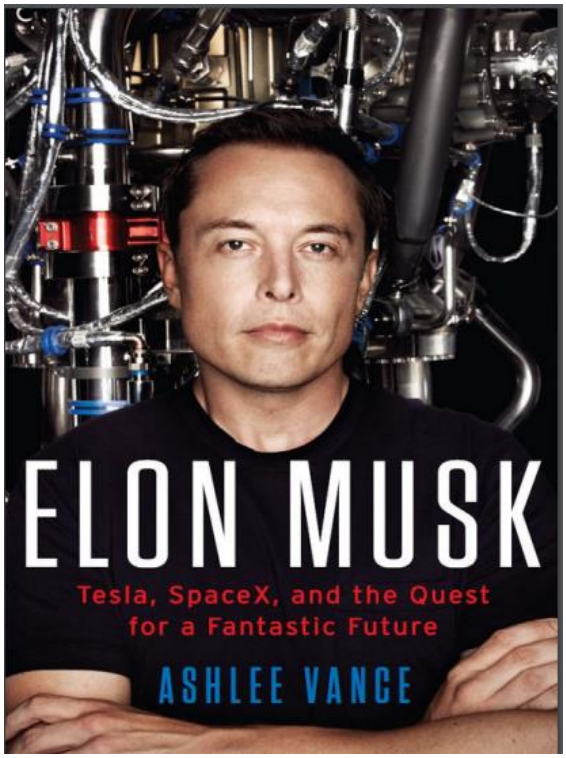

ELON MUSK

BIOGRAPHY

BOOK REVIEW

Contents

Title

“Elon Musk” by Ashlee Vance

Genre

Biography

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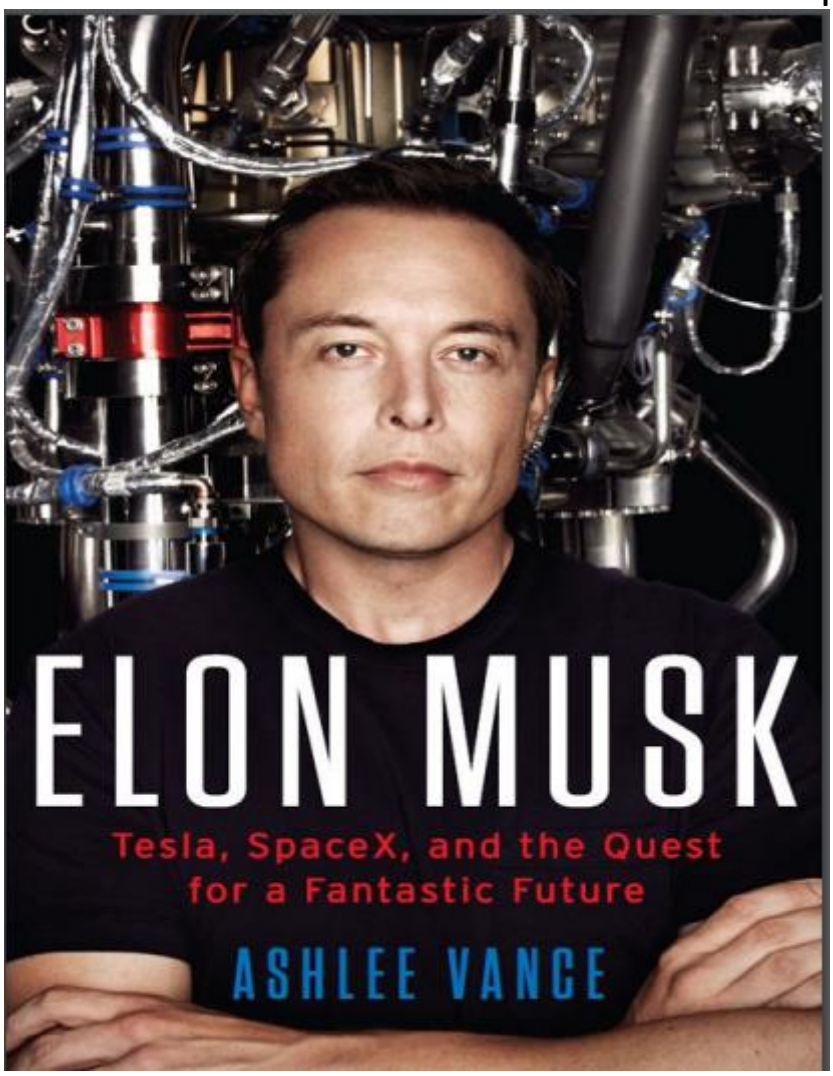
Book cover

The cover is quite decent and plain. It displays a combination of three colours that are blue, black and white. The text is plain and the inventions of Elon Musk are written on the title page to depict the purpose as well. It also says that the book is number one bestseller for The New York Times and the Author, Ashlee Vance is a very famous technology and business writer who has worked for New York Times and wrote many featured stories ranging from technology to DNA sequencing to business. For me, this minor information about the book and author made me choose it in the first place.



Author

Ashlee Vance is an American business columnist and author. Ashlee Vance is one of the most prominent writers on technology today. After spending several years reporting on Silicon Valley and technology for The New York Times, Vance went to Bloomberg Businessweek, where he has written dozens of cover and feature stories on topics ranging from cyber espionage to DNA sequencing and space exploration. Ashlee Vance has won awards for his performances in Bloomberg Business Week Magazine. He is also the host of "Hello World" TV Show.

Summary

Elon Musk; Tesla, SpaceX, and the Quest for a Fantastic Future is an in-depth, extensively-researched, and balanced biography by Ashlee Vance, a well-known business and technology columnist who has written for the Economist, BusinessWeek, and the New York Times. Described as the Thomas Edison or the Iron Man of our times, Musk is painted as an eccentric industrialist, both inventor and business man with insanely big vision, the impressive capacity to deal with stress, and the often shaking but necessary capability to squeeze the most out of his people.

To put the Musk oddity in context, after the Silicon Valley implosion in the turn of the millennium, entrepreneurs and investors started playing it safe, whereas Musk never gave up on his leap-forward visions. To the point that those closest to him were following him around to make sure he wasn't actually going insane.

From early on, even as a student, Musk had determined that his life goal would be to lessen our dependence on oil and make us a multiplanetary species. The former was a necessity to make humanity sustainable on Earth. The latter was essential to make us future-proof. He saw it as an obvious 'risk management' strategy for humanity, in case something happened to Earth. Eventually, he succeeded on both front but it was quite a bumpy ride.

After the sale of PayPal, Musk had the liquidity to attempt to turn his dreams into reality. He founded SpaceX in 2002 with the mission to become the Southwest Airlines for space! Later on, he heard of a team developing a fully electric car and flowed much of his money there as well. Both start-ups were money-pits but Musk was committed to go broke while trying. In 2008, he had to face the ultimate choice: which of his two babies to save? He was running out of cash and could only support SpaceX or Tesla, but not both.

In the end, he accomplished the unfathomable during the heights of the financial decline: he scraped together financing for Tesla the day before he wouldn't have been able to meet payroll; and he secured a large government contract for SpaceX, saving both his inventories.

Musk brought two much-needed things to two very 'old-school' industries: Silicon Valley thinking, and Apple-like design. He dove right into executing his big vision and figured it out as he went along, ignoring the status quo in order to deliver step-change improvements. And he made sure that

design was an integral part of execution: minimal, functional, and delightful whether he was building rockets or cars.

Musk was often seen as part playboy and part space cowboy. He talked the biggest game in town, but he also delivered no matter what stood in his way, perhaps a bit late, but otherwise as promised. In the process, he went from multi-millionaire to selling almost everything and staying at a friend's house, but in the end it all came together. The book recounts this tightrope act blow by blow to get a glimpse of what it's like to be Elon Musk. Of the people interviewed for the book, whether they loved or hated Elon, in the end they were all awed and inspired by him.

Chapter 1:

Elon's World

This chapter revolves around the efforts that the author did to get Elon Musk agreed on cooperating with the biography writing. The author, Ashlee Vance, meets Elon Musk for dinner at a restaurant in Los Angeles. After many months of effort, he has finally convinced Elon to sit down with him. Over dinner, he discusses his plans to colonize Mars and release a new electric car. Vance, meanwhile, is there to strike a deal for access and cooperation on a wide-ranging

biography that will tell the story of the visionary. Elon eventually agrees. As he takes his leave, he asks Vance, “Do you think I’m insane?” It is a question the author will pursue throughout the book. Unlike other would-be biographers, Vance alone was successful in obtaining Musk’s cooperation after telling Elon he would write the book with or without him. Elon spent more than 30 hours with Vance and participated in multiple interviews.

Chapter 2:

Africa

Elon Musk first made headlines at the age of 12, in 1984, the early days of personal computing, when a publication printed the code for a video game he wrote himself. It was Apartheid-era South Africa, and the young coder was the son of Errol and the glamorous model, Maye Musk, who had moved to South Africa from Canada as a child. The marriage was tumultuous and ended in divorce. Elon wound up with his father, Errol. An engineer by trade, Errol was a difficult and strict parent. Elon said his childhood was “like misery”

and has vowed to never let his children meet their grandfather.

By the third or fourth grade Elon ran out of books to read at the school's library. He would sneak into a bookstore and read books off the shelf occasionally getting kicked out. He eventually began reading the Encyclopedia Britannica, which he loved. His preternatural knowledge, enthusiasm for learning, creativity, and a focus on the big questions did not endear him to his classmates. When a friend said he was afraid of the dark, Elon replied that there was nothing to be afraid of because darkness is merely an absence of light.

As an independent scholar, he did well, but Elon had a tough time in school and was occasionally beaten up. At 10 years old, he convinced his father to buy him a Commodore VIC-20 computer. It came with a guide meant to be used over six months—Elon exhausted it in three days.

Despite his bookish nature, Elon was a key member of an enterprising pre-teen team who came up with their own schemes. The other members were his little brother Kimbal, and his cousins Russ, Lyndon, and Peter, all of whom

often got in trouble. Presaging his times at SpaceX, Elon became interested in building rockets and explosives, mixing chemicals himself. Once, Elon and his cousins got a lease for a video arcade, but the plan fizzled when they found they needed someone over the age of 18 to sign the document. He and his cousins also took the dangerous train ride to Johannesburg, which they recount as a formative experience.

In high school, as in grade school, Elon was bullied, although he was treated better as he became older. His classmates do not remember him as an exceptional student, and some expressed surprise that he became so successful. Elon himself recounts that he got good grades only in classes he cared about.

After high school, Elon spent five months at the University of Pretoria before moving to Canada at the young age of 17. In light of his mother's Canadian roots, Elon was able to secure Canadian citizenship and was determined to eventually make it to the United States. As a child, Elon Musk demonstrated a remarkable affinity for learning, a trait for which he was often bullied. Unhappy in

South Africa, he moved to Canada as soon as he could.

"'There needs to be a reason for a grade. I'd rather play video games, write software, and read books than try and get an A if there's no point in getting an A.'"

Chapter 3:

Canada

Elon arrived in Canada without a job or a place to live. He had planned to stay with a great-uncle, but learned that he had moved to Minnesota. Without a fixed address, Elon bought a bus ticket and traveled across Canada, staying with relatives along the way until he reached Swift Current, Saskatchewan, where his grandfather used to live. He stayed with a second cousin and, for the next year, worked odd jobs around the country. He was a hard worker, and one of only a few employees who stuck out a grueling and dangerous job in the boiler room of a lumber mill. In 1989, Elon enrolled at Queen's University in Kingston, Ontario. There he met Justine Wilson, a fellow student and his future wife. Although she dated popular men and imagined a whirlwind

romance with a writer, Elon relentlessly pursued her.

In 1992, Elon received a scholarship to the University of Pennsylvania and transferred there. Throughout university, Elon showed an ability to delve into a subject and completely master it far more than other high achievers. Elon displayed his passion for clean energy early on. During his time at Penn, he wrote a paper predicting a fall in the price of solar cells, and a corresponding rise in their adoption in society. He also wrote papers predicting the rise of a product similar to Google Books, and another on ultracapacitors and their potential use in energy storage.

While at Penn, Elon became friends with Adeo Ressi, who also became a Silicon Valley entrepreneur. Elon and Ressi rented out a house and supported themselves by throwing parties, charging hundreds of guests $5 apiece. Elon, not a big fan of alcohol, drank little, and instead focused on managing the chaos.

Elon already knew he wanted to change the world, though he hadn’t resolved on how. He decided to not return to his early roots in gaming after briefly considered it. Video games would not

direct the future of humanity. Once Elon's brother Kimbal arrived in Canada, the two began randomly calling interesting and famous people they wanted to meet. One person they called was a bigwig at the Bank of Nova Scotia. He took the call, agreed to meet the Musk brothers, and ended up being a mentor to Elon.

Chapter 4

Elon's First Start-Up

Before setting off on his own, Elon did two internships in Silicon Valley. One was at Pinnacle Research Institute, a start-up examining the use of ultracapacitors in electric vehicles. The other was at Rocket Science Games, a start-up that focused on creating state-of-the-art video games. After graduating from Penn, Elon and his brother Kimbal created Global Link Information Network, which would eventually be renamed Zip2.
Zip2 was essentially a mash-up of the old Yellow Pages directory and a map that directed customers to nearby businesses. It was not instantly successful. In the very early days of the web, it was difficult convincing businesses to pay to be listed on the site.

Elon and Kimbal lived a plain life while getting the business off the ground. They were helped by Greg Kouri, an old acquaintance from Canada, who invested $6,000 and joined as a cofounder. Then, in 1996, the company received a $3-million investment from a venture capital firm. With the funds, Zip2 changed its strategy. Instead of selling the service to businesses, they would create software to sell to newspapers, which had already realized the Internet might overtake their business in classified ads. Elon became Chief Technology Officer of the company, and the venture capital firm brought in someone else to be the Chief Executive Officer. Elon would come to regret giving up the CEO role.

Elon and his brother enjoyed their newfound success as they were able to buy new cars and Elon became less volatile and more confident. However, he clashed with the CEO about the direction of the company. Elon wanted to sell to individual consumers, while the CEO and board wanted to focus on selling to businesses. The argument came to a head over a proposed merger with CitySearch, a rival. CitySearch, however, had not been entirely transparent about its finances,

so the deal was abandoned. When Compaq swept in and purchased the company for $307 million, Elon made $22 million from the deal and immediately began planning his next move.

Chapter 5:

PayPal Boss Mafia

With X.com, Elon's next company, he tried to do just that. At a time when many people were still afraid of putting their credit card information online, Elon believed he could create a fully digital bank. X.com offered $20 signup bonuses and $10 for every referral, and grew quickly, with 200,000 signups in the first few months. Meanwhile, Elon was enjoying the fruits of his success. He purchased a condo and a $1 million McLaren supercar—at the time the fastest car in the world. Unlike many other supercar owners, Elon drove his every day.

Another start-up, led by future Silicon Valley legends Peter Thiel and Max Levchin, rented office space from X.com. Originally called Confinity, it was rebranded as PayPal.com. Their company first focused on allowing people to transfer money using Palm Pilots, but moved on

to email-based payments and money transfers. Although relations were initially friendly, the two companies quickly became rivals, and PayPal moved to another building nearby.

Five months into X.com, cofounder Harris Fricker, also a former Nova Scotia Bank intern, attempted a coup. If Elon didn't make him CEO, he would pull out along with most of the talent. Elon told him to leave, and Fricker was good on his word. Mere months into the company, Elon had to start again.

By March of 2000, PayPal had emerged as a hot consumer brand but was running out of money, while X.com had significantly more resources. The companies merged, but tensions were still high. Elon wanted to keep the X.com name, while most other employees believed PayPal was a better option. The tension led to Thiel's resignation.

But the war was not over. A group of employees plotted to oust Elon and replace him with Thiel. As Elon boarded a plane to Australia for his honeymoon with his new wife, Justine, a group of employees convinced the board to replace Elon with Thiel. Elon found out upon landing in Australia and immediately flew back, but it was too late. Elon loyalists were disappointed, but

Elon maintained a level head and continued to invest. When eBay offered to buy PayPal, Elon and others argued for a better deal. In July of 2002, eBay upped the offer to $1.5 billion. After taxes, Elon made about $180 million.

Chapter 6:

Mice in Space

Elon turned 30 in June of 2011. He and Justine decided to leave Silicon Valley for Los Angeles in order to start a family and to be closer to the aerospace industry, which had thrived in the area since the 1920s. Elon joined the Mars Society, an organization dedicated to visiting the red planet, and was dumbfounded when he learned NASA had no plans to attempt a trip.

Elon formed his own group, the Life to Mars Foundation, which brought together top scientists to determine how to stimulate public interest in a mission to Mars. Among the ideas that came was one of sending a group of mice to the red planet, or creating a greenhouse that, when reaching the red planet, would scoop up Martian soil and attempt to grow plants in it. Elon believed if he could demonstrate the possibility of life on Mars,

even in a very limited way, it could have a profound effect.

To tackle the problem of cost, he first explored purchasing rockets from Russia. He then decided to form his own rocket company. Industry insiders believed it was impossible to compete with established corporations and institutions, but Elon was undaunted. He felt the aerospace industry had stopped progressing half a century ago, and it was time for a new way of thinking. Ambitious as ever, he promised to launch the first rocket in November of 2003, only 15 months after the founding of the company. Once the PayPal deal wrapped up, Elon was able to infuse SpaceX with $100 million, ensuring he would remain CEO.

Elon faced a personal tragedy when his newborn son died of Sudden Infant Death Syndrome (SIDS). While Justine publicly grieved, Elon largely hid his emotions. The couple tried IVF soon after, and Justine would go on to have twins and then triplets, all boys.

To test the rockets and design, SpaceX acquired property in Texas once owned by Andrew Beal, another billionaire who had nurtured dreams of space. SpaceX engineers went back and forth

between Los Angeles and Texas, testing rocket engines and design. As always, Elon drove his employees hard. As a publicity stunt, he brought a rocket across the country and parked it in front of the Federal Aviation Administration in Washington, DC.

To launch its first rockets, SpaceX was forced to go to the Kwajalein Atoll in the Marshall Islands. After several false starts, on March 24, 2006, their first rocket launched, within 25 seconds it caught on fire, spun out of control, and fell to earth. The second rocket, launched on March 21, 2007, made it nearly five minutes before exploding. Employees were devastated, but Elon remained undaunted. Elon, flush with PayPal money, was able to pursue and fund his longstanding interest in space travel, forming the rocket company SpaceX. Despite setbacks and failures, Elon made sure the company kept the public interested.

Chapter 7:

All Electric

Elon joined Tesla Motors founders Martin Eberhard and Marc Tarpenning during a funding round, becoming the chairman and largest

shareholder. Initially, Tesla planned to build its first car by combining parts from AC Propulsion; a hobbyist electric car company, with parts from Lotus, the British sports car manufacturer. The plan was for their electric car to reduce the need for oil, be more environmentally friendly, and outperform electric rivals. Indeed, a kit electric car used to wow investors was faster than a Ferrari. There were a number of hurdles. The first battery pack was vulnerable to explosion, and the Lotus body frame had to be lengthened. Elon continually pushed for the design to be accessible and less of a hard-core sports car. By July of 2006, a second prototype was launched with great fanfare. Even the governor of California, Arnold Schwarzenegger, showed up. At an event in Pebble Beach a few months later, dozens of people wrote $100,000 pre-order checks.
But Elon slowed the project with refinements and improvements. Then, a faulty transmission had to be completely redesigned, and several workers entirely retrained at the Tesla factory in Thailand. Disaster struck when Tesla realized the cost to create a Roadster was actually $200,000, not the $68,000 they had projected.

These cost overruns led to ousting Eberhard who remains on bad terms with Elon. When the next CEO, Michael Marks, wanted to sell Tesla to a larger car company, he too was out. Another CEO was brought in, but the company was still in trouble. The Roadster was late and Elon had to reassure customers and investors that it would arrive. Meanwhile, the 2008 financial crisis and the subsequent recession made raising additional capital a drag. Tesla's future was uncertain. Elon had always been obsessed with electric cars, and when he got the chance to invest in Tesla, he seized it. His efforts helped Tesla succeed, but he clashed with cofounder Martin Eberhard.

Chapter 8:

Pain, Suffering, and Survival

From attending weddings with Bono to partying with Leonardo DiCaprio, Elon was now part of an elite social scene. But work and home life were chaotic. His investments in Tesla and SpaceX had yet to pay out in fact, people questioned if the companies would survive. Meanwhile, his marriage to Justine was suffering. Elon believed she had postpartum depression after the birth of

their triplets. Justine documented many of their marital fights on her blog. Elon filed for divorce, and the couple engaged in a messy public battle. Not long after, Elon met his second wife, Talulah Riley, at a London club. Just a few weeks later, Elon proposed and Riley accepted.

Righting his companies was less easy. On August 2, 2008, during SpaceX's third launch, the Falcon 1 rocket exploded, dealing a crushing blow. Thankfully, a September 28 launch was successful. Without it, the company would have likely folded immediately. In any case, it was still running out of money. Tesla, also under financial strain, had only delivered 60 Roadsters. The press seized on a negative memo leaked anonymously, and Elon, without enough cash to save both companies, considered letting one die. Hours before Tesla would have gone bankrupt, Elon bluffed investors trying to hardball him and received a new round of funding. Meanwhile, SpaceX was able to get a last-minute $1.6-billion deal with NASA for missions to the International Space Station. Elon had narrowly averted bankruptcy and saved both Tesla and SpaceX. Shortly after his divorce from Justine in 2008, Elon quickly remarried and

rescued both SpaceX and Tesla from imminent bankruptcy. In both his personal and work life, Elon was prone to last-minute saves.

"Even in social settings, Musk might get up from the dinner table without a word of explanation to head outside and look at the stars, simply because he's not willing to suffer fools or small talk."

Chapter 9:

Liftoff

With more than fifty launches scheduled over the next few years, SpaceX has achieved a level of success that was once unimaginable for a private rocket company. Part of the reason for this is Elon's demanding standards. Programmers are often subjected to 500-line coding tests—far more than average. If a candidate passes this rigorous screening, they are then asked to write a personal letter telling Elon why they want to work for the company. In interviews, Elon often emails and does other work while they speak, then hits them with incisive questions and riddles. (A favorite is a logic trick regarding walking around the North Pole.) Current employees have compared working at SpaceX to working in the

special forces. Elon has berated employees at parties, and he refuses to go public with his company fearing that his workers would abandon their innovative work for easy money on Wall Street.

Elon doesn’t only care about the company running smoothly. He is focused on the aesthetics as well. From a data center lit by blue lights to the oversized letters on the extra-large computers at the office, SpaceX is less like an office and more like the set of a Sci-Fi movie. The brand-new Dragon capsule for human spaceflight looks like it is out of a movie, with advanced flat-screen TVs and stylish but supportive seats.

SpaceX has consistently made advancements in the products that are used in their rockets. While thier competitors still largely use technology from the ’60s, SpaceX has raced ahead, finding easier and cheaper solutions. The Russian Soyuz capsule is apparently largely unchanged since its inaugural mission in 1966. Elon believes space-age technology should look like it is from the future, not the past.

SpaceX hasn’t just changed the traditional rocketry supply chain, it has also transformed the

way rockets are built. The company manufactures 80–90% of its own parts, an unheard-of figure in an industry with huge supply chains. SpaceX pioneered a new welding technique that allows it to make rockets significantly cheaper and lighter. These advances have attracted other players. Elon has pushed SpaceX to develop new technologies and new manufacturing methods to help humans get to space. His demanding requirements have sometimes led to fights within the company, but they have also revolutionized the industry.

Chapter 10:

The Revenge of the Electric Car

To design the Model S Tesla car, engineers initially purchased a Mercedes sedan, stripped it, and then rebuilt it as an electric car. This allowed engineers to test concepts. A gorgeous design came from new hire Franz von Holzhausen, famous for his version of the VW Beetle. To reduce weight, Elon insisted on building the car out of aluminium, an innovation that created multiple engineering conundrums.

In March of 2009, Tesla revealed the Model S to the public, to great fanfare. Over a year later,

thanks to the upheaval of the great recession, the company was able to buy the old NUMMI plant in Fremont, California, which would handle production. Flush from these providential events, Tesla went public, raising $226 million. On June 22, 2012, Tesla delivered the first Model S sedans to paying customers. With a 17-inch touchscreen, two trunks, seating for up to seven people, and a 4.2 second 0–60 mph acceleration time, the Model S didn't just compete with gasoline vehicles, it demolished them.

Sales spiked and the accolades started pouring in. Motor Trend named the Model S the 2012 car of the year. Consumer Reports gave it a near-perfect 99/100 rating, the highest any vehicle had ever achieved at that time. As the good news came in, Tesla's stock price began a steep ascent, and Elon created a revolutionary nationwide network of free supercharger stations for the pollution-free vehicles.

Chapter 11:

The Unified Field Theory of Elon Musk

At Tesla, Musk has the Model 3 in the works, a $35,000 car meant to compete in the mass

market that could make Tesla one of the leading car companies in the world. Intent on expanding its production future, Tesla is building the Gigafactory, which will produce the batteries for the Model 3.

Meanwhile, Musk maintains the goal of taking humans to Mars, and SpaceX is building its own spaceport in Texas. There are also plans for a worldwide satellite Internet network, and for the Hyperloop, a pneumatic-tube transportation system that can carry passengers at speeds of 800 miles per hour.

All of this ambition has come at a personal cost, including two divorces, and a number of fractured business relationships. Some have claimed that Musk may be on the autism spectrum, but Ashlee Vance instead believes that Musk's drive leaves him little time for social graces. Elon Musk has burned through multiple personal and professional relationships, but he has also profoundly changed the future of transportation, banking, and space travel. His work seeks to both help the environment and powerfully innovate our world. He has moved on to investing in

SolarCity, a manufacturer and installer that may transform the power grid.

EVALUATION:

The book manages to convey Musk's image as a ruthless egomaniacal sadist and a caring, benevolent visionary at the same time, leaving you indecisive on whether to admire or despise him as a person; maybe both.

By the final pages, it is made overly clear that the author has sided with Musk in almost all controversial events of his life. Musk is clearly portrayed as a one-of-a-kind genius in conception and execution, but it is striking how several of his successes seem to have hung in the balance of one tragic error or one amazing coincidence. It seems that he has been both single-mindedly focused on his goals and impressively lucky in the circumstances that solidified his success, which demonstrates that a "genius" status is not enough in the business world.
The book provides enough details about the Space crafts, Falcon 9 Rockets, Shuttle services, SolarCity and all the innovations that Elon has pursued to serve humanity. Elon is really paving

the way for us in the future. We might not realize it now but the efforts he is putting in to make the environment better are going to be appreciated later. Even more than they are being appreciated now. Overall, I found the book incredibly inspiring and uplifting. It leaves you hopeful for the future and convinced to take on the world to make your own ideas come to life.