

Chapter One



Introduction

“DAD, YOU’RE TECHNOLOGICALLY TONE deaf. You can barely turn on your iPhone.” It was my son, AJ, and he was just about to give me some of the best advice of my life.

“When I say ‘blockchain,’ you have no idea what I’m talking about,” he complained. “When I say, ‘The Internet of Things,’ you’re clueless!”

My son, who was working at Tesla during the summer of 2012, urged me to get with the times.

“You have to address this,” he added. By “this,” he meant that I was a technology luddite.

He suggested I fix “this” by enrolling in an executive class at Singularity University. Despite the name, Singularity isn’t really a university at all. It’s not an accredited institution. It doesn’t dole out diplomas. Instead, it offers something way more useful: a glimpse into the future.

Founded by futurists and entrepreneurs Ray Kurzweil and Peter Diamandis, Singularity University’s promise is simple: “Don’t fear the future – own it.”

And so, in April 2013, I enrolled at the sprawling NASA Ames Research Center in the heart of California’s Silicon Valley. Singularity offers professionals weekly courses that combine the best elements of think tanks, seminars, and conferences. You learn from and network with some of the brightest and most forward-thinking minds in tech.

It was then when I first learned about the world of block-chain digital assets, particularly Bitcoin.

Diamandis was speaking along with Hal Finney, who, in addition to being one of the early developers of console gaming, was one of the first Bitcoin adopters. In fact, he was the recipient of the very first Bitcoin transaction. Finney was an early believer in digital currencies, having experimented with its earliest forms like DigiCash. But those protocols were centralized, and in Bitcoin he had finally found a real free and decentralized currency. Now he was teaching others.

The two talked less about the coin itself and more about the factors that were driving it or what Diamandis called

“The Six Ds of Exponentials,” which he viewed as the keys to identifying lucrative long-term investment ideas. These are Digitize, Dematerialize, Demonetize, Democratize, Deception, and finally Disruption.

In Diamandis’ view, if you can digitize a product or service, you can effectively dematerialize it, reducing the physical to metadata, or a series of ones and zeros. And moving from a physical to a virtual good or service is a much more efficient process since now everything is just data. Digitizing a product makes it cheaper and more universally available; it’s now democratized, and everyone can have it. Before you know it, it’s deceptively become a disruptive force in its industry.

What he was really talking about is how to identify technologies that have the power to disrupt, redefine, and then scale up various industries. Diamandis called this phenomenon “exponential technologies,” and it didn’t apply to the small stuff, like a color versus a black-and-white television. He was more interested in discovering and harnessing the airwaves that made television possible. Think electricity. Mobility. Computers. The next great technology that immediately changes every industry it touches. The Internet! And now he was looking at a new one that had been around only a couple years and was viewed by many with a cynical eye.

“Kodak made the epic error of thinking they were in the chemicals and paper business,” Diamandis told his class.

“They thought that because that’s where they made their profits, and anything not in service to that was a waste.” The problem was that digital photography was on an exponential growth curve.

“So, when the digital camera came along, Kodak executives took a look at the standard 0.01 megapixel camera and laughed at it. But the next year it was 0.02 megapixels. Then 0.04. Then 0.08. And after 30 doublings, it was better than the standard traditional camera, and Kodak was bankrupt,” Diamandis explained.

His point was simple: moving from the physical to the virtual is a wildly disruptive and potentially lucrative process, both for goods and for services. But it’s a necessary one if a company or industry is going to evolve and survive. Those that don’t transition are inevitably eaten by technology as industries become leaner and more efficient. Think about all the physical goods you probably kept in your home just 25 years ago. You likely had a landline phone, which required lots of plastic and cords. You may have even had an answering machine. You probably had a stereo system, with a stack of CDs next to it. You had a camera, maybe a digital one but likely an old-fashioned film one that required you to take that roll and have it developed. And let’s not forget the TV, which required a cable box but also probably had a nice stack of DVDs sitting not too far from those CDs. Most, if not all, of those devices have been reduced to a series of

ones and zeros. They've become digitized, combined, and reimaged into one remarkable device: the smartphone. Your phone now carries your pictures, music, movies, and phone (to say nothing of your computer). All that physical stuff now fits into the palm of your hand. And as a result, Apple's \$3 trillion market capitalization is bigger than Germany's entire stock market and half that of Japan's. Staggering change creates – and destroys – stupendous value.

In fairness to the good folks at Kodak, digital photography looked like a loser and in fact was a loser at the time. Shifting from a profitable business to an unprofitable one won't exactly endear management with shareholders. But what they didn't realize is that digitization wasn't just the future. It was their lifeline. It led to the dematerialization of cameras and film. And it demonetized the process of taking photos so that, today, most of us take pictures for free. And soon enough, it democratized photography. There are eight billion phones around the world, and Kodak, Polaroid, and Nikon are all obsolete. An entire industry was reduced to a series of ones and zeros. In 2000, Kodak announced that 80 billion photos were taken, a record. In 2022, an estimated 1.5 trillion photos were taken.

"Bitcoin is digital photography," Diamandis added. "Before you know it, it will digitize and dematerialize the entire financial system, and the same thing that happened to Kodak will happen to many traditional financial institutions."

The room fell silent.

I have to be honest; I didn't really understand much of it. I knew, liked, and respected Diamandis; we were about the same age, both first-generation sons of immigrants, both from Long Island. He's wickedly smart and doesn't take himself too seriously, which are rare qualities. And it was hard to argue with the logic of what he was saying.

Still, it seemed a leap too far. I was a traditional finance guy with 25 years of experience working for places like Goldman Sachs and Neuberger Berman. The idea that money could exist outside the government seemed almost farcical to me. How could something that wasn't sanctioned by the government be considered "money" and eventually replace the dollar? How could money exist entirely in nonphysical form? For thousands of years, the construct of money was based on physical objects – coins, bills, metals. And now society was going to ignore that and accept an idea of money but without having the money? What were these guys talking about?

I left the seminar chuckling to myself, and then I promptly did what I've probably done too many times before in my life. I put my digital foot in my digital mouth and immediately took to Twitter and mocked it:

"For the record, I don't know what a #bitcoin is and could care less. Caveat Emptor," I proudly tweeted.

Buyer beware!

Do you know what embarrasses me about those 15 words as I sit here today? It's not the typo – I could “careless” about that. It's not the millions I would've made had I bought in right then. It's not even that I could have jumped up a notch or two on my son's cool-o-meter. It's that I had closed my mind.

As you go on this journey with me, into what I now believe is one of the most transformative and potentially lucrative asset classes of all time, I ask only one thing: don't repeat my mistake. Whether you're a believer or a skeptic, be open to the possibility that you could be wrong. The world may be bigger – and may be changing faster – than you previously thought. Keep an open mind, and your world can expand.

Mine was about to.

