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The Story of Mark Zuckerberg and Facebook

Move Fast and Break Things!

Facebook's earliest motto, 2004

What would you do if you weren't afraid?

Posters plastered on walls throughout Facebook Campus, 2012

Over the past half dozen years, we have written investment commentaries about Steve Jobs and Apple Computer, Elon Musk and Tesla, and Jeff Bezos and Amazon. Just as these entrepreneurs had a vision to change the world and sought to use their companies as vehicles to accomplish that, so has Mark Zuckerberg had a vision to change the world through Facebook. And Facebook has indeed changed the way an enormous number of people conduct their lives. Currently, Facebook has 2.6 billion monthly active users. That is almost one-third of the world's population. More than 1.6 billion people utilize Facebook every day. These are staggering numbers. How did this occur?

Unfortunately, there is no single, thorough, and well-written biography of Mark Zuckerberg similar to the great self-authorized biography, *Steve Jobs*, that Walter Isaacson wrote in 2011. Thus, in telling this remarkable story about how a Harvard University sophomore changed the world, we depend primarily on two books: *The Accidental Billionaires: The Founding of Facebook* by Ben Mezrich, and *Becoming Facebook* by Mike Hoefflinger. Several other books by former Facebook employees can help the reader understand the early Facebook culture, which resembled a frat house of computer engineers: *Chaos Monkeys: Obscene Fortune and Random Failure in Silicon Valley* by Antonio García Martínez, and *The Boy Kings: A Journey into the Heart of the Social Network* by Katherine Losse. At the conclusion of this commentary, we will refer to the 2019 book *Zucked: Waking Up to The Facebook Catastrophe* by Roger McNamee, a former Facebook admirer who has turned into a fierce critic of the social media behemoth.

Mark Zuckerberg is a genius. He emerges from these pages as a young man of great intelligence, vision, perseverance, willingness to fail, and above all, an overriding desire to connect the world. Zuckerberg, like Jobs, Musk and Bezos, has a strong personality, great intensity and an overwhelming desire to achieve the goals he set out for himself and for Facebook. This commentary is meant for those who do not have the time or inclination to read multiple books about Mark Zuckerberg and Facebook but would like to understand the man whose passion is to connect people.

Youth 1984-2004

Mark was born in 1984 in White Plains, NY to Edward (a dentist) and Karen (a psychiatrist) Zuckerberg. He and his three sisters were raised in a Reform Jewish household in the fashionable town of Dobbs Ferry. Mark's first two years of high school were spent at Ardsley High School, where he excelled in science and classics. In middle school, Zuckerberg had already begun writing software programs, and his father, recognizing his giftedness in this area, hired a software developer to tutor him privately. Mark

spent his junior and senior high school years at Phillips Exeter Academy – the private boarding school in New Hampshire founded in 1781. Zuckerberg demonstrated his formidable intellect winning prizes in physics, mathematics, and classics. His college application stated that he could read and write French, Latin, Hebrew, and classical Greek. He was also captain of Exeter’s fencing team. While still in high school, Zuckerberg wrote a software program which he called Synapse. It was a plug-in for MP3 players that used artificial intelligence to “learn” a listener’s musical preferences and match those listening habits with a tailored playlist. Apparently, several companies were interested in buying the app from him, but instead, Zuckerberg released it for free download from the web.

Entering Harvard University in 2002, Mark had a well-deserved reputation as a skilled hacker and a programming prodigy. In the Fall of 2003, Zuckerberg created a program which he called Facemash, which let students select the best-looking person from a choice of student photos. The widely acclaimed 2010 movie, *The Social Network*, largely taken from the book, *The Accidental Billionaires*, depicts Zuckerberg imbibing a good bit of alcohol as he allegedly hacked into the computers of seven Harvard residential houses. In so doing, he was able to download the pictures of female students shown on Facemash. Within hours, thousands of students logged onto Facemash, comparing the attractiveness of Harvard undergraduates. Various campus groups were outraged by Facemash, and Mark apologized repeatedly for the prank. Because he had invaded the privacy of students in his hacking and contravened other Harvard regulations, he was placed on six months academic probation.

Creation of TheFacebook 2003-2004

At the same time, Tyler and Cameron Winklevoss, twins who were seniors at Harvard, were working with a classmate, Divya Narendra, to create a social networking site called Harvard Connection (later called ConnectU). They learned about Zuckerberg’s Facemash prank from an article in the college newspaper, *The Harvard Crimson*, and approached him to write the software for their site. They offered Zuckerberg not only the opportunity of becoming a partner in a potentially lucrative initiative but also the chance of getting positive publicity which would counter the negative press he had received from Facemash. According to *The Accidental Billionaires*, Zuckerberg appraised Harvard Connection and decided to use their idea to create his own social networking site. In December, 2003 and during the Christmas break, Zuckerberg wrote much of the initial software to create TheFacebook, at the same time allowing the Winklevoss twins and their partner Narendra to believe that he was still working on their project. They exchanged 52 emails. But Zuckerberg registered the domain name, TheFacebook.com, on January 11, 2004. The site went live in early February, 2004. During the start-up period, the funds needed to initiate the project came from his good friend, Eduardo Saverin, who became the Chief Financial Officer and the business end of the company. Zuckerberg took a 60% stake in Facebook, Saverin received 35% of the ownership and a fellow computer science student, Dustin Moskovitz initially took a 5% stake in the company. One of the key features which Zuckerberg picked up from Harvard Connection sites was exclusivity – only students with a harvard.edu email address could access the site. The basic idea of Facebook was to take the entire social experience of college and put it online. Pictures, photos, profiles, love interests, and more. And in a world where social structure meant a great deal, the exclusivity of sharing that information online only with people who agreed to be one’s “friend” was a big draw. Within several days of the launch, more than 1,000 Harvard students had registered to use TheFacebook.com. Shortly thereafter, they expanded the site to Yale, Columbia and Stanford, and soon other colleges followed. By May, there were 100,000 members. Facebook soon dominated the college and high school markets, and it was not until 2006 that Facebook opened up the site to anyone over 18 with an email address.

Key Events in the Life of Mark Zuckerberg

1984	Born in White Plains, NY
2002	Graduated from Phillips Exeter Academy, New Hampshire
2003	Created Facemash which compared the relative attractiveness of female Harvard students
2003	Recruited by Tyler and Cameron Winklevoss and Divya Narendra to write software for a social networking site called the Harvard Connection
2004	Took the idea of Harvard Connection and created TheFacebook
2004	Met Sean Parker, Napster cofounder, who suggested the site be called Facebook
2004	Dropped out of Harvard and moved to Silicon Valley to grow Facebook
2004	Peter Thiel, CEO of Clarium Capital, made a \$500,000 angel investment in Facebook for a 7% stake in the company
2004	Facebook reached one million members
2005	Share ownership of his friend and CFO, Eduardo Saverin, diluted from 34% to 1%. Saverin exited Facebook, sued Facebook and won a large settlement.
2005	Accel Partners invested \$13 million in Facebook at a \$100 million valuation
2006	With only \$20 million in revenue and 9 million users, Facebook received a \$1 billion acquisition offer from Yahoo. Zuckerberg turned it down.
2006	Launched News Feed – the most complex project ever undertaken by Facebook
2008	Sheryl Sandberg hired as Chief Operating Officer to make Facebook profitable
2009	Facebook became cash flow positive and reached 500 million users
2011-2012	Launched Messenger and acquired Instagram for \$1 billion
2012	Initial Public Offering of Facebook with a market valuation of \$104 billion
2014	Acquired WhatsApp for \$19 billion
2018	Millions of Facebook users' personal data harvested by Cambridge Analytica and later used for political advertising, resulting in #DeleteFacebook movement
2020	2.6 billion monthly active users – 1/3 of the world's population – on Facebook

Fun and Games in Silicon Valley 2004-2005

As TheFacebook was gaining momentum, Zuckerberg and Saverin met in the spring of 2004 with Sean Parker, the rogue computer hacker who cofounded Napster. Zuckerberg was greatly impressed with Parker. Parker encouraged Zuckerberg to move his fledgling company to Silicon Valley, and he also suggested that Zuckerberg call the site just Facebook. Zuckerberg acted on both recommendations. As Facebook continued to gain traction during the latter half of 2004, Parker encouraged Zuckerberg to look for venture capital (VC) funding rather than seek advertising revenue. This contributed to the rift between Mark and his friend and cofounder, Eduardo Saverin, who was drumming up ad money. At this point Parker had invested in the company and become President of Facebook, and he began increasingly to take over the business side of Facebook. This created a crisis in the relationship between Saverin, who briefly froze Facebook's bank account. It was smoothed over for a while, when the venture capital firm headed by PayPal cofounder Peter Thiel made a \$500,000 angel investment in Facebook. And Sean Parker received a 7% stake in Facebook. Saverin's share of the company remained at roughly 34%.

As the summer ended and Facebook's momentum accelerated, Zuckerberg dropped out of Harvard to pursue his dream while Saverin decided to return to Harvard for his senior year. It was probably his biggest mistake, because as Facebook reached two million members and was on nearly five hundred campuses, Saverin was at Harvard and not really part of the team. Clearly Zuckerberg had slowly transferred his primary loyalty from his friend, Saverin, to Parker. In early 2005, Zuckerberg and Parker restructured the company, granting themselves enough shares to reduce Saverin's share of the company dramatically. Saverin traveled from Harvard to Silicon Valley where he learned, in his own words, that he had been "betrayed" in an ambush – that he was fired from Facebook and his ownership had been diluted to less than 1%. Saverin sued Zuckerberg and ended up with a roughly 4% interest in the company.

By this time, Facebook was a hot item in the Silicon Valley VC community, and firms were lining up to invest in it. The iconic VC firm, Sequoia Capital, had kicked Parker out of the firm, Plaxo, which he had founded. So Parker asked Zuckerberg to play a sophomoric prank on Sequoia Capital and visit their offices in his pajamas to show their disdain for the company, which Zuckerberg immaturely agreed to and carried out. Ultimately, Parker helped arrange a \$13 million investment in Facebook by the prestigious VC firm, Accel Partners. Fourteen months after its founding, Facebook had a market valuation of \$100 million.

News Feed – Debacle, then Success 2006

Heading into 2006, Facebook had over six million users in its college and high school audience. But the gifted business executive, Chris Cox, who headed the product management team, observed that there was no organized way for a member to click through all the data on people's profiles on Facebook. With that insight, Cox and his team began to build News Feed – a continually updated, chronologically-reversed listing on one's Facebook page of the most important things to which users are connected. This included status updates, photos, events, groups, and new connections. It was an incredibly complex technical undertaking, distilling the thousands of daily updates available to the

average user to roughly 300 items that would be shown in order of increasing relevance. And the News Feed would be custom tailored to each user's data and connections.

News Feed launched on September 5, 2006. It was a near debacle. By the end of the day, Facebook groups had formed to protest News Feed. The main concern was privacy – that content on their page would find its way onto other members' News Feeds. It was Facebook's first major user crisis. The company even needed to hire security guards to escort employees to and from the office. It was such a revolt that Zuckerberg himself responded that night. His note was entitled, "Calm down. Breathe. We hear you." Later that week, Facebook released more granular privacy controls both to remind members, and give them more control over, how content lands on other users' News Feeds.

News Feed has become, in effect, a "personal newspaper." The news that is channeled to each person's News Feed is customized and unique. Starting in 2016, it prioritizes content from friends and family over pages from publishers and businesses. It now delivers over 200 million stories to screens worldwide every minute. Its growth was greatly accelerated by the introduction of the iPhone by Steve Jobs in 2007. In 2008, Facebook launched its mobile app. Now, more than 90% of monthly global users access Facebook via mobile devices. The addictive nature of the iPhone – the ability to instantly command data and communication at one's fingertips – accelerated the growth of News Feed. Its endless vertical scrolling column of visual stories fits perfectly for the handheld, thumb-driven vertical form feature of iPhones. Chris Cox and his team succeeded in connecting the world through News Feed in ways they could not have even dreamed of in 2006 when they had fewer than 10 million members.

Zuckerberg Turns Down \$1 Billion Acquisition Offer from Yahoo 2006

In the summer of 2009, Mike Hoefflinger, the author of *Becoming Facebook*, set up a lunch with Mark Zuckerberg and Andy Grove, the iconic 72-year-old Cofounder, CEO and Chairman of Intel. At the lunch, Grove asked Zuckerberg: "How did you turn down Yahoo's \$1 billion?" [offer in 2006]. In the summer of 2006, Facebook had approximately nine million users and revenue of only \$20 million. It still had a large negative operating cash flow. A flock of other companies were rumored to be pursuing Facebook including Google, Viacom, MySpace, and Microsoft. But Yahoo actually offered the 22-year-old Zuckerberg \$1 billion for Facebook. That would have meant about \$250 million for Zuckerberg.

Peter Thiel, a Facebook board member at the time, has since recounted the July 2006 Board meeting. Zuckerberg told Thiel and other board members that it would just be a short meeting, because "we are obviously not going to sell here." Thiel and others thought that they should take the money, but Zuckerberg argued that there were things that he wanted to build at Facebook, and he wanted the chance to build them. They were persuaded by his passion.

Hoefflinger writes that Zuckerberg answered Grove's question with two words: "Jewish mother." Grove nodded in recognition, as his own mother had played a huge role in his life both in surviving life in Nazi-occupied Hungary and the Communist regime that followed and later as an entrepreneur. Zuckerberg's mother's upbringing had instilled in him the gift of determination, persistence, and willpower. Zuckerberg explained that he thought that he and his team could grow Facebook to a far greater scale and eventually become a public company with a much larger valuation. Facebook's market capitalization today is \$675 billion.

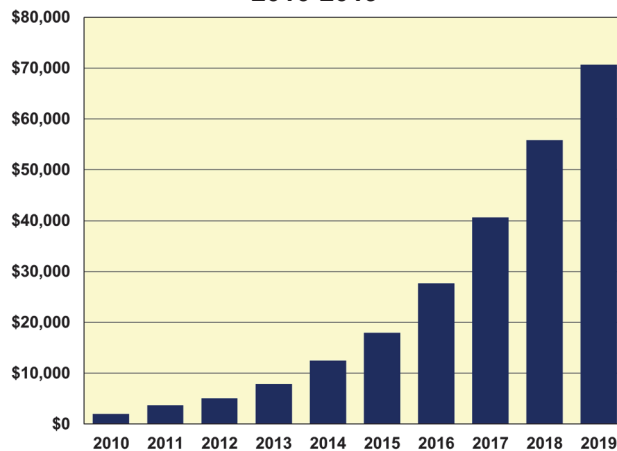
Accelerating User Growth 2007-2009

In late 2007, Facebook's user growth stalled. It hit a wall at around 50 million users. At that time, it was still smaller than MySpace, which had approximately 100 million users. Zuckerberg and his team worried that perhaps social networking was of interest to only 100 million people. But they set to work by following a famous quote by U.S. General George Patton: "A good plan, violently executed today, is better than a perfect plan next week." Zuckerberg assembled a team, which would grow to 100 people, to attack the wall. The team carefully analyzed the different types of Facebook users and ultimately focused on one key metric: the nature of a user's engagement. They tracked monthly active users (MAU) and daily active users (DAU). They also meticulously analyzed user demographics by age, gender, location, interests, and type of device used to access the site. And they landed on the most important thing which caused new users to engage: seeing your friends in your News Feed. Once users were hooked, the team focused on the content needed to keep users engaged, with the most important tool being News Feed. They also inked a deal with Google for Facebook to use the search engine giant's tools to read, store and make searchable the public parts of Facebook profiles. Another key step was to build a translation application on their own platform that allowed the site to be broken into 300,000 component words and phrases that enabled Facebook to move very rapidly into different countries. The team's results were spectacular. Within six months, the number of Facebook users had grown from 50 million to 124 million, topping MySpace for the first time.

Initial Public Offering 2012

In 2008, Zuckerberg made a key decision: he hired Sheryl Sandberg as Chief Operating Officer. Over the next year, she developed a consensus within the firm that advertising was the chief business model of the company. In 2009, Facebook reached 500 million users and became cash flow positive. In 2011, Zuckerberg and Sandberg agreed to allow advertisements on News Feed. That year, Facebook's revenues hit \$3.7 billion, and net income was over \$600 million. An Initial Public Offering was planned for the next year. The IPO came on May 15, 2012 with the stock priced at \$38. The stock initially popped to \$42 a share, but then fell precipitously over the following months to a low of \$17.73 in September. It was a disaster.

**Facebook Revenue
2010-2019**



Source: Bloomberg

**Facebook Stock Price
2012-2020**



Source: Bloomberg

What had happened? Investors began to doubt whether Facebook would ever be able to generate meaningful revenue from its mobile products. When General Motors pulled \$10 million in advertising saying that they did not think advertising on Facebook was effective, the stock went into freefall. But revenue growth re-accelerated as advertising on mobile devices flourished, and the stock rebounded, regaining its IPO price within a year. Currently the stock is up approximately six fold from its IPO price.

The Current Controversies about Facebook

Facebook is a controversial company for two main reasons: privacy, and the ways in which individuals, groups and companies can use its platform to further their aims. Since 2006 with the launch of News Feed, there have been questions about Facebook's privacy policies. In essence, users post volumes about their lives, their interests, their politics, their purchasing habits, and much else. This data is collected, stored, and analyzed. The perennial question is: How much of this data can Facebook use to generate advertising revenue? The Cambridge Analytica scandal is a good window into this issue. In 2014, Cambridge Analytica developed an app called "This Is Your Digital Life" and joined with Facebook to sign up several hundred thousand Facebook users who agreed to complete a profile survey meant for academic use only. However, unbeknownst to survey respondents, Facebook allowed this app to collect personal information not only from survey respondents but also from respondents' Facebook friends. In this way, Cambridge Analytica acquired data from millions of Facebook users. The campaigns of Senator Cruz and Presidential Candidate Trump then hired Cambridge Analytica to craft customized messages to voters on various digital platforms for the 2016 election. When the scandal broke in 2018, Zuckerberg apologized, calling the data breach a "mistake" and a "breach of trust." Zuckerberg apologized before a Congressional Committee. A #DeleteFacebook campaign arose, but it did not seem to affect Facebook's financial results. While several studies have shown that these messages did not appear to affect the elections in any meaningful way, in 2019 the FTC fined Facebook \$5 billion for its breach of users' privacy.

One of the questions which has arisen since the 2016 elections is foreign interference in elections. In his 2019 book, *Zucked*, author Roger McNamee details how Russia spent \$100,000 on advertisements on Facebook, targeting key groups on Facebook to allegedly swing the 2016 election to Trump. He also writes of a group in March, 2016 which exploited a programming tool on Facebook to gather data on users expressing interest in Black Lives Matter, which the group then sold to police departments. The book concludes with a speech by George Soros in Davos in 2018 in which he describes the dangers which Google and Facebook pose to humanity by the evil use of personal data and therefore the need to eliminate them through regulation and taxation. While informative on various aspects of Facebook, McNamee's book is largely an impassioned plea, based on his political views, that Facebook should be curtailed or closed down entirely.

The other major controversy has to do with objectionable content, misinformation, and "fake news" on Facebook. Are the postings of some politicians, activists, and others to be considered hate speech and censored? Facebook has invested heavily in recent years in technology to moderate content. Additionally, Facebook has hired 15,000 content moderators in the U.S. via independent contractors to police objectionable content, "fake news," and hate speech. The problem, of course, is that one person's political ideas may be seen by others as hate speech. After wrestling with this issue, Zuckerberg said that Facebook is not an "arbiter of truth." He is for free speech. Recently major corporations such as Ford, Clorox, Verizon and Coca-Cola have banded together and pledged not to advertise on

Facebook until Facebook changes its policies on what content is allowed – especially when their ads are posted next to content of which they disapprove. Zuckerberg has steadfastly maintained that Facebook is a neutral platform and legitimate political discourse must be allowed. But clearly this is a real dilemma for Facebook at a time when our country is in the midst of what some are calling an ideological civil war.

What Zuckerberg has Achieved

Launching Facebook as a brilliant but immature Harvard College sophomore, Zuckerberg has created a company which connects one-third of the world's 7.8 billion people. Since its founding in 2004, Facebook has grown to a market capitalization of over \$650 billion. Zuckerberg's 14% stake is worth more than \$90 billion currently (Zuckerberg and his wife Priscilla Chan have pledged to give away 99% of their fortune during their lifetimes). Revenues have grown to over \$70 billion in 2019. Net cash on the balance sheet is over \$50 billion. This is one of the great success stories in the history of business. How did Zuckerberg pull it off?

It was not easy. In the early years of Facebook, Zuckerberg saw himself as a rebel. On his early Facebook profile, he wrote, "I don't read." He always sought to think outside the box. He wore cargo shorts, flip flops, and the ubiquitous hoodie in the office. Facebook's earliest motto was *Move Fast and Break Things*. He was socially awkward and a poor communicator, often appearing arrogant. But his brilliant insight was to realize that in a technology-driven world, people to people connections had diminished greatly. Facebook was created to fulfill the social need that people have to connect with one another. In the early years, he focused on attracting and keeping users engaged, and as the numbers of users skyrocketed, he hired Sheryl Sandberg and other outstanding executives to create a revenue stream from advertising which grew at a startling pace. Over 7 million companies now advertise on Facebook, many of them small and medium-sized firms. With its huge database of user profiles, Facebook can assure companies that their advertisements will reach their core target market.

In short, Zuckerberg followed his passion, never allowing himself to be deflected from his goal of connecting the world. He refused to let Facebook be bought by larger companies. He sought to create a world-class social media company. He defeated competitors like Google who tried in 2011 to copy Facebook with Google+; Google shut down Google+ in 2019. He met crisis after crisis with determination, persistence and sheer guts – all of this from a man who grew from a socially-awkward, nerdy 20-year-old computer genius to an accomplished business leader. But his challenges are not over. Governments seem increasingly likely to challenge his monopoly-like business model. Privacy advocates continue to gun for Facebook. And in our increasingly fractured world, determining what is hate speech is thorny. Facebook is currently so controversial that many investors do not want it in their portfolio – even as it trades at a reasonable P/E of 25 times 2021 earnings. In the last analysis, however, we believe that Zuckerberg has a reasonable chance of overcoming these challenges. A company that has 2.6 billion users on its platform will find a way to profitably monetize these connections which many find so valuable.

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