

Elizabeth Holmes & Theranos - Red Thread

For those of us living our regular lives in our own corners of the world, it's difficult to grapple with the idea that there are others out there living in their own completely different worlds, particularly those in privileged positions of power who are dealing with inordinate sums of money and even bigger egos.

In the real world, most of us try to lead lives with some semblance of goodwill, trust and honesty; the oil that keeps the machine of modern society running smoothly. However, amongst the dormrooms of Ivy-league colleges, back-doors of networking forums and laboratories of Silicon Valley, these ideals are much fewer and farther between. These people are competing in a game that most of us will never be exposed to. Deceit, betrayal, and a good lick of narcissism are prerequisites for climbing such ladders, and no other character in recent history embodies such a profile more than Elizabeth Holmes, founder of medtech company Theranos.

Today on Red Thread, we'll uncover just how a Stanford dropout student managed to become the world's youngest female billionaire, and convince heavy-hitters such as Henry Kissinger and Rupert Murdoch into backing one of the greatest technological scams in medical-tech history. We've covered contagious conspiracies, now it's time to tackle corporate conspiracies.



The Early Years

Born in Washington DC on the 3rd of February, 1984, Elizabeth Anne Holmes was born to parents Christian Rasmus Holmes IV and Noel Anne. Immediately, Elizabeth was born into a privileged position. Holmes' father [Christian](#) was the Vice President of the Enron subsidiary Clean Energy Solutions Group, as well as serving as the CFO of the Environmental Protection Agency. Her mother, Noel, worked as a congressional committee staffer.



Aside from her parents' individual success, Elizabeth may have inherited the entrepreneurial gene - as her great-great-great grandfather, [Charles Louis Fleischmann](#), a Jewish-Hungarian immigrant, was the founder of

Fleischmann's Yeast - America's largest yeast empire, making their families one of the richest in American history during the late nineteenth century. [The family](#) helped found The New Yorker magazine and owned a massive 42 room mansion complete with servants, polo and yachts. They even bought Coconut Island off the coast of Hawaii, though over multiple generations the family's fortune had begun to dissipate and wasn't what it once was. When she was asked as a child what she wanted to be when she grew up, Elizabeth's [answer was simple](#): she wanted to be a billionaire.

Elizabeth's fixation on competition and succeeding was evident very early, with some [reports](#) of her playing Monopoly so intensely with her family that she would play relentlessly until she won, and if she didn't, storming off in fury - even running through a screen door on more than one occasion.

Elizabeth got the knack for tech ventures at a young age, as she learned computer programming in high school while studying at St John's School in Houston, and began selling programming-language compilers to Chinese Universities. Fostering Elizabeth's clear intelligence and drive, her parents offered Mandarin home-tutoring, and upon graduating high-school she commenced a Chemical Engineering degree at Stanford.

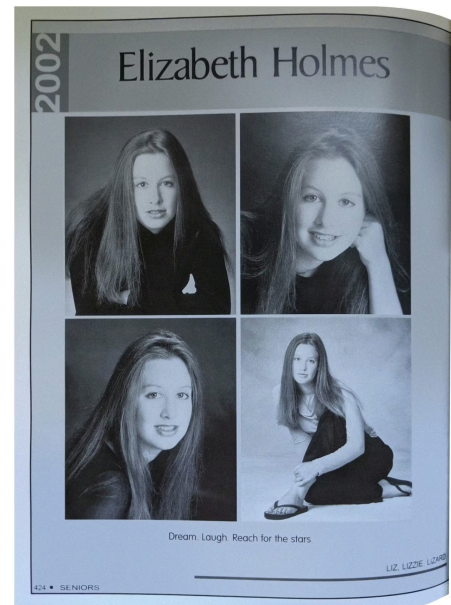
While at college, Elizabeth worked as a researcher and laboratory assistant, and was a member of Kappa Alpha Theta. By the end of her freshman year, Elizabeth scored a role working at the Genome Institute of Singapore - testing for acute respiratory syndrome coronavirus (*for those confused, this strain is different from COVID-19*).

Enter Sunny Balwani



During a 2002 Mandarin exchange program to Beijing, at the young age of 18, Elizabeth would meet Pakistani-born entrepreneur Ramesh "[Sunny](#)" Balwani. Sunny was 19 years her senior. Sunny, being considered a mentor to Elizabeth, would later go on to be a key investor and player in Theranos, as well being involved in a secret relationship with Elizabeth throughout the company's duration.

Sunny cut his teeth at Microsoft during the 90's, claiming to have written thousands of lines of code for the software company, although this hasn't been independently verified - with investigations revealing he worked in sales, and most



Microsoft managers present during his tenure unable to remember him.

Sunny made his fortune in 2000, having sold his shares in software development company Commerce One right before the dotcom bubble burst. His earnings amounted to close to \$40 million USD.

It's unclear whether Sunny and Elizabeth kicked-off their sexual and romantic relationship at their first Beijing encounter in 2002. Sunny was married at the time of meeting Elizabeth, however divorced soon after in December of 2002, and reportedly became involved with Elizabeth a year later, around the time of her dropping out. Regardless, Sunny would make a dramatic reentrance into Elizabeth's Theranos journey a short time later.

The Patents

It wouldn't be long either before Elizabeth filed for her first patented technology in 2003, an idea for a wearable drug delivery patch. The [gadget](#) was supposedly designed to monitor a patients' blood for infectious organisms and deliver antibiotics. She had originally pitched this idea [to Dr. Phyllis Gardner](#), a professor of medicine at Stanford. The two were introduced by a former president of Panasonic, who had told Dr Gardner that this was a brilliant idea. Dr Gardner, however, wasn't convinced, as the skin is too strong of a barrier for something like that to work properly. Undeterred, Elizabeth ignored the critiques and went to another professor, Channing Robertson, who she managed to convince not only of her idea, but that she was capable of creating it. He also became a mentor to her and later became a board member of Theranos. The patent was rejected a total of four times before finally receiving approval in 2007. Perhaps this was the first warning sign of the technology's usefulness...

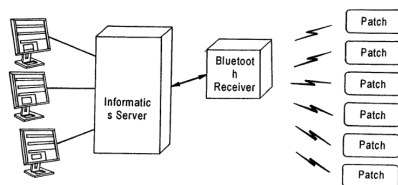


Fig. 3

Supposedly, Elizabeth's idea for this technology was inspired from her fear of needles, as well as her experience collecting blood samples through syringes during her time in Singapore researching coronavirus. Simply, she believed there must be a way to administer these tests through non-invasive, faster means.

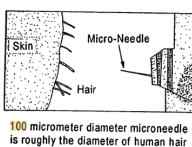


Fig. 4(a)

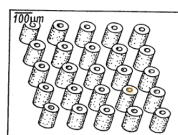


Fig. 4(b)

A common [misconception](#) is that a granted patent is evidence that the technology is both useful or viable. In this instance, Elizabeth's patent was only granted following four rejections after she and her lawyers were able to make enough technical tweaks to the idea so that it appeared marginally unique to other existing technologies. In essence, the approval came after her team proved the idea was novel, not because it was efficacious.

College Drop-Out

In March of 2004 - at the age of 19 - Elizabeth dropped out of Stanford, asking her parents to instead direct her [tuition fees](#) into seed funding for her next big business venture. Not only this, but she managed to get funding from [Tim Draper](#), a highly successful investor who was a friend of the family. In Draper's own words, he gave Elizabeth her first cheque for a million dollars.

Although Elizabeth initially claimed the reason for dropping out was to focus on her start-up, a later testimony would [claim](#) that being sexually assaulted at Stanford was the driving motivator to leaving the college in her sophomore year, stating: "I wasn't going to class, I was questioning ... how I was going to be able to process that experience and what I wanted to do with my life... I decided I was going to build a life by building this company."

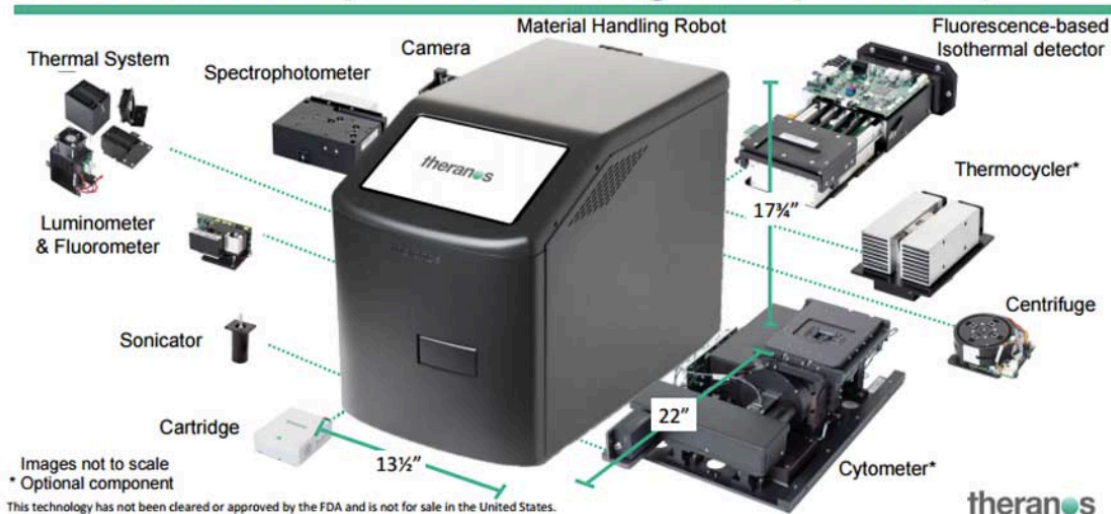
Elizabeth's mission for her company was to "democratise healthcare", with the underlying pitch that her technology could collect "vast amounts of data from a few droplets of blood derived from the tip of a finger". A noble aspiration, in theory at least.

Originally, the company was named "Real-Time Cures". However, Elizabeth eventually changed the name to Theranos (a merge of 'therapy' and 'diagnosis') after her concern that the word "cure" might invoke a sense of promise of literal disease curing. Probably a wise change from a legal standpoint, but this name change would prove to be the least of her worries as things developed.

Elizabeth can be seen [here](#) giving a talk about her decision to drop out of college.

The Edison

Theranos Sample Processing Unit (miniLab)



Finally moving on from her skin patch idea, Elizabeth had a new idea for Theranos, that being a blood test system that purported to be able to test for [hundreds](#) of different diseases, illnesses and other toxicities in a matter of seconds from a single prick of a finger and a few drops of blood. The sample would be collected in a 'nanotainer', which would then be tested inside a home printer-sized miniature lab.

The machine that was supposed to do this was titled The Edison. If it's not already obvious, the gadget was named after American inventor Thomas Edison - likely just as a way of establishing some form of credibility.

Although this was a great concept in theory, in reality it was unfortunately quite a farfetched vision. The [scientific reality](#) is that while there are certain tests which can be done with a single drop of blood (for example, testing blood sugar levels), there are other tests which cannot be done with such a small amount. Depending on what you're trying to measure, there may not be enough concentration of it in those few drops, or the count might vary greatly from drop to drop. Similarly, certain tests involve separating cells via a centrifuge or adding other chemicals into the blood, which renders other tests impossible from that same sample. In layman's terms: a single drop just isn't enough to run all of the tests Elizabeth was claiming. It was physically impossible.

When testing the machine, the technology proved this by returning results that were broadly inaccurate. For the time being, Holmes was able to curtail regulatory oversight for the product and market the service directly through a legal [loophole](#): Theranos' technology fell under the LDT category (lab-developed tests), established by the US government in 1976, which the FDA had little control over. This category was designated for products that were developed and used in a single lab, and as such, did not require US authorities' approvals to market to the public.

Of course, LDTs were far simpler in 1976, and would really only be used on significantly smaller population sizes, diagnosing far fewer illnesses, and cost substantially more to test. This 50-year-old loophole meant that Theranos could scale their unscrutinised technology interstate, without FDA approval, because their customer samples were transported back to their Californian and Arizona centralised labs for "analysis" in their Edison machines. By staying within the LDT category, Theranos was not required to disclose the inner workings of their technology to regulators or their investors. It only gets worse from here...

Not only was Theranos hiding behind a half-century old regulatory loophole to deceive the scientific community of their faulty equipment, they weren't even using their own proposed technology to carry out the testing.

While fronting The Edison to investors and stakeholders as their revolutionary technology, internally, they knew it didn't work. Instead, within their own labs they were using [equipment](#) of existing commercial machinery from trusted and established tech companies like Siemens and Beckman Coulter to run their diagnostic tests. As these commercial machines weren't designed to handle the Theranos "nanotainer" vials, they had to be hacked and modified extensively by

the Theranos team, resulting in Frankenstein machines that created further diagnostic errors and unreliability. Furthermore, the customers' blood samples were diluted with saline in order to fit inside these bastardised machines for testing - again, increasing the amount of inaccurate results.

Theranos: A House of Cards from the Start

Undeterred by the knowledge that the vision of their finalised machine was still no more tangible than a sketch on a restaurant napkin, Elizabeth and Theranos soldiered on. She began to meet with more investors and acquire serious amounts of funding. Part of Elizabeth's charm was her ability at [storytelling and playing to people's emotions](#), which helped her achieve the necessary funds. These weren't small fry investors either. We're talking about [people like](#) Rupert Murdoch and the Walton Family (founders of Walmart), who invested over \$100 million each. The company even got [public support from former US president Bill Clinton](#), who touted Elizabeth as a genius that was changing the face of modern medicine.

Just how was Elizabeth getting face time with these big hitters of business and politics? Not just anyone can schedule an appointment with these people. Well, of course it came down to family connections thanks to her parents. This nepotism was likely the reason that so many people got behind Elizabeth's vision and company, despite not seeing any concrete evidence that it worked, or was even feasible. Over the course of [2004 to 2014](#) Theranos managed to [raise over \\$700 million](#) in funding and was valued at a whopping \$9 billion, including a [\\$140 million partnership with Walgreens](#) in 2013 to have The Edison in stores for blood tests. The company's net worth from this rapid growth technically made Elizabeth the youngest ever female self-made billionaire. Her childhood dream had already been achieved.

Unfortunately, all that funding ended up being spent questionably to build the Theranos empire to what it was at its peak. Elizabeth had [zero medical expertise](#) and limited engineering experience from her brief and incomplete studies at Stanford. Naturally, you'd expect that she would have been aware of the gaps in her knowledge and aimed to fill those. On the contrary though, [reportedly](#) the company had very few medical professionals making up the ranks, and was instead mostly composed of engineers.

Similarly, the [board of directors](#) that Elizabeth acquired as Theranos grew also had no medical professionals on board. Once again, thanks to her family connections the board took on a far more unique composition. The first notable board member was the former Secretary of State George Schultz, who was credited by many to be the man who won the Cold War. After this, others joined such as another former Secretary of State Henry Kissinger, former Chief of Naval Operations Admiral Gary Roughead, former Marine Corps General Gen. James Mattis, former State Senator Bill Frist, and so on. This was looking much more like a board for tackling a doomsday armageddon scenario as opposed to a company providing medical assistance to millions of people across the world.

Still though, this seemingly random board of directors was dubbed by Fortune as [“the most illustrious board in US corporate history”](#). It was likely this appraisal which helped give Theranos the illusion of being reputable to investors and laymen alike, despite still having no evidence that their concepts or patents actually worked, thus netting them their inordinate funding.

Blessed by the nepotism that gave her her humble beginnings, Elizabeth was kind enough to return the favour. Since the company’s inception, Elizabeth’s secret lover Sunny Balwani had been advising her on business decisions and the like, as well as [giving Theranos a personal loan](#) of \$12-14 million during the Global Financial Crisis, but was officially [hired as COO in 2009](#). Their relationship status remained a secret for the duration of their time working together.

Elizabeth also [hired her younger brother](#), Christian Holmes, for a senior management position. Christian also had no medical experience, although in fairness for a management role perhaps that wasn’t a prerequisite for the job. However, it seemed that his management skills were also not too sharp. Christian continued the nepotism trend by reportedly hiring a bunch of his college pals for other roles, his gang eventually gaining the title of the [“Therabros”](#).

Although creating a team of close-knit and trusted people around you can be a great asset, there is a line where it crosses over into short-sightedness and folly. The culture around Theranos was certainly far from warm and welcoming (more on that in a moment), but this was also perhaps when some of the cracks in Elizabeth’s confidence and facade of genius started to show. Dr Jeffery Flier, former dean of Harvard Medical School, met with Elizabeth for lunch in 2015 to discuss her work, but came away from the meeting unconvinced. [As he recalled](#):

“I knew she’d had this brilliant idea and that she had managed to convince all these investors and scientists, ... She was self-assured, but when I asked her several questions about her technology she didn’t look like she understood.”

[Video: Inside Theranos’ Lab - CNN](#)

Fake Voice and Steve Jobs Pastiche

Being the youngest ever self-made billionaire obviously came with even more public attention, with Elizabeth being featured on the covers of [Forbes](#), [Fortune](#) and [other similar magazines](#). She also appeared in plenty of [television interviews](#) and had her own [TED Talk](#). But if misleading investors wasn’t bad enough, what about adding some lighthearted impersonation into the mix?

Over the course of these features and as Theranos grew exponentially, Elizabeth was seen in the same outfit in all of these interviews. Of course, for the billionaire CEOs of the 2000s and 2010s, this was far from uncommon. Eliminating decision fatigue by wearing the same plain clothes day in day out was the style at the time, as seen by some of the most well known amongst them including [Mark Zuckerberg](#) and [Steve Jobs](#). Ah, but there’s the rub...



Rather than coordinating her own unique style, Elizabeth instead adopted Steve Jobs' iconic black turtleneck. When factoring in her mannerisms during speeches (*which can be seen during her [TED Talk](#)*), the [comparison](#) to Steve Jobs grew even closer, almost becoming a total pastiche of the late computing innovator. Although she [did claim](#) that she had always worn black turtlenecks and [played down](#) the comparisons to Steve Jobs, it was also true that she idolised him. In fact, she went so far as to [hire](#) Steve's old right hand man, Avi Tevanian, as well as former iPhone developer Ana Arriola, along with other Apple employees. She even [asked Ana](#) numerous questions about Steve's outfit, even going so far as to track down the designer that he had consulted with for his tailored look.

On top of this getup, Elizabeth made another odd choice regarding her presentation. She decided to affect a much deeper voice whenever she was speaking. This was certainly odd, as people who knew her from her Stanford days and earlier were [adamant that the voice was fake](#). At a [work party](#), perhaps after loosening up a little, she also let her real voice slip to her employees. In [one clip](#), she slipped up for about a minute during an interview, further solidifying that this was indeed an affected voice.

Certainly, the baritone voice sounded *very* forced and at times even painful for her to do, so what was the point? The [common theory](#) is that Elizabeth was trying to lower her voice to command more respect and authority from others. However, she took this concept so far that it actually [backfired on her](#), distracting listeners from her core message and instead prompting [heavy speculation](#), [analysis](#) and, of course, [memes](#) and [impressions](#). The deep voice was [also the reason](#) for Holmes' iconic [wide-eyed and unblinking stare](#), caused by her focusing so much on performing in the lower register. This only exacerbated the uncanny valley feeling that she often gave off and inspired yet more [impressions](#).

Video: [Charlie Rose Interview](#)

Paranoia Within Theranos

The fake voice and Steve Jobs caricature was far from the limit of Elizabeth's insecurities, though. Former Theranos employees noted that almost immediately after being hired, they noticed that things may not have been as they appeared from the outside.

Elizabeth [herself admitted](#) that she was probably “one of the most paranoid people on the planet”, and that paranoia seemed to permeate into the culture at Theranos and the way it was being run. [According to employees](#), the office areas were designed in a way that made interaction with others difficult. Departments were also [heavily compartmentalised](#), likely in an effort to prevent employees from catching on that the technology didn't work and to keep them in the dark as to the holistic picture of the company.



Elizabeth was also overly micromanaging and she [lied](#) about trivial things to employees. One employee noted an email exchange with her where she told him she had left the office for the day, despite him being able to see her a few offices away leading to an argument. [Employee turnover](#) was also incredibly high, both from Elizabeth and Balwani taking a dictator-esque approach of firing and demoting any

nay-sayers towards the company, and from workers leaving in states of exasperation and frustration at chasing their own tails and being continually lied to. One of her most prestigious and coveted hires, Avi Tevanian, even copped this treatment for “asking too many questions” and was [told to resign](#) from the board of Theranos when trying to instigate changes to prevent the ship from sinking. No one was safe.

Perhaps the pressure of keeping investors happy and putting up with questions internally from employees with nothing to show for it was beginning to pile up for Elizabeth. Her paranoia also began to spread to her personal security. Elizabeth [hired personal security and bodyguards](#) to drive her around in a black sedan, even adopting the codename ‘Eagle One’. Security also supposedly stayed with her in the office, meaning approaching her office was a rarity. Speaking of her office, she was [reported](#) to have had bulletproof glass installed in her windows. It was even [alleged](#) that Sunny Balwani read employee emails, replying to email threads to which he and Holmes weren't even addressed. Balwani also tracked employee whereabouts, including their computer activity and their key card entries and exits of the building.

While it can be argued that some of these actions were justified for a CEO with a net worth of billions, it also seemed that the continually growing hype around Theranos was fuelling this spike in anxiety, perhaps the fear of getting caught out for the fraud that she was committing.

This was the tip of the iceberg, and things were about to start crumbling for Theranos *very* fast...

The Unravelling of Theranos



The gross negligence and facade of genius couldn't be kept up for long. By 2013, the fractures within Theranos slowly became deep fissures, making its way to the key staff who had been pushed to the limits of their integrity, thus commencing its downfall.

[Ian Gibbons](#), Theranos' chief scientist, was hired by Holmes in 2005. With a PhD in biochemistry from the University of Cambridge, he seemingly was one of the only scientific experts present within the company who attempted to uphold Theranos' products to industry benchmarks, often becoming frustrated that the technology was never up to par. He would even host lectures on biochemistry to Theranos staff on his own time to ensure there was at least some semblance of scientific understanding amongst the employees, and was greatly disturbed by Elizabeth's [compartmentalisation](#) of information within departments of the company.

Gibbons even took his concerns of the dodgy technology to the board, who promptly [fired](#) him, only to rehire him just hours later out of concern he would spill the beans. The entire ordeal made Gibbons deeply depressed.

In 2013, after Elizabeth tried to sue a former neighbour, Richard Fuisz, for "stealing" her ideas, Richard subpoenaed Ian as Chief Scientist of Theranos to testify in court against Elizabeth and Theranos. This placed Ian in a delicate position: testify against Theranos, admitting that the technology is a sham, breaking his NDA and losing his position and reputation - or lie, protecting Theranos under full knowledge that the technology could harm the public.

The night before Ian was set to take the stand to be deposed, he tragically took his own life. Ian's widow, Rochelle, didn't receive flowers or even a note of condolences from Elizabeth. Instead, she received a notice to immediately return all of Ian's work and company laptop.

Ian was one of many senior staff within Theranos who did their best to bring the dishonesty to light, but were often left hamstrung by professional threats, public character smearing and strict NDA agreements. Earlier, in 2007, Design Director Justin Maxwell had resigned after learning of the depths of deceit occurring within Theranos, sending a [scathing resignation email](#) to Elizabeth in the process.

Two junior staffers, Erika Cheung and Tyler Schultz (Grandson of board member George Schultz) joined the Theranos team in later 2013, several months after Ian Gibbons' suicide. Tyler's role had been in protein engineering, where Erika's was in research and development. They were quickly acquainted with each other having moved to the assay validation team - tasked with ensuring the technology was safe for public use. Both Schultz and Cheung [recalled](#) their early impressions working at Theranos, noting their immediate confusion over the siloed information and partitions built around the actual devices throughout the labs so no worker could actually see the "devices" they were researching.

The pair almost immediately recognised that something was deeply wrong within the company, after witnessing first-hand lab researchers skewing data and falsifying information. Schultz identified that Theranos' methodology followed a 'delete and repeat'



process, where tests were rerun until they received the results they wanted. Schultz recalled in an [interview](#) that his red-flag moment came after running a precision test on the devices for diagnosing syphilis - he observed the machines had a whopping 43% variation between any given sample, an enormous swing in testing accuracy. He comically also told a story in which he collected blood from all of his colleagues in the lab, with the Theranos equipment returning a positive syphilis result for most of them.

With Erika's assistance, the pair documented all technical failures and wrongdoing they were able to observe. Schultz was notably in a tricky situation. He had met Elizabeth [through his grandfather](#), George Schultz - a member of the Theranos board - which enabled him to land the role in 2013. Coming forward with this information would come at the expense of his relationship with his family. Tyler later [admitted](#) that he wished he took his findings directly to the US Securities Exchange Commission, with his familial ties to the company likely clouding his initial judgement.

Hoping that the Theranos leadership team would be just as concerned over their failing technology, he passed on his findings to Elizabeth - who was initially all-ears, until she passed Tyler's concerns on to Sunny.

Sunny returned to Tyler with anger, berating him in a follow-up meeting - calling him arrogant and threatening his position at Theranos. Tyler and Erika quit a month later in April after the exchange, but not without sending a formal letter to the public health regulators in New York under an alias.

John Carreyrou: The Catalyst for Theranos' Downfall



Investigative journalist for the Wall Street Journal, John Carreyrou, had been [tapped on the shoulder](#) by Missouri pathologist Adam Clapper a short time after Tyler and Erika had resigned from Theranos. Also finding Theranos' purported technology incredulous, Clapper urged John to look into the case further, suspecting serious fraudulent activity was taking place.

Carreyrou agreed, and sought out people connected to the company - eventually finding his way to both Erika Chueng and Tyler Schultz in early 2015. Tyler then became John's private confidential source on the story.

[John's piece](#) on Theranos came out in the Wall Street Journal on the 15th of October, 2015. His investigation had been extensive and spanned multiple months, and essentially finally revealed that the entire company was a sham and the technology didn't work. Somehow after operating for 11 years without showing any real signs of progress or development, John was the first person to bother properly investigating the company.

Holmes' reaction to the article was swift. She set her lawyer, David Boies, onto John immediately, who aggressively [threatened him](#) with legal and financial threats for his article. To offer perspective as to Theranos' legal representation, [David Boies](#) is the chairman of law firm Boies Schiller Flexner, with an impressive gallery of clients including Harvey Weinstein and big tobacco companies. This was the big leagues for lawyers.



Theranos also released a statement denying the allegations made by Carreyrou and [labelling them as](#) "factually and scientifically erroneous and grounded in baseless assertions by inexperienced and disgruntled former employees". The statement went on to assert that John's sources were "never in a position to understand Theranos' technology and know nothing about the processes" (as a reminder, this was likely why Holmes wanted employees largely in the dark).

Elizabeth also appeared on Jim Cramer's show the day the article dropped to defend herself, providing us with [this now infamous quote](#) that has since aged like milk...

In a brazen effort to maintain whatever credibility Theranos had left, they invited then-Vice President Joe Biden on [tour](#) around their facility. Despite Joe being impressed with what he saw, it was later revealed that Elizabeth and Sunny had constructed a fake lab to guide him through.

John Carreyrou wasn't the only person being chased by Theranos lawyers. His key confidant and whistleblower, Tyler Schultz, was also subject to aggressive legal pursuit. As mentioned earlier, his exposé of Theranos' racket put him in direct conflict with his family, with his grandfather sitting on the board of the company. Under the guise of a lunch catch-up, Tyler was invited to his grandfather's home in June of 2015 - only to be [ambushed](#) by Theranos attorneys. They threatened him with insurmountable litigation challenges, pressuring him to sign an NDA to "end a world of suffering", but Tyler refused to put pen to paper without his own lawyers present.

Despite Elizabeth and Sunny's best efforts for seeking legal action against the article, the floodgates had opened and the spotlight was now well and truly being aimed at Theranos. In 2016 [more revelations](#) about the company began to be published. Adding insult to injury, the magazines which once sung Elizabeth's praises turned against her, with [Forbes revising her net worth to \\$0](#) and Fortune featuring her in a list of the ["19 Most Disappointing Leaders"](#).

Health Regulators Catch On

2016 was truly the year things really started imploding for Theranos and Elizabeth. On top of the media scrutiny, US regulators started to get involved in scrutinising them too. In January, the Centers for Medicare and Medicaid Services (CMS) sent a [warning letter](#) (likely after investigation following Erika Cheung's notice) to Theranos after inspecting their California testing lab and finding that it didn't meet the standards in five areas. Their letter [noted](#) that these deficiencies had "already caused, is causing, or is likely to cause, at any time, serious injury or harm, or death, to individuals served by the laboratory or to the health and safety of the general public". CMS [ended up](#) banning Elizabeth from operating a blood testing lab for two years, as well as pulling approval for the California lab to receive subsidies for their services.

In June of the same year, Walgreens decided to [end their partnership](#) with Theranos, cutting ties with the now sinking company and citing its recent regulatory issues as the cause for the split. It was also around this time that the Food and Drug Administration (FDA) essentially [banned Theranos' Capillary Tube Nanotainer](#) (their patented tiny blood vials) due to an incorrect classification that avoided regulatory control from the FDA. Whether this misclassification was intentional or not is not known.

Things only got worse in 2017, when the State of Arizona [filed a suit against the company](#), alleging that it sold 1.5 million blood tests to its citizens while concealing or misrepresenting facts about the tests. The lawsuit was eventually settled by Theranos refunding the costs of all

the tests, regardless of whether they were inaccurate or not, as well as paying legal fees. This resulted in a loss of \$4.6 million. For context, [some of the people getting these tests](#) were cancer survivors or people who had to be regularly screened for cancer getting wildly incorrect results, leading them to believe they had cancer until receiving further tests. There were also cases of [patients being given false diagnoses](#) of miscarriages and HIV.

Things were now critical for Theranos. By March of 2018, the company had laid off the majority of its staff in order to stay solvent, down to around 25 personnel from around 800.

As a humorous footnote, during the final days of the company's life, Elizabeth bought a Siberian Husky named Balto. Holmes would reportedly bring the canine to the office and insist to others that the dog was in fact a wolf. Furthermore, having not trained the new dog yet, Balto apparently did its business throughout the building and in the middle of high-level meetings. Sadly, Balto would meet an early end in 2022 after allegedly being dragged away from Elizabeth's front porch by a mountain lion.

Lies Upon Lies

In March of 2018, the Security Exchange Commission (SEC) formally charged Theranos, Sunny Balwani and Elizabeth Holmes with fraud. The basis for the charge was the complete nonsense perpetuated by Theranos to stakeholders that their devices could actually do anything close to what they reportedly could do, and that their technology was being used by the US Department of Defense in combat zones, a lie that even the board members (including Tyler's grandfather, George) wholeheartedly [believed](#).

Another outright and bold lie claimed by Theranos was that the company turned over \$100 million USD in revenue in 2014 - the real sum was closer to a *thousandth* of that, around \$100,000.

When [confronted with these lies](#), Elizabeth, the woman who seemed to love the image of being the woman with all the answers, was much less sure of herself. She repeatedly answered that she didn't know to numerous questions, although did admit to these lies at least, as well as her relationship with Sunny.

As part of Holmes' settlement of the civil fraud charges with the SEC, she was required to pay \$500,000 USD, return almost 19 million shares in the company, and was barred from holding any leadership position within a public company for ten years.

In June of that same year, both Holmes and Balwani were indicted by the federal court, the case titled as *United States v Elizabeth A Holmes et al*. Elizabeth stepped down as CEO of Theranos shortly after. The trial was to commence in August of 2020, although Covid-19 disrupted the proceedings and it was eventually moved to August of 2021, with Balwani's trial moved to 2022.

Holmes' defence team reportedly tried to take the angle that media outlets were responsible for the company's undoing - with focus on John Carreyrou's article being the impetus for negative media attention and perverting investigations conducted by health regulatory bodies. This case, as expected, would later prove futile.

By mid-2019, in a twist of direction, Elizabeth's legal defence pivoted towards Balwani - with reports suggesting that Holmes had planned to argue a "mental defect" case, placing the blame for her negligence and mismanagement on her business partner Sunny Balwani, accusing him of emotional and psychological abuse - rendering her incapable of making her own decisions.

Additionally, Elizabeth's legal team in a separate class-action lawsuit [requested](#) that the courts allow them to withdraw as her legal representation, citing that she hadn't paid them for more than a year's worth of services, which the court granted.

The Trials



Theranos founder Elizabeth Holmes arrives to attend her fraud trial at federal court in San Jose, California. Photograph: Peter Dasilva/Reuters

In February of 2021, prior to the main trial, US prosecutors accused Elizabeth and her legal team of destroying evidence in their final days of business - the evidence in question being the database in which three years worth of Theranos' failed lab tests and accuracy reports were stored. However, Holmes' legal team [argued](#) that it was the responsibility of the US regulators to attain and hold this information themselves. Essentially their argument was that the government lost that information, not Theranos.

By the time Elizabeth was due to have her time in court, she was facing [twelve criminal counts](#), pertaining to both wire fraud and conspiracy against her investors and Theranos patients.

The case commenced on August 31st of 2021. Several witnesses, including whistleblower Erika Cheung and Theranos lab directors, were called upon. Numerous items of evidence was surmounted against Elizabeth, including her fake product demonstrations, audio and video files of her deliberately making false claims about her technology, falsified financial documentation, and [forged pharmaceutical logos](#) on Theranos reports (namely from Pfizer and Schering-Plough) to allude to the fact that the companies had verified their technology.



As previously mentioned, Elizabeth would also allege in her testimony that she suffered decades of emotional, sexual and financial abuse from Sunny Balwani, revealing that she was in a romantic relationship with him throughout the saga. However, Elizabeth also testified that it was she herself who decided to mislead investors, business partners and journalists - not Balwani.

From the evidence brought forward, a lot could be ascertained about Holmes' sense of self as well as her turbulent relationship with Sunny. [One of several hundred text messages](#) displayed intense affection from Elizabeth to Sunny, reading:

Elizabeth: "You are the breeze in desert [sic] for me – my water, and ocean"

Sunny: "OK"

Another document seemingly written by Elizabeth herself read lines of affirmations:

"ALL ABOUT BUSINESS."

"I am not impulsive."

"I do not react."

"I am always proactive."

"I know the outcome of every encounter."

"I do not hesitate."

"I speak rarely. When I do – CRISP and CONCISE. I call bullshit immediately. My hands are always in my pockets or gesturing"



Elizabeth Holmes leaves federal court after the verdict in San Jose, California, on Monday, Jan. 3, 2022. (Nic Courty/AP)

On the 3rd of January 2022, Holmes was found [guilty](#) on four of the charges against her: Three counts of wire fraud against investors, and one count of conspiracy to commit wire fraud. As for her four counts of defrauding patients, she was found not guilty.

The jury were unable to reach a unanimous decision on whether Elizabeth was guilty for her three other counts of defrauding investors, to which the judge declared a mistrial.

Sunny Balwani stood trial separately from Elizabeth Holmes in 2022. He was not as fortunate as Elizabeth, as on the 7th of July

he was found guilty on all twelve counts: 10 counts of wire fraud, and two counts of conspiracy. This was a much more severe verdict in contrast to Elizabeth.

Sentencing

As for Elizabeth, she faced a maximum penalty of twenty years in prison, and fine of \$250,000 for each count of fraud and conspiracy - the US prosecution were [seeking](#) a 15 year prison sentence, a three year supervised probation period and \$800 million in restitution payment.

Prior to the sentencing, Elizabeth and her legal team requested that the courts acquit the convictions, [arguing](#) that no rational juror in their right mind would suggest that Elizabeth is guilty beyond a reasonable doubt. Several more attempts were made to request a retrial, these motions stemmed from arguments made by the defence that prosecutors unfairly represented Sunny and Elizabeth's partnership, that witnesses (namely a former Theranos lab director) had felt guilty testifying against Elizabeth after-the-fact, and that the prosecutors failed to take the correct steps to ensure a critical database of Theranos testing information was protected.

On the 18th of November, Holmes was finally sentenced to 11 years and 3 months in prison, with an additional three years of supervised release. The judge recommended she be imprisoned in the Bryan, Texas Federal Prison Camp, a minimum security facility which, [according](#) to one criminal defence lawyer, is considered "heaven".

Sunny, on the other hand, was later sentenced to 12 years and 11 months in prison, 3 years of supervised release. Balwani was scheduled to self-surrender by March 15th 2023, yet just hours prior he [appealed](#) the ruling, triggering a sentence-stay - meaning his trip to prison was stalled. On April 7th, the request was processed and denied, and he surrendered on the 20th. He was imprisoned at Federal Correction Institute, San Pedro California.

During the restitution stage in May of 2023, both Holmes and Balwani were ordered to repay \$452 million USD to their defrauded investors (including Walgreens, the Murdoch family, DeVos family, and Safeway).

A Convenient Partnership



One final spanner in the works that held up Elizabeth's sentencing and date for her surrender to prison was that of her new romantic partner and relationship status. This time, it was the much more age-appropriate [Billy Evans](#).

Evans is the heir to a hospitality company which runs some luxury hotels in San Diego. He and Elizabeth [met](#) when they were introduced to each other by a mutual friend in October of 2017. Despite Theranos well and truly being on its downward spiral by that point, and Holmes beginning to be

tarnished by the media, the spark was apparently still there. They hit it off quickly and were [engaged](#) by August 2018 and [reportedly married](#) in mid-2019. Evans was present during Holmes' trial and was seen to be consistently offering her support, showing that their relationship may well be a strong one.

On top of this, the couple has had [two children](#) in the relationship speedrun: their son William in July 2021 and their daughter Invicta (Latin for invincible) in April 2023. Naturally, giving birth to two children can muddy the waters when you're on trial for fraud. This was indeed the case, with her pregnancy with William delaying the start of her trial. Similarly, she became pregnant with Invicta after being convicted. Holmes and her legal team tried to [use her pregnancy and children](#) as a reason to delay her sentencing and to remain free while appealing the conviction, so as to not have them grow up without their mother, but it was to no avail. Her sentence was only delayed until she had given birth, then she was off to jail at the end of May 2023.

Although some have speculated that she only had these children as a way of delaying proceedings and garnering sympathy from the courts and prosecutors, Holmes has [rejected these claims](#).

According to federal prosecutors, both Elizabeth and her partner William "attempted to flee" after [purchasing](#) one way tickets to Mexico shortly after sentencing. However the defence argued that the tickets were merely purchased in hopes that the verdict would be different and that they were planning to attend a wedding ceremony of close friends.

Where Are They Now?

So where are they now? Holmes, now 42, is living as [inmate #24965-111](#) at the Bryan Federal Prison Camp, around 100 miles northwest of Houston, Texas. [She is working](#) in the prison as a French teacher and a re-entry clerk for 31 cents an hour, helping other inmates write resumés to get work upon their release.

Despite it being one of the best prisons to be sent to, in a [2025 interview](#) with People magazine, Elizabeth described her time in prison as "hell and torture", even though she gets [2 visits a week](#) from her husband and children. She has also reportedly [dropped the fake voice schtick](#) and is spending every day researching and studying. She says she's still committed to achieving her dream of making healthcare solutions affordable for all. Still a noble goal, but hopefully less misguided in future.

Holmes is also still pushing for further sentence reductions, and has [received a reduction](#) from 11.25 years to 9 for good behaviour in 2025 as well as a [further year reduction](#) in early 2026 due to the fact that there was no evidence Theranos' investors "suffered financial hardship" for their bad investment. Luckily for Elizabeth she went after the big fish for funding rather than regular people. Her projected release date is currently somewhere between late 2029 and August 2032, depending on continued good behaviour and program credits.

In December of 2025, Elizabeth even began curating social media momentum in an [apparent](#) attempt to attract President Donald Trump's attention, in hopes of a presidential pardon. She has even filed a formal [request](#) for commutation, meaning that if granted, she'd be released early but still have the conviction to her name. This decision to pardon, as of now, is still sitting in limbo.

Sunny, on the other hand, has been less lucky. Currently 60, his [appeals have been exhausted](#) as of 2025 and is scheduled for release in [2034](#).

Elizabeth's story has since been subject to plenty of media attention and adaptation, including an [HBO documentary](#) and a [TV series](#) starring Amanda Seyfried. She also managed to become a [niche girlboss meme on TikTok](#). John Carreyrou also got his investigations and research into Theranos published as a book, entitled "[Bad Blood](#)", which allowed a more detailed and narrative look into the shambles of the company. Carreyrou's book also brought to light more of the intimidation tactics that Holmes' lawyer David Boies directed towards him, which has since [damaged Boies' once strong reputation](#).

Perhaps most interestingly, Holmes' husband Billy Evans has had a slight career pivot in recent years. He has [previously worked in tech](#), but in 2025 he [launched and became the CEO](#) of new startup Haemanthus. This company is a medtech company which, you guessed it, tests blood for diseases and is described as being a "radical new approach to health testing". Although it will initially be starting by testing on pets, the ultimate goal is to progress to humans. The company has raised [over \\$18 million in funding](#) as of 2025, with Evans' goal being \$50 million to build the first prototype, which looks eerily similar to Holmes' Edison machine. [Reportedly](#), Holmes has been advising Evans on the company from behind bars, but has no plans to take on a formal role at the company and has [no involvement](#) with the company (regardless, she is still banned from being an officer or director of a public company until at least 2028).

Conclusion

While the "fake it 'til you make it" ethos seems to be a strong part of many Silicon Valley startups, it certainly plays out worse for some than others. One key difference seems to be that people who actually have ideas that can truly change or provide benefit to the world seem to find success despite initial backlash. That mindset is also much more dicey when you're dealing with the healthcare sector, where people's lives are on the line. When your idea is simply medically and technologically impossible, you aren't blazing new scientific trails in the face of adversity; you are sending your multi-billion dollar company into a nosedive towards failure. Such was the position that Theranos found itself in with Elizabeth Holmes at the helm.

Holmes' parents and family were supposedly [very proud and conscious](#) of their lineage and connections. The pressure on Elizabeth's shoulders was [likely high as a result](#); the stress of actualising the archetype of child genius seemed to become too much to uphold. Perhaps attending her classes at Stanford instead of manufacturing a facade of public appearances,

magazine covers and interviews, and consulting with more medical experts rather than investors, might have served her better.

It's a shame to think about the wasted potential of Theranos in hindsight. Here was a company that had raised incredible amounts of funding and had backing from plenty of highly influential figures. If Elizabeth had simply been less headstrong and more adaptable, she could have admitted her mistakes with The Edison and pivoted to some new avenue of research and medical testing. Her dream of making healthcare affordable for everyone could still have been achieved, albeit in somewhat of a different form than she had first envisaged. Unfortunately, we'll likely never know what that may have looked like now.