank. Revenues for 1990 were only \$20 million whereas rival Sun Microsystems had revenue of \$2.5 billion. In January 1992, Jobs was forced to do something against his very core by licensing NeXT software to run on other computers. IBM was among those involved, and had Jobs been able to get over his resistance to licensing software, NeXT might have replaced Microsoft as the dominant software provider for IBM. Both parties eventually turned cold to the idea, and nothing came of it. By February 1993, NeXT was forced to end hardware operations and dismissed 300 of its employees.

Things would not get any lower for Jobs. His personal fortune was a small fraction of the hundreds of millions of dollars it once was due to bankrolling two companies which had never turned a profit.

As NeXT floundered, Jobs turned his attention more and more to Pixar. *Toy Story* looked like it would be a hit. Against all advice from bankers and investment brokers, Jobs gambled heavily by deciding to take the company public on November 29, 1995, one week after the opening. He insisted on setting the IPO at \$22, eight dollars higher than analysts recommended. In the first half hour of trading, stock went up to \$45 and trading was delayed because of so many buy orders. Earlier that year, Jobs said he had hoped to find a buyer for Pixar for \$50 million to simply recover what he had put into the company. By

the end of the first day of trading, the shares he retained, 80% of the company, were worth \$1.2 billion. With this leverage, he was able to renegotiate Pixar's deal with Disney and Michael Eisner, its high-profile CEO.

During this same time, things were going poorly at Apple. In 1995, Microsoft released Windows 95, a crude but workable copy of the Mac operating system and its popular graphic user interface. Mac sales plummeted even farther. Apple went through several CEOs during this time, the latest one being Gil Amelio. Apple desperately needed a new, modern operating system, and buying one was deemed a better and faster option than trying to develop a new one from scratch. Jobs' company NeXT was failing, but it had developed a powerful operating system, NeXTSTEP, which was a natural fit with Apple. Jobs turned on his formidable negotiating skills once again and was able to convince Amelio to purchase not just the software, but the whole company for an astonishing \$400 million. For the first time in 11 years, Jobs stepped on Apple's campus in December 1996, was named an informal advisor to Amelio, and had a seat on the Board of Directors. He was back at the company he founded.

After Apple lost \$700 million in the first quarter of 1997, Amelio was ousted. At first, Jobs declined the CEO position, but agreed to serve in an interim capacity. He jumped into the job headfirst. Jobs demanded and got resignations from the Board of Directors, replacing them with new members, whose common trait was complete loyalty to Jobs. Every product line was thoroughly reviewed. Dismissal of a product, and likely its developers, was prompt if it didn't fit into Job's vision of the company. At the MacWorld

conference in August 1997, Jobs dropped a bombshell that made the cover of both Time and Newsweek: Microsoft and Apple agreed to resolve their patent disputes over the graphic user interface and Microsoft would commit to continue software development for future Macintosh systems. In addition, Microsoft would invest \$150 million in the struggling company in return for nonvoting shares. At the same time, Apple launched its popular "Think Different" campaign, which would define Apple as a lifestyle brand for the next five years. By January 1998, Apple was profitable again. Jobs retained the title of iCEO, but the "i" had changed from interim to indefinite. In May of that year, the iMac was introduced, Apple's first truly innovative product since the original Macintosh in 1984. Sales would reach almost 1,000,000 units in the first year, Apple's best-selling product yet.

At the turn-of-the-century, a confluence of developments would change Apple's focus for the future. A new operating system, the Mac OSx, with a revolutionary new graphic user interface was under rapid and intense development. In addition, the rapid acceptance of mainstream digital devices such as cameras, digital music, digital books, and camcorders, made it apparent that a digital hub strategy would have many advantages. By placing the complex and robust software to manage these technologies in the home computer, the peripheral devices themselves could become much simpler and intuitive and user-friendly. Personal movies were the first foray into this realm and were moderately successful. But the next step would revolutionize an industry, and Apple, with its unyielding commitment to vertical integration, was poised to lead

the way.

In March 2001, Jobs launched a crash development program that resulted in the iPod. With the tagline "1000 songs in your pocket", it was shown to a group of journalists on October 23, 2001, just in time for the Christmas season, and priced at \$399. Many joked that it stood for "idiots price our devices". The intuitive iTunes software that would operate on the home computer made it the first digital music player that was easy to use and it was an immediate success. When it was shown to Bill Gates, he took several minutes to evaluate it and finally responded, "This looks like a great product. It's only for the Macintosh?"<sup>10</sup>

Concurrently and as importantly, Jobs had negotiated with the major music labels to place their music on the iTunes store. He argued that since Macintoshes represented only 5% of computers, the risk to their industry was small. The iTunes store was unveiled on April 28, 2003, with hopes of selling 1 million songs in six months. It surpassed that in six days. Had the major labels been able to agree on a common standard, there likely would have been multiple online music stores, and iTunes near monopoly on digital music, which continues to this day, would have been unlikely.

Microsoft realized they had been smoked by Apple. Jobs initially resisted writing software for Windows. But cooler heads convinced him to not repeat the mistake that had been made years earlier. That decision would further cement iTunes lock hold on the industry. With a large screen projecting over his shoulder with the title "The Day Hell Froze Over," Jobs announced iTunes for Windows in October 2003. Apple continued with iPod innovations including the Mini, the

Shuffle, and the Nano. By January 2007, the iPod represented half of Apple's revenues. Its astonishing success proved to Jobs and Apple that striving for perfection and ease-of-use was a business model that could be phenomenally successful.

That same October, Jobs had a CT scan for evaluation of kidney stones that fortuitously demonstrated a small mass in the pancreas. It turned out to be an islet cell tumor, a rare, slow-growing tumor of the pancreas, with a much greater surgical success rate than more common malignancies. Despite strong advice to have surgery, Jobs resisted for 10 months while attempting to treat it with nonconventional therapies such as strict vegan diets, fruitarian diets, acupuncture, and herbal remedies. A repeat scan in July 2004 showed growth and suspected metastatic disease to the liver. At the end of the month, Jobs underwent a modified Whipple procedure for resection of the tumor. Metastatic disease was confirmed at the time of surgery, and chemotherapy begun soon afterwards.

Meanwhile, back at Woody's Roundup, aka Jobs' other company, aka Pixar, the iPod was also having an impact. Pixar continued with hit after hit: *A Bug's Life* (1988), *Toy Story II* (1999), *Monsters, Inc.* (2001), and *Finding Nemo* (2003). But the relationship between Michael Eisner, the head of Disney, and Jobs began to deteriorate. They openly began sniping with each other. Jobs announced he was ending negotiations with Disney in January 2004. Eisner had also alienated many of Disney's board members, most notably Walt's own nephew Roy, who began a public campaign to oust Eisner as well. In September



2005, Bob Iger, COO of Disney, was named the new CEO, and worked quickly and vigorously to repair the relationship with Pixar. Disney now needed Pixar, with its blockbuster gallery of hits, as much as Pixar needed Disney when they were developing the original *Toy Story*. Apple had created a video capable iPod, and Jobs wanted content to display on it. Iger quickly pledged some of Disney's best TV shows and videos to support it. With this newfound goodwill, the idea of buying Pixar was floated by Disney and on January 24, 2006, Pixar was purchased by Disney for \$7.4 billion in stock. In actuality, it essentially ended up being a reverse acquisition, with Ed Catmull, Pixar's chief technical officer, becoming head of Disney animation, John Lasseter, Pixar's chief creative officer, became Disney's chief creative officer as well, and Jobs went on the board of Disney as the single largest shareholder of Disney stock, holding 7% of the company.

In June 2005, Jobs announced plans that had been underway for almost 2 years. Apple, which since its inception had used Motorola and IBM microprocessors, would be switching to Intel. This led to an even greater adoption of the Macintosh platform, and all Macs had made the switch within a year.

Apple was on a roll. Secretly, Apple had begun working on a tablet computer in 2003. Jobs soon realized that the revolutionary touchscreen technology that had been developed for the tablet could work on a cell phone as well. He also knew that 825 million cell phones were sold throughout the world in 2005. The market was huge.

In January 2007, Jobs made his best keynote presentation ever at the annual MacWorld conference. On that day, three revolutionary devices were introduced: a widescreen iPod with touch controls, a revolutionary cell phone, and a breakthrough Internet communicator. Jobs announced, "These are not three separate devices, this is one device, and we are calling it the iPhone." Six months later the phone was released for sale, the same day that Pixar studios released their newest film, *Ratatouille*. When Jobs went to the nearest Apple store, an employee called out to him, "Gates stayed in line all night". Jobs started laughing and said, "I sent him one". "He needs six," was the response.<sup>11</sup> By the end of 2010, 90 million iPhones had been sold, and Apple had more than half the profits of the global cell phone market.

Jobs also brilliantly negotiated a landmark deal with AT&T, without ever showing them the phone. It changed the phone industry, and made Apple the most prominent digital device company in the world. This was also reflected in the decision to change of the corporate name from Apple Computer, Inc. to Apple, Inc. When Apple allowed third-party software for applications on the iPhone (after appropriate review by Apple engineers), another revolution occurred, this one in mobile software. The App store was created and gave Apple one more advantage over competitors, one that likewise continues to this day. Apple was effective in convincing most people that, if you've got a problem, it's a pretty good bet that "there's an app for that."

Jobs personal fortunes were not following those of the company. By spring of 2008, he had lost 40 pounds. In January 2009, he took his second medical

leave, putting Tim Cook, Apple COO, in charge. In March, only weeks from death, he underwent a liver transplant in Memphis. By September, he was again involved in day-to-day operations. He still had a few tricks up his sleeve.

Development of the tablet computer had actually preceded that of the iPhone. It would have to be good at web browsing, email, photos, video, music, games, and e-books. When it was unveiled by Jobs in January 2010, the Wall Street Journal responded, "the last time there was this much excitement about a tablet, there were some commandments written on it".<sup>12</sup> 15 million were sold in nine months. It would benefit from an even richer garden of applications, all tried and tested by Apple and only sold by iTunes.

Jobs declining health could no longer be denied. His third medical leave was announced in January 2011, with no date set for his return. He made two public announcements after this, one in March for the iPad 2, and again in June, where a major corporate strategy was revealed, the iCloud. This was as momentous as Apple's digital hub strategy 10 years earlier, with the hub now moving from the home computer to Apple's ecosystem of remote servers. By July, the cancer had spread to his bones. His last personal appearance was to Apple's Board of Directors on August 25, 2011 stating "I have always said if there ever came a day when I could no longer meet the duties and expectations as Apple CEO, I would be the first to let you know. Unfortunately, that day has come".<sup>13</sup> Six weeks later on October 5, he passed away at home surrounded by family, one day after the iPhone 4S was introduced.

It has been a little over year since Job's resignation and death. The first orderly transition to a new CEO occurred at his resignation, with Tim Cook, the current CEO of Apple, taking control. 2012 was Apple's most ambitious year yet. During those 12 months, Apple released the iPhone 5, a redesigned MacBook Pro, two new iPods, both the third and fourth generation iPad, the iPad mini, completely redesigned the iTunes software, and added more than 250,000 applications to the iTunes store. The company increased in value during that year from \$351 billion to \$488 billion, more than Google and Microsoft combined. They also committed to return some manufacturing to the US.<sup>14</sup> But it has not been completely smooth sailing. The Apple maps replacement on the iPhone was a rare misstep. Labor practices in their China factories have come under continued scrutiny. And though still the world's most valuable company, the stock has come down 25% after missing earnings estimates in the third and fourth quarters of 2012. Apple's well-known super secrecy makes evaluation of potential new products near impossible, but rumors of an Apple TV have been circulating for sometime. It seems likely that when new products come, something new and unexpected will be a part of it

Job's legacy is secure. He will stand with other legendary innovators including many of his personal heroes such as William Hewlett, David Packard, Edwin Land, Robert Noyce, and Walt Disney. The adopted son of an unwed American graduate student and a Syrian immigrant graduate student, he was raised in the right place and at the right time, but brought his own unique personality and drive and his own set of principles that helped drive the success

of both Apple and Pixar. A succinct list of these principles would include:

- Develop your intuition and trust it. Jobs would not listen to his customers as "they don't know what they want until you show them". He also liked quoting a statement attributed to Henry Ford, "If I asked people what they wanted, they would've said faster horses."
- Stay focused on what you're good at, get rid of the rest.
- Look at alternatives, no matter how far out of the mainstream they may seem.
- Delve deeply into the details.
- Don't compromise.
- Design is function, not form.
- New products should be developed in a nonlinear fashion, and should include designers, engineers, and marketers, at all stages in the development process.
- Seek the highest quality
- Partner with the best.
- Don't be afraid to steal
- Don't be afraid to cannibalize your own products. If you don't, someone else will.
- Simplify, simplify, simplify. This is the realization of complexity resolved.
- Be passionate.

Development and adherence to these philosophies has led to product and industry innovations that in retrospect are truly staggering and revolutionary. These include the Apple II, the first out-of-the-box home computer; the Macintosh, which introduced the graphic user interface; Pixar Animation Studios, which changed the way animated films were made and viewed; the iPod, which changed the way we listened to music; the iTunes store, which changed the whole music industry much less the way we buy our music; the iPhone, which changed our shirt pockets into telephones, music stores, cameras, and complete libraries as well as changing the phone industry; the App Store, which created a new software industry; Apple retail stores, which revived a sales model that had otherwise died; the iPad, a completely new platform for magazines, books, the web, and television, and the iCloud, which is poised to change how and where we manage our personal digital devices and information.

Despite his long history of well rehearsed and choreographed public presentations of Apple products, Jobs had never given a commencement address until he did so in June, 2005 at Stanford University. In it he related three simple stories, focusing on setbacks and failures in his life. The first was about dropping out of Reed College and how that allowed him the freedom to pursue his own vision and to audit classes that really interested him. The second was about being fired from Apple, the company he started, and how that gave him the freedom to be a beginner again. The third was about being diagnosed with cancer and the freedom it gave to focus on the truly essential. He included the following prescient, simple, and profound comments:

Remembering that I'll be dead soon is the most important tool I've ever encountered to help me make big choices in life. Because almost everything – all external expectations, all pride, all fear of embarrassment or failure – these things just fall away in the face of death, leaving only what is truly important. Remembering that you're going to die is the best way I know to avoid the trap of thinking you have something to lose. You are already naked. There is no reason not to follow your heart.<sup>15</sup>

**Footnotes:**

1. Isaacson, Walter. *Steve Jobs*. New York: Simon & Schuster, 2011 pp. 58-59
2. Rosenbaum, Ron. "Secrets of the Little Blue Box," *Esquire*, Oct. 1971
3. Op. cit., Isaacson, p. 65
4. Ibid., p. 83
5. Ibid., p. 157
6. Ibid., p. 157
7. Moritz, Michael. "The Updated Book of Jobs," *Time*, Jan. 3, 1983
8. Sculley, John, and John Byrne. *Odyssey: Pepsi to Apple*. London: Collins, 1987. p. 90
9. Op. cit., Isaacson, p, 259
10. Ibid., p. 567
11. Ibid., p. 678
12. Ibid., p. 703
13. Ibid., p.794
14. Tyrangiel, Josh. "Tim Cook's Freshman Year," *Business Week*, Dec. 10-16, 2012
15. Jobs, Steve. Commencement Address, Stanford University, June 5, 2005



## References

### Books

Byrne, John A. *World Changers: 25 Entrepreneurs Who Changed Business as We Knew It*. New York: Portfolio / Penguin, 2011. Print.

Deutschman, Alan. *The Second Coming of Steve Jobs*. New York: Broadway, 2000. Print.

Isaacson, Walter. *Steve Jobs*. New York: Simon & Schuster, 2011. Print.

Kahney, Leander. *Inside Steve's Brain*. New York: Portfolio, 2008. Print.

Levy, Steven. *Insanely Great: The Life and times of Macintosh, the Computer That Changed Everything*. New York: Viking, 1994. Print.

Linzmayr, Owen W. *Apple Confidential 2.0: The Definitive History of the World's Most Colorful Company*. San Francisco, CA: No Starch, 2004. Print.

Lüsted, Marcia Amidon. *Apple: The Company and Its Visionary Founder, Steve Jobs*. Minneapolis, MN: ABDO Pub., 2012. Print.

Price, David A. *The Pixar Touch: The Making of a Company*. New York: Alfred A. Knopf, 2008. Web.

Rhodes, Richard. *Visions of Technology: A Century of Vital Debate about Machines, Systems, and the Human World*. New York, NY: Simon & Schuster, 1999. Print.

Sculley, John, and John A. Byrne. *Odyssey: Pepsi to Apple*. London: Collins, 1987. Print.

Wozniak, Steve, and Gina Smith. *!Woz: Computer Geek to Cult Icon : How I Invented the Personal Computer, Co-founded Apple, and Had Fun Doing It*. New York: W.W. Norton &, 2006. Print.

## **Articles**

Deutschman, A. (2011, September 5). Exit the King. *Newsweek*, pp.30-36

Grossman, L and McCracken, H. (2011, October 17). The Inventor of Our Future. *Time*, 178, pp 38-44

Isaacson, W. (2011, October 17). American Icon. *Time*, 178, pp.32-35

Moritz, Michael. "The Updated Book of Jobs," *Time*, Jan. 3, 1983

Rosenbaum, Ron. "Secrets of the Little Blue Box," *Esquire*, Oct. 1971

Theroux, P. (2011, September 5). How Apple Revolutionized our World. *Newsweek*, p.36

Tyrangiel, J. (2012, December 10-16). Tim Cook's Freshman Year. *Business Week*, pp. 62-74