

# The Infinite Machine: How an Army of Crypto-hackers Is Building the Next Internet | Camila Russo

July 6th, 2020

*For me, it's about freedom. If you push me a little, I might even say it's about revolution.* — Camila Russo

## INTRODUCTION

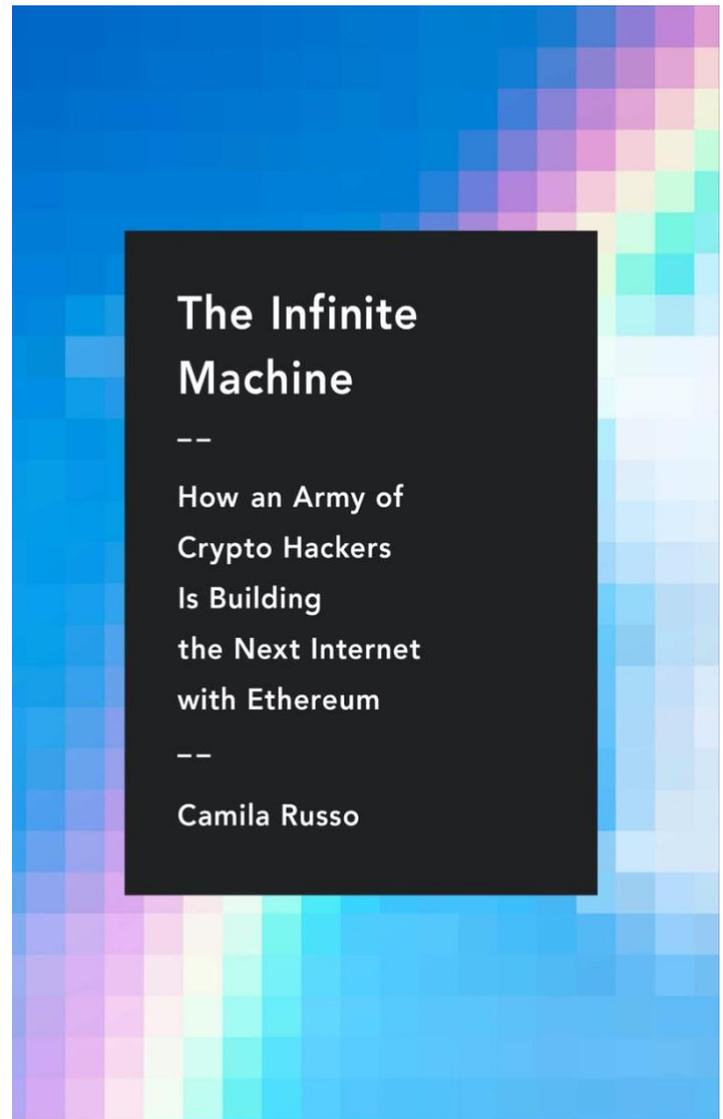
**Camila Russo** is a financial journalist, and one of the most prolific and dedicated cryptocurrency reporters, with experience across continents and asset classes. She has worked at Bloomberg News and covered the Argentine market while based in Buenos Aires, European stocks with a focus on Southern Europe in Madrid, macro emerging markets moves for the Markets Live blog in New York. Previous to Bloomberg, she wrote international news for Chile's largest national newspaper, El Mercurio. She has moderated and spoken at some of the most influential cryptocurrency conferences, done multiple TV and radio appearances, and was awarded first place for online journalism by Brazil's exchange operator BM&F Bovespa. She has a Master of Science degree from Northwestern University's Medill School of Journalism and a bachelor's degree from Pontificia Universidad Catolica de Chile, and is the founder of blockchain content platform The Defiant.

## WHY DO I CARE?

Today's recording with Camila Russo will be my first dedicated crypto episode since September 2019. I originally got into the space two years before (in September 2017) when I discovered the [Swirlds white paper](#) and made a seed investment in the Hedera Hashgraph protocol two months later (December 2017).

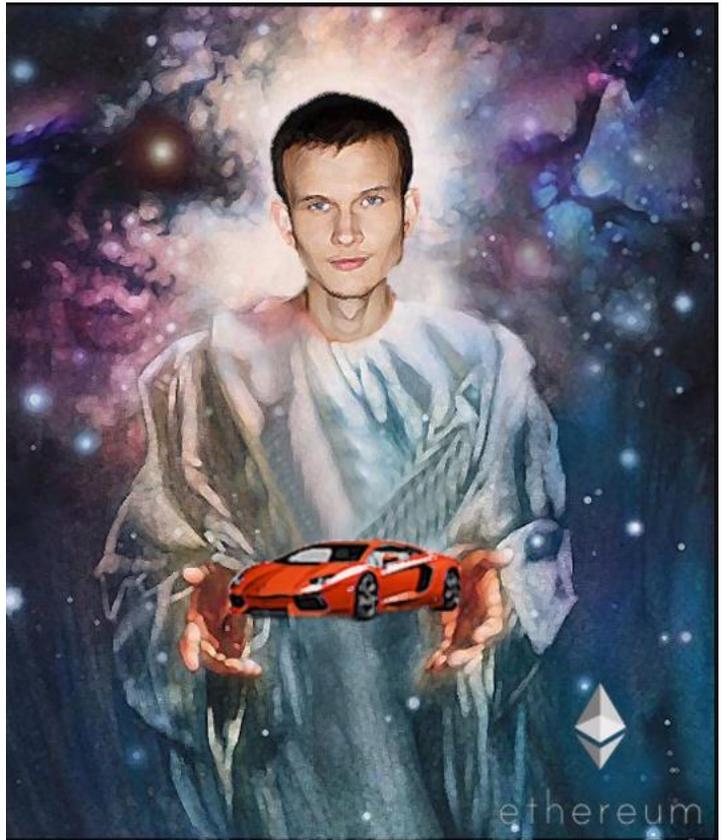
When I was researching crypto in 2017, the interesting technical questions seemed to circle around the problem of scalability, which led to a proliferation of so-called "Ethereum killers." On the other hand, investment frameworks were informed largely by debates around utility vs. store-of-value. The earliest mention of such a framework that I can find was a paper published by Chris Burniske in September 2017 title "[Cryptoasset Valuations](#)." The paper focused on "crypto economics" and asked whether or not the value of any given cryptocurrency (in this case, the comparisons made were between Bitcoin & Ethereum) is determined by the utility of its network or the propensity of its users to "hodl" the currency in the hope of riding ever higher rising prices.

At first glance, the idea that a pyramid scheme could ever provide a better return for investors than a network that actually generates value & utility for end users seems preposterous. But if you think of cryptocurrency as money, hoarding



actually represents a real use-case, and the act of doing so dramatically reduces money velocity which increases price ( $M=PQ/V$ , where M is the size of the monetary base needed to support a cryptoeconomy of size PQ, at velocity V).

With the onset of another crypto winter, many of the highly touted Ethereum killers have either died or had to reinvent themselves. Likewise, many of the Dapps that collectively raised billions of dollars in ERC-20 token enabled ICO's on Ethereum have disappeared or turned out to be scams. However, some of the teams behind some of these projects survived and used the bear market in crypto (and the money they raised during the boom) to build on what they promised their investors. Whether or not these applications will ever achieve mainstream adoptions or whether crypto as an industry can graduate beyond BTC's store-of-value use cases remains an open question. The problem of scalability was never really solved. Rather, it was offloaded to second-layer solutions, which



provide incremental gains in performance in return for various compromises in security. I'm not enough of an expert to know whether or not the tradeoffs being made or proposed by the Ethereum community will ultimately keep the spirit of decentralization intact, but there are reasons to be skeptical.

All of this said, the story of Ethereum is an important one, and I want to spend most of our time today exploring the protocol's origins, including the personal drama of its founding. Much of this will inevitably involve a conversation about its prodigal founder Vitalik Buterin, who I had on HF a few years ago for an in-person conversation alongside Vlad Zamfir. I would also like to discuss the 2017 ICO boom, since I lived through that and experienced the hype and excitement first hand. Other interested topics to focus on are Ethereum's community, its culture, and the emergence of DeFi as the "next big thing" in crypto.



## FIRST THINGS FIRST

**Origins of the Book** — I usually ask my guests how the idea for their books came about, but in your case the idea to write a history of Ethereum is not altogether remarkable. Rather, it is the idea that one might be aptly suited to write such a book *that is* impressive. **Q:** When/how did you get the idea that you were the person to write the first official story of Ethereum?

**Q:** Was it difficult not writing in your native language?

**Camila Origins** — I'm curious to understand your own evolution as a journalist in this space and how you got interested in cryptocurrency. **Q:** Were you born and raised in Chile? **Q:** What got you interested in journalism? **Q:** What got you interested in financial journalism?

**Buenos Cryptos** — **Q:** When and why did you move to Argentina? Argentina has featured prominently in the stories of many of the people in crypto. Michael Casey, for instance, lived there between 2003-2009 as Bureau Chief for Dow Jones and the WSJ. **Q:** Is it just me, or has Argentina produced an outsized number of crypto enthusiasts over the years? **Q:** Why do you think so many prominent Bitcoiners and crypto evangelists have ties to Argentina? **Q:** What impact did living in Buenos Aires have on your development as a journalist in crypto?

**Interest in Crypto** — **Q:** What was the process by which you became interested in cryptocurrency? **Q:** How long did it take you before you felt that crypto was worth betting on, both as a career and maybe even as a speculation? **Q:** When did you write your first article on cryptocurrency? **Q:** What was the article about?

**Crypto Narrative** — **Q:** How has the crypto narrative evolved during your time in the space? **Q:** How has your relationship to the industry changed in that time?

## BOOK OVERVIEW & PROCESS

**Process** — **Q:** What was your process like for writing this book? **Q:** How long did it take you to write it from when you started on the book proposal to when you finished the final draft?

**Research** — **Q:** How many people did you interview for the book? **Q:** How did you keep track of all that work? **Q:** How much of your research for the book came upfront and how much was interspersed during the writing phase? **Q:** Have you considered making any of your interviews or other source material publicly available?

**Writing** — **Q:** What did you enjoy most about writing the book? **Q:** Do you have a favorite chapter?

**Inspiration** — **Q:** What other books did you read in preparation for writing this one? **Q:** Did you have any particular book in mind as a template for what you wanted yours to be like?

**Substance & Timeline** — **Q:** How do you explain to people who haven't read the book what it's about? **Q:** Who is this book for? **Q:** What were your favorite parts to research and/or write?



## THE PEOPLE

**The Characters** — Q: What was it like dealing with all the different egos and expectations of the people you were writing about? Q: How did you try and ensure that the story you put forward in the book is accurate?

**Vitalik** — Q: How much time did you spend with Vitalik as part of your research for this book (both direct and indirect, through prior interviews and stories)? Q: You seem to have a particular soft-spot for Vitalik, is that correct? Q: What endeared you to him? Q: What impresses you about him the most? Q: How would you rank him in terms of his leadership capacity? Q: What do you think is the biggest misconception about Vitalik?

**Ethereum Culture** — Q: Where does Ethereum culture come from? (fashion, memes, etc.) Q: Why has no other base layer been able to replicate it? (Sergey Nazarov memes)

## ICO CRAZE

**Legacy of the ICO Craze** — Q: What has been the legacy of the ICO craze for Ethereum, its community, and its founders? Q: In what ways does the platform continue to be hampered by this legacy? (e.g. how far back have the events of 2017 & 2018 placed Ethereum?)

**Regaining Faith & Prestige** — Q: What does Ethereum have to achieve in order for it to regain the prestige it had during this ICO boom (e.g. world computer)? Q: How did this period impact faith in cryptocurrency as a whole?

**Founders Unfairly Profited** — Q: How would you respond to the accusation that folks like Vitalik and other founders unfairly profited from the over 70% of ETH that was pre-mined by the founders?

## MORE QUESTIONS

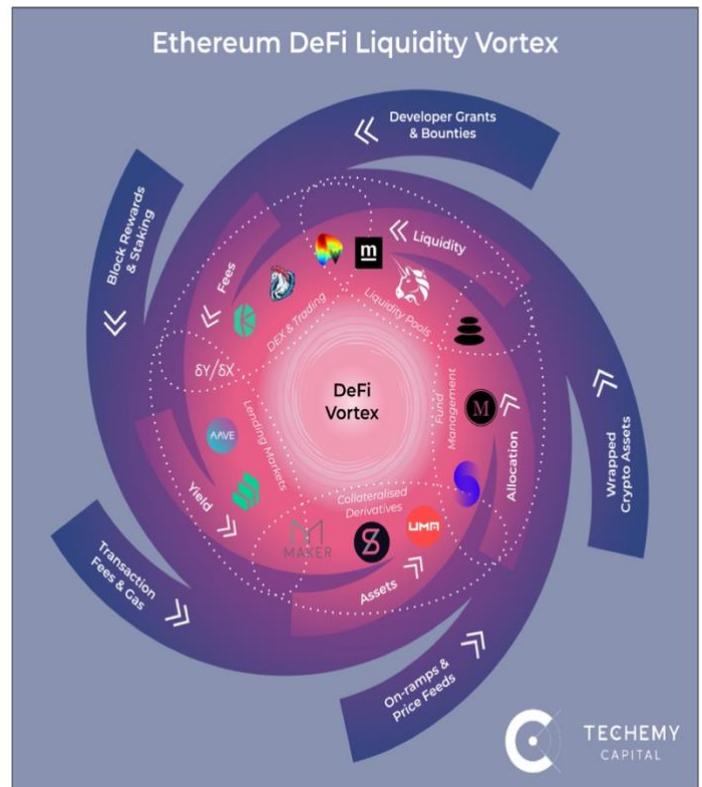
**From Web3 to DeFi** — Q: Would you say Ethereum is at an inflection point? They transitioned from Web3 to DeFi... Q: Do you ever wonder if blockchain is a technology in search of a use cases, and that the transition from Web3 to DeFi is an expression of that?

**Camila's Interest in DeFi** — You've left Bloomberg to basically work in DeFi. To me, this signals a significant belief in the future of DeFi. Q: Can you explain DeFi to us? Q: What projects are you most excited by? Q: How does DeFi stop being a niche sector for speculators?

**Failed to Gain Traction in Developed World** — Q: Why has cryptocurrency failed to gain significant traction in the developing world, like Argentina?

**How Decentralized is Ethereum?** — Q: Now that the dust has settled, how decentralized is Ethereum really?

**Decentralization: Buzz Word?** — Q: Would centralization (even temporarily) have helped as Fred Wilson argued? Q: Many claim Vitalik has stepped back, but how true is this? His opinion still has a great deal of sway, and he regularly steps in to offer it. He still headlines events, and he often gives away money etc.



**Eth Killers** — **Q:** What do you think about “ETH Killers?” **Q:** Ethereum does have the first mover advantage and the large developer base, but isn’t it still premature to say it has won? After all, it still hasn’t been able to scale. **Q:** Also, while network effect is important, couldn’t the rise of a killer app on another platform totally change the playing field? **Q:** What would happen if say, Epic Games decided to use Cardano to track video game assets, for example?

**Crypto Media** — After the 2018 crash, we saw a rise of interest in BTC and BTC related media. During the bubble, I’d say that Laura Shin’s podcast may have had the largest audience or was the podcast that most people wanted to get on. Afterwards, I would say that it became shows like Peter McCormick’s or Anthony Pompiliano, who seemed to pivot from “crypto” to Bitcoin. **Q:** How has the media landscape changed as a result of the crash? **Q:** How did journalists’, users, entrepreneurs, developers, and investors’ perceptions of the opportunities change? **Q:** What do you think the next big opportunity for media companies in crypto is?



## CAMILA’S NOTE TO HER READERS

I don’t consider myself a computer geek. I don’t spend hours on end hacking away on my laptop. I’m also not into financial speculation. Watching it from a distance and writing about it, I love. Putting my money—and my stomach—through nauseating ups and downs, not so much.

So why spend years devoted to cryptocurrencies? The answer is at least slightly different for everyone I’ve asked this question to. For me, it’s about freedom. If you push me a little, I might even say it’s about revolution.

The first time I learned about Bitcoin was in 2013. I was living in Buenos Aires, reporting on the Argentine market for Bloomberg News. But I was more than reporting about it; I was also living it. As I wrote about double-digit inflation, the pesos I earned for those stories quickly depreciated. I started exchanging my salary to dollars as soon as I got it, until one day the president woke up and said, Nope! You can’t do that anymore.

Could it be possible that the government was able to ban the purchase of the US currency, something I’d been able to do with a click on my bank’s website? I went to check, and sure enough, the option to exchange pesos from my local currency account into dollars to deposit in my foreign currency account was nowhere to be found. One day it was there, the next day it was gone. The government was depreciating its currency with populist policies, and now it wasn’t even going to let me protect my own savings against its economic mismanagement. This was perfectly legal. It was the government doing it.



Who could I turn to? Around that time, a colleague in another office told me about some weird digital currency called Bitcoin, which Argentines were using to get around this problem. I decided to write about it. The people I talked with for my article had been living with some form of inflation and/or currency controls all their lives and so had their parents. They understood right away how significant it was to be able to buy a currency that's not controlled by anyone and, therefore, can't be stopped or seized. Its issuance rate was dictated by algorithms and computer code, not by the whims of politicians and central bankers.

I thought this innovation was incredibly powerful and continued to watch Bitcoin and the growing cryptocurrency market until, in 2017, I got a chance to write about it again. By this time, I was based in New York, still reporting on markets with Bloomberg News, and noticed that crypto was heating up. I started covering this strange market, at first sporadically, but as prices kept climbing, and more tokens kept getting issued, and crypto startups were raising millions in seconds, and everyone from celebrities to fund managers to CEOs was talking about it, it was soon consuming most of my time. By the end of the year it was clear we were witnessing a full-blown bubble. One of the most fantastic speculative manias the world had ever seen, and I had been privileged to cover it at one of the most respected financial media organizations.

At the end of 2017, when I took stock of what I had just witnessed in crypto, I thought, this needs to be permanently documented. From an early age, my dream had been to write about the real world with the drama and excitement found in fiction. I set out to find the best story to tell in crypto. I found that, while some great books of the kind I wanted to write had been written about Bitcoin, there was no history of Ethereum, the second-biggest chain, which had fueled much of the craziness of the past year. More important, Ethereum was unique in that it tried to take blockchain technology, underlying Bitcoin, even further than what the original cryptocurrency had. Bitcoin wanted to be peer-to-peer money. Ethereum wanted to be peer-to-peer everything. It wanted to be the "world computer," behind a more decentralized, freer world. Even if it failed in its ambition, the innovation in itself and the frenzy it caused were book worthy.

That's how I set out to write the first book on the history of Ethereum. To write it, I started with interviews with the small founding group of this network, the original cofounders—although you will now read there's some contention around that term—including the creator of the platform himself, Vitalik Buterin. From initial conversations, I established the basic chronology of how Ethereum developed, the major milestones and themes. Then I sought out the protagonists of each major stage of the project, those who saw its history unfold firsthand. They led me to contact others closely involved, who led me to talk with yet others. Then I went back and talked with many of them again. That's how



after two years of work, with roughly six months focused on research full time, I compiled more than one hundred interviews, and many more hours of recorded conversations.

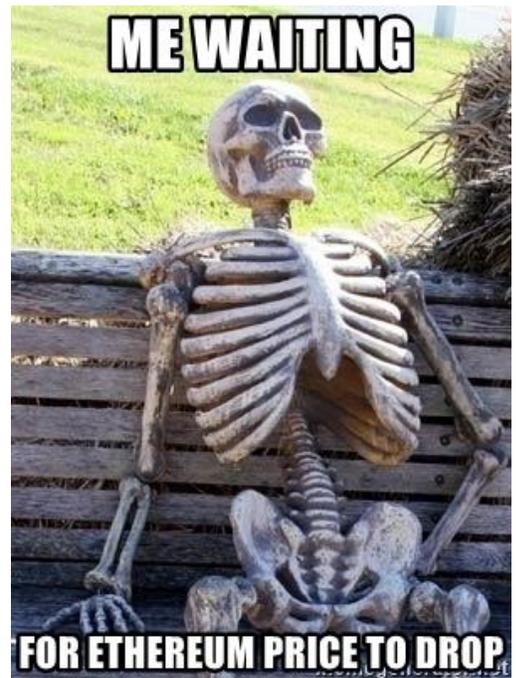
I also tried my best to follow them wherever they met. The Ethereum community lives all over the globe by design, so conferences and hacking contests are especially important as they're the few times during the year where many see colleagues and fellow Ethereans in person. At the dozen or so events I attended in the United States, South America, Europe, and Asia, I got a chance to meet even more people and get a better sense of what the broader community looks like, from what they talk about to how they dress and party. In other words, I got color—and they're a colorful bunch.

Some of my sources were also generous enough to share their emails from the time, pictures, chat logs, and recorded conversations. In addition, I relied on other primary material, such as archived websites, blog posts, and videos.

My goal with this research was to reconstruct Ethereum's history as accurately, and as close to reality, as possible. Everything I narrate is based on interviews with people who were there and materials from the time. I haven't reconstructed or condensed scenes for dramatism. The closest elements to fiction are dialogues, which I crafted from how those involved in these conversations or events remember they happened. All of the characters in the book are real people, and the names used are their real names. I didn't create composite or fictional characters. In only one occasion, I accepted a request to use a pseudonym, as it was a minor character and excluding his name didn't impact the documentation of Ethereum history. It is disclosed in the book.

One of the biggest challenges when writing this story was to decide on a single version of events when those involved remembered it in different ways. This was especially difficult when there wasn't supporting material, other than interviews. On those occasions, I went with the account that was shared by most participants, and the one that, based on my research, made the most sense. Readers will have to trust my judgment on those few cases. I did my best to make those decisions responsibly.

Of course, enthusiasts will hopefully enjoy learning even more about the network they support and work on and get a peek at how it developed from its very early days. But if you're a non-techie person like me, and even if you had never heard of the word "Ethereum" until maybe just now, this book is for you. My intention is that anyone, anywhere, will be able to pick this up, without prior knowledge of blockchain technology, and be captivated by a fascinating story: an idealistic hero, his band of misfits, and the challenges they face to make their incredibly ambitious dream a reality.



By the final pages, I hope you will have learned more about this dream, about how this army of hackers is building an alternative to the way the world works right now, that is, concentrated in the hands of a few powerful entities. They're seeking to put that power into the hands of individuals, so that people can have greater control over the things they own, from assets to data, and more freedom to use those things in the ways they choose—that's what I meant when I said cryptocurrencies are about revolution. I hope you will also have learned about this technology, which I believe is here to stay and will be increasingly prevalent in the future.

## QUOTES

"Vitalik was only twenty years old and he may have looked like any other young geek in his worn jeans and faded T-shirt covering his rail-thin frame. But few people his age ever have to face what he did that day. He was now responsible for deciding the fates of the men who had left everything to make his idea a reality, and the future of a tech project that was set on raising millions in a legally uncertain sale. He worried about them, but, most of all, he thought about what was best for Ethereum. Stephan saw Vitalik hug a soft, red ball the team kept outside as he sat on the balcony, softly rocking back and forth, as he thought about what to do next. After what felt like about an hour, he came back inside and everyone gathered around him. "Ethereum will be a nonprofit and open source project" is the first thing Vitalik announced. "The eight founders will always stay founders and they'll get everything that's due. All your back wages, and all your ether. Going forward there will still be a leadership team of eight. This leadership team will be: Gavin, Jeff, Mihai, Joe, Anthony, Stephan, Taylor, and myself." With that, he had effectively removed Charles and Amir, and promoted Stephan and Taylor. Amir was out because the team didn't think he had enough commitment to the project. And Charles? Well, even if he ultimately wanted the best for Ethereum, he'd lost the support and trust of the rest of the team. Anthony stayed on but his vision for how Ethereum should be developed was crushed. Joe was already thinking about leaving Ethereum to run the for-profit company building the application layer that he envisioned."

— Camila Russo



# What is Decentralized Finance?