

FINTECH ONE-ON-ONE PODCAST 360-LAURA SHIN

Welcome to the Fintech One-on-One Podcast, Episode No. 360. This is your host, Peter Renton, Chairman and Co-Founder of LendIt Fintech.

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Before we get started, I want to talk about the 10th Annual LendIt Fintech USA event. We are so excited to be back in the financial capital of the world, New York City, in-person, on May 25th and 26th. It feels like fintech is on fire right now with so much change happening and we'll be distilling all that for you at New York's biggest fintech event of the year. We have our best line-up of keynote speakers ever with leaders from many of the most successful fintechs and incumbent banks. This is shaping up to be our biggest event ever as sponsorship support is off the charts. You know, you need to be there so find out more and register at lendit.com

Peter Renton: Today on the show, I'm delighted to welcome Laura Shin, she is the long-time journalist in the crypto space, was actually the first serious journalist to actually go fulltime covering crypto, she's also the host of the Unchained podcast and most importantly, the author of a new book called "The Cryptopians: Idealism, Greed, Lies and the Making of the First Big Cryptocurrency Craze."

It's basically a story on Ethereum, it sort of takes us through the history of Ethereum from the very , very beginning and some of the milestones along the way, it reads more like fiction than non-fiction because it's such an interesting saga with lots of conflict and twists and turns along the way so we talk about some of that in this conversation. You know, Laura also provides some of the background to the book, she also provides her thoughts on where crypto is going and what it really means for the rest of the financial world. It was a fascinating conversation, hope you enjoy the show.

Welcome to the podcast, Laura!

Laura Shin: Thanks for having me.

Peter: Why don't we get started by giving the listeners a little bit of background about yourself and just maybe if you could weave into the background sort of how you first got interested in crypto.

Laura: So, I've been a journalist for over 20 years and I had covered a whole bunch of different things, but in 2015, I was covering personal finance and I was, frankly, like a little bored and my editors at Forbes, I was at that time a contributor, I was just a freelancer, they said hey, we have this idea to do a Forbes Fintech 50 list, do you want to head up the list with another reporter. And so, she and I decided to do this together and we divided the list into categories and I took the category of digital currency and just became completely obsessed, that was seven years ago, it'll be seven years ago in like two weeks so it's been the fastest and most fun seven years of my career. I just kind of became very obsessed with crypto and yeah, just kind of could not satiate my curiosity about it, people in crypto often called this "falling down the rabbit hole" and that was definitely what it was for me.

For a brief period in there, I was a senior editor of Forbes and at that time when I was hired they finally told me I could cover crypto fulltime and I didn't have to write any more personal finance articles. I also launched my podcast in 2016 and I actually owned that from the beginning because I was a freelancer at Forbes at that time that I started it, even though I started it with them.

And then in early 2018, someone who was helping me with the podcast told me that with the downloads that I had, I could charge X amount for sponsorships on it and I had had no idea because, you know, she was saying, well, this is what the other podcasts are charging and you have way more downloads than anybody else. So, that made me realize I can quit this job at Forbes and I will then keep doing the podcast, but then spend the rest of my time working on a book and that is how I published this book which came out...it's a little over two months ago now and my life has been a complete whirlwind ever since. (Peter laughs)

Peter: Right. We're going to get into the book in some depth here. I've read it and it really is a fascinating, fascinating read, but maybe first, I know we chatted actually right around that time in 2018 when you were about to jump off into becoming really an entrepreneur more than just a journalist. So, what was that sort of leap like for you, how was it kind of ... and I presume maybe you can also talk about did you own any crypto at that time, you've been covering this for a while, you could actually have done very well for yourself, but...so tell us a little bit about that and the leap into entrepreneurship.

Laura: Yeah. So, when I worked at Forbes, there was a period where I owned Bitcoin and Ether. Forbes has a policy that you cover something that you own that you can just disclose it, but then when I left, I wanted to be able to write for any publication that I wanted to and many publications have a stricter policy then where they would not let you cover something that you own. So, I sold my Bitcoin and Ether, I also gave some away and donated, but basically, I haven't looked back, writing is the most important thing to me, especially as I love crypto, it's definitely less important to me than being able to write for any topnotch publication I'd like to write for.

Peter: You've seen people that you've interviewed and talked to that were struggling financially, now they're billionaires, right, so that's.....

Laura: Oh, yeah. For sure.

Peter: That must be interesting. (laughs)

Laura: Yeah, except that even when I did buy a little, like journalists definitely compared to business people, they just don't make anywhere near as much money so the amount that I put in, even now if I kept it, wouldn't be as wealthy as any of them (laughs) because I didn't own that many.

Peter: Right, right, got it. (laughs)

Laura: But, anyway, in terms of the entrepreneurship, I actually have worked for myself for most of my career. I have freelance to just probably, I don't even know, it's like maybe 60/70% of my career,

maybe 80% now, I really don't know. I just, for various reasons, I don't have the kind of personality where, you know, I really like working for others so, yeah, I just have actually mostly worked for myself. So, when I quite that job at Forbes, I'd actually only been there for seven months, I worked at Forbes total for roughly five years and most of the time it was just freelancing for them and, you know, it was just a small sliver of time where I was fulltime.

So, making that shift actually wasn't that difficult, it's just that now everything's so much bigger, the business is bigger, I've a lot more going on, I have all these different employees which when I was a freelancer I always, not always, but essentially towards the later years I might have had one assistant, just part time, but now I have a lot more than that. I recently had to hire to some personal assistants because I am really struggling to keep up with everything so, yeah.

Peter: Right, right, understood. So then, before we dive into the book, I'd like to sort of take a step back and get your perspective about...you're deep in the weeds into the crypto world, but you're from the sort of traditional finance world and so I'd love to get your perspective on what do people outside of crypto...what's the biggest misconception? I'm particularly interested in those in banking and traditional finance, what do you think is their biggest misconception today?

Laura: So, this is just a general misconception, I don't know if it particularizes the finance world, but it might be. It's that crypto is just full of illicit activity and it's only for criminals and stuff laying far and away, that's probably the number one thing that I hear that is actually really false and incorrect. The statistics show that, at least, for the year 2021, crypto crime accounted for 0.15% of all crypto transactions whereas in the traditional financial world it's something like 2 to 5% of all transactions so, you know, as an order of magnitude different. I hear, time and again, that people think that it's only for criminals and, I mean, even in mainstream publications they will see this and publications have just huge readership and, you know, right on the front page of the website and it's surprising because the actual statistics show the exact opposite.

Peter: Interesting. So then, you decided to write a book, why did you decide to focus on Ethereum, obviously there was the original Bitcoin story, Ripple, Litecoin has an interesting beginning, I mean, what was it about Ethereum that you decided you really wanted to dive into that story?

Laura: So, when I went to write the book, I actually didn't set out to write a history of Ethereum so I started working on that proposal maybe like in March 2018 and we had just come through that initial coin offering craze of 2017 and early 2018, actually it lasted long after that. But, I'm just saying, there was a bubble in terms of the prices that peaked in January 2018 and at that moment I just knew I had lived through something historic.

You know, just in my own life, if I looked at how my own life had changed, I could feel that there's something new and different that happened and I had had a front row seat and the question that I wanted to answer with my book was, how did that happen, how did that craze happen? The initial conception of the book was actually quite different because I even have this whole Coinbase element, but then when I was actually done on my reporting, when I went to write it, I realized, oh my gosh, if I include all these Coinbase reporting then the book is going to be like 800 pages.

Peter: (laughs) Right.

Laura: So, I felt that Ethereum was really the crux of , you know, what was new and what enabled that initial coin offering craze and so that's why the book reads mostly as the history of Ethereum. At the end, when the initial coin offering craze happens then, of course, it kind of opens up into a few other story lines, but, yes, really Ethereum was the catalysts and so that's why it's 75/80% of the book is about Ethereum.

Peter: Right, right.

Laura: And, by the way, you know, Ethereum is the second largest crypto by market cap, it is clearly the leader in terms of attracting developers. There are some amazing statistics about how...when developers tried to work in Web 3, as it's now called, 20 to 25% of them will work in Ethereum which is crazy and Ethereum developer ecosystem is four times as large as the second largest and there's all these different blockchains that are trying to compete with Ethereum. So, it's just a leader in so many ways and Ripple and Litecoin have not had anywhere near the success, they're really, frankly, people might call them like "ghost chains", meaning they're chains that like, yeah, they have large market caps, but there's no real meaningful economic activity.

Peter: Right, right, okay. So then, when you were writing the book who did you have in mind as the reader and just as sort of preface, it's not a technical book, like you don't need to be an Ethereum expert to understand pretty much everything that goes on in the book, you explain some things when it does get a little technical. So, who did you have in mind as the reader?

Laura: Well, actually, it's funny because I can tell the way you're phrasing this, you're thinking of somebody alive today, but, actually, I was thinking of people a hundred years from now. (Peter laughs) I was thinking this is a historical moment and I want people to know what happened and I want people in the future to look back and be able to understand what really brought this technology alive so that's actually what I was thinking about. I was thinking about people in the future and part of the reason also that I say that is, you know, I have a podcast where I invite people in the crypto world to come on my show and I interview them. And so, one element, you know, one ingredient that's necessary to do the podcast is access and, as I'm sure you're well aware, the way I wrote the book, I did not let that factor into the way I wrote anything.

You know, if something happened, even if it didn't make somebody look good, if it's accurate, if I can verify it then yeah, it's going to go in the book and I'm sure there are certain people I've lost access to, but I'm just not going to let it bother me. I wanted the book to be as good as it could be, but the sort of secondary person shore is an everyday person. I definitely did not want to write something that was only for crypto people and so I actually had my, like real life friends, read one of the first drafts of the book and they are people who definitely don't know anything about crypto and they gave me invaluable feedback. You're right, there are so many technical things in the book and that part, they really helped improve, frankly, you know, because they would tell me when they were confused and things like that .

They told me things like every time you use an analogy it was extremely helpful so then I went back to it and I added a ton more analogies.

Peter: Right, right and it really is. It's like a...it's a gripping story, in some ways it almost reads like fiction because there's just some of these things happened and it's just crazy, particularly in the early stages where it just felt like it wasn't a done deal, like Ethereum was going to make it and so, I mean, did it feel to you, when you're sort of looking at it, like it's a real story, it's not just a recounting of history. It felt like, to me, it almost had a fiction feel to it, was that your intention?

Laura: Oh, yeah, yeah. When I went in, I didn't know that, but once I had the reporting then it was very clear that this was a very dramatic tale, there was a lot of drama, there were all these sagas, there was a lot of conflict, there were a lot of moments when it didn't look like Ethereum would make it. On top of that, by the end, I suddenly realized like oh, these years that I chose to focus on, they ended up being a coming of age story for Vitalik which I didn't know when I went into write it so there were just so many elements, yeah, it just ended up being a very classic story. You know, one thing I will say is that I remember, early on, my editor and I talked about how we wanted the book to be about the people and not like kind of a drier technological thing.

Peter: Right.

Laura: And so that's why we actually chose this title "The Cryptopians," we did actually look at a number of other titles that didn't kind of highlight the fact that this like about people, this, we felt, was going to kind of just underscore that and then I like the fact that, you know it's like a made up word, right, but it's a made up word for two other words that are common which are like utopian and dystopian and you don't know which one is it (both laugh) exactly, so.

Peter: Great. And so, you mentioned the Vitalik, Vitalik Buterin who's really the...it was his brainchild and it's truly interesting in the book because you start...I think he started when he was like in high school and talking a little bit about what it was like then because he was pretty young when he, and he's still very young obviously, but tell us a little bit about him. I mean, he comes across in the book, you know, he's certainly an evolving character, but someone that's pretty socially and relatively naive and you kept talking about how people were trying to manipulate him. Tell us a little bit about your sense of who he is and how he has grown, whether it was really his ingenuity that sort of has been most responsible for the success of Ethereum.

Laura: So, Vitalik is, to my mind, a very kind of pure person, very idealistic and definitely in the beginning of the book he is very naive so I actually had gone back to his childhood and he's had to talk a little bit about that and so people get his insight. This is someone who really did not have social skills and he came up with the idea for Ethereum when he was 19 and he sent the white paper out to several friends on the day that Bitcoin crossed \$1,000 for the first time. So, there was this sort of like magic in the air where all these crypto people were having these feelings of oh, my gosh, we can make money from this and you know, they were people who may have bought Bitcoin at \$1 and now, they had \$1,000X there as initial investment.

And so, when they saw Ethereum they really felt like oh, you know, we can make money here and Vitalik, he doesn't have that kind of character, he had this very idealistic notion about building something decentralized, for the people and, you know, this leads us to many of the early conflicts where there are people that are kind of more business-minded or you could even say self-interested and they and the people like Vitalik which mainly as the other developers, they butt heads a lot and there is always conflicts between the business guys and the developers or the devs and he could not see when people were trying to manipulate him. And countless people told me about how.....because he's so conflict-averse, he could never say no to anybody and so, what people would do is they would just kind of like hang around him a lot and like just be talking to him and because he couldn't say no, they would basically get their way and a lot of people felt that Vitalik couldn't even see that people have these ulterior motives.

So, the book just goes into kind of how this created a lot of the conflicts in Ethereum for years and by the end of...finally, he's kind of wizened up a little bit, but one thing that I would still say that was I do feel that that idealistic nature of Vitalik shows that he's a very evolved person. So, even though he was naive, you could say naïve, but because he was so pure and so evolved it was like he couldn't even conceive of anybody who would have less pure motives. And so, yeah, there just were, you know, a number of people like that who were older and yet they, in my opinion, were these less evolved characters.

Peter: What's his perspective on your book?

Laura: As far as I know, I don't think he's read it, I think he has mixed feelings about it because it does reveal so much.

Peter: It does.

Laura: But one thing I just wanted to answer your question about whether or not Ethereum success is due to Vitalik, you know, I wouldn't say single handedly by any stretch because, as you know, the main builders were actually these other coders and Vitalik is really more the visionary and certainly, you know, probably other coders could have coded it up, but in terms of actually getting it done and building it, it wasn't Vitalik who did that. So, in that regard, I do think it was a group effort.

Peter: Right, right. Looking into Crypto Twitter and particularly around sort of your book launch, I mean, obviously anyone who's out there, like you are taking a stance you get criticism, it's just part of having a profile these days, but there's been some pretty vicious criticism I think of you on Twitter, firstly, how's that been for you and why do you struck a nerve for some people. I know you sort of....you did reveal probably some things about people that weren't very complimentary, but tell us a little bit about what the reactions have been like.

Laura: You're really referring to a single incident which is that....so one of the characters in the book, Charles Hoskinson, said he was the founder of a new chain called Cardano, he told me and he's been...other people have reported that, you know, he said he dropped out of a PhD program when he discovered Ethereum or got, you know, involved. I did a very, very aggressive fact checking for my

book and so, you know, this is just part of the standard fact checking and I found out actually the schools that he attended both say that he was an undergrad and he was not enrolled in a PhD.

I have not found any school that has said that he was enrolled in a PhD and so he tweeted that my book was a work of fiction which I found pretty rich coming from him because not only does he appear to have lied about his education, but many, many, many people told me the stories, the kind of tall tales that he told them saying he was Satoshi Nakamoto or that he had been involved in Darbo or the army or had been in and blah, blah, the list just goes on and on. That's kind of people who have read the book, he will read about this because there's many of these tales and so I just responded to him saying hey, you want to rectify the difference between what you're claiming by your education with the schools say, and I think a lot of Cardano people were really upset that I revealed something that he appears to have lied about.

And so, I actually.... when you say, like I'm getting criticism, I actually don't think it has anything to do with me because a lot of these people will say that for instance, I'm a shill for Ethereum, okay, nobody who has read my book would call me a shill for Ethereum. So, it's very obvious they didn't read my book and they're just upset that I found out the facts or what appears to be this fact that he lied about his education and they're just worried about their Cardano holdings decreasing so I think that's basically it, but I really don't feel it has anything to do with me, it's just about them and their worries about their money bags.

Peter: Okay. So, you talk about sort of the running out of money piece and there were lots of challenges in the beginning and then there was this big hack, the DAO hack, which you write about extensively. So, maybe you could tell a little bit about what actually happened there and how someone was able to steal a good chunk of the total of Ethereum.

Laura: We're talking about the DAO hack, DAO is D A O, it stands for Decentralized Autonomous Organization and now there are many DAOs, but at that time, for some reason, they just showed the name The DAO. It was felt as a decentralized venture fund meaning that the DAO token holders would basically kind of vet these certain proposals that would come in front of the DAO and for any that they approve, the DAO would give that venture money and then when the venture began making money it would send some of the proceeds back to the DAO token holders. People were so enthralled by this idea, but when the DAO hack happened, maybe like about nine months after Ethereum had launched so it was a very new time in Ethereum.

It's amazing because, you know, I actually consider Ethereum difficult to use now and yet even at that time it was like way more difficult to use and yet it went on to become the highest crowdfunded project of all time and it raised \$140 Million and that was 15% of all Ether and then within the span of a few short weeks someone hacked 31% of the Ether in the DAO and so now, that malicious actor had 5% of all Ether. This was truly the only existential crisis for Ethereum, but essentially the community either just was really at a loss for what to do, they had multiple different options and as tech went on, they kept tapping to nix different options because they just weren't going to work.

Finally, they were left with what many people dubbed the Nuclear Option and because it was the Nuclear Option there were many in the community who felt Ethereum should not do it anyway. And just to give people a sense of why this wasn't a Nuclear Option you could sort of imagine a situation in which Apple's most popular app is hacked in the App Store so the Nuclear Option would be for Apple to do something risky to itself in order to save that app. That's basically what this Nuclear Option was for Ethereum, that Ethereum was going to do something risky to itself in order to save its most popular app which was the DAO.

And, yes, it did result in kind of the worst case scenario happening which is that Ethereum essentially gave birth to it's evil twin in the course of executing this Nuclear Option and that evil twin is now called Ethereum Classic. But, the upshot of all that, for the hacker, the hack essentially got erased on Ethereum, but the hackers' money was retained on Ethereum Classic, of course, it was worth a lot less because Ether Classic coins were worth yet less, but they still they had access to 3.6 Million Ether Classic even though they had been stripped of their Ether.

Peter: Right, right. This was called a Hard Fork, right?

Laura: Exactly, yeah, that nuclear option.

Peter: Right, right. And so, it was interesting to me, I was reading earlier this year that you actually figured out the person behind the hack and can you maybe, I know it's a pretty detailed story, but can you just tell us a little bit about one, how you figured it out and yeah, sort of the process there and you announced it maybe when you figured it out, you only announced it this year, right?

Laura: I announced it the day we published my book.

Peter: Right, okay, good move. (laughs)

Laura: Yes. I do think it helped drive some book sales which is great. So, yeah, this ended up being sort of like the meteor out of nowhere. Basically, I was in the last stages of editing my book and when you finish a book there are what are called three final passes with the publisher. And I was supposed to turn in the second to the last pass which at this point I was supposed to probably make maybe a hundred pages for the book or less. And one of my sources reached out to me personally and had been involved in the DAO and in rescue and he said, hey, the Brazilian federal government started an investigation into the DAO when the hack occurred what was then five years ago and by extension, they opened an investigation and to me because I was involved in it and they wanted to interview me and I thought I need a report to kind of exonerate myself.

You know, these reports can be a bit expensive so he thought he was going to use this information and he thought of me and so he got a discount and I credited this company, Coinfirm, in the book and we basically went over this report which contained the transactions that the DAO hacker had used to convert their Ether Classics since the Ether Classic was not very usable, not easy to turn into money into Bitcoin which was, at that time and still is today, the most liquid cryptocurrency. The thing is because everybody knew that those were the hacked coins, this person really only had one exchange

that they could use and it was an exchange that didn't take any personal identifying information, but because of that it also restricted you to trades of \$2,500 or less.

And so, the hacker was doing many, many, many conversions, you know, under that limit and we kind of followed the pattern of these cash outs and we noticed that they followed an Asian morning to night schedule. And the thing is that I had actually kind of followed through on an investigation that somebody else had started back in 2016 where there were some suspicious transactions that were identified. I interviewed all these people and I kind of looked into what was actually happening with those transactions, like there was the theory about what was happening and then I found out what was actually happening. And then I interviewed them all and the way I had written the book up until that point was that I explained why they came under suspicion, I explained what I discovered about what their transactions actually meant and then, finally, interviewed them and gave all their comments.

And so, I did not say anything conclusive about who did it, I just sort of left the reader to decide and just kind of basically show that I did the homework I finished this investigation I had then started. Well, when I got, you know, this new report I was supposed to turn in this second pass so I said to my publisher, can I have two more weeks. They were like, no, no, no, like this book is basically done and we'd actually already delayed it once for various reasons and so, you know, it was kind of absurd that I was saying I needed more time.

However, I sent the information anyway to another firm I had been working with called Chainalysis and oh, by the way, the one thing I just want to mention was the different people that I had, you know, kind of put in the book, the ones who had fallen under suspicion, they were all based in Europe. So, the Asian morning to evening cash out schedule did not match their online activity or their geographic location so that was, you know, to me just something confusing.

The other thing about the Asian morning to night schedule is I had gotten a customer service email from the DAO hacker, it was an email that they had sent to Shapeshift when they were kind of putting all their coins in the right places to execute this attack and I could see from their email that they were a fluent English speaker. It was very obvious because it wasn't even just like complete sentences in English, but it was in shorthand so it'd be like instead of saying I'm going to the grocery store, do you want anything, it'd be like heading to the grocery store, want anything, just another level of fluency.

So, I sent the information into Chainalysis and I had actually already gotten a ton of information from them for many, many other things in the book and they were not responding. And so, I forget for how long, I just kept hounding them and I just was like oh, my gosh, these people are never going to talk to me again, I'm completely harassing them, you know, and then finally they reached out and the attacker had sent those Bitcoin that they received through what's called a Wasabi Mixer which is a way of obscuring the trail of your coins. It just basically mixes your transactions with a bunch of other people's transactions and then on the other side, it's just harder to kind of, you know, follow the trail backward. Now, Chainalysis have the ability to de-mix, at least, some types of these transactions and so they followed the DAO hackers Bitcoins to four different exchanges.

Now, exchanges are where you get an account name, address, you know, etc. obviously, no private citizen, including myself as a journalist, can just call up the exchange and say, hey, whose account is that or like what's their name, what's their email address, but through a source I was able to find out that those coins were converted to Grin which is a privacy coin and which runs through a Grin node and that green node had the name grin.toby.ai and this person, I believe, was behind the DAO attack is somebody named Toby Hoenisch, toby.ai on his profile pretty much everywhere like Reddit, Medium, Twitter, GitHub, you know, you name it, that was the alias, I think I uncovered 16 of these.

The other thing is that we saw the IP address for the Grin node was also Hoenisch, it's called a Bitcoin Lightning Node which is a kind of layer on top of Bitcoin for T-transactions and Grin Node was named TenX and this person Tony Hoenisch had founded a company called TenX. So, once I had his identity which, you know, seemed quite strong, I went back and I found out what he was doing at the time of the DAO hack and he was very into the DAO. He identified flaws in the DAO, he reached out to the creators about this, they said, oh, okay, we'll fix this, but they didn't feel like it was urgent to do then he begins writing this blog post where he has like multiple exclamation points about these flaws and indeed, some of these flaws are what forced Ethereum to Hard Fork. After the hack, he was tweeting things that were pro letting the hacker keep their coins and Anti Hard Fork.

Peter: Oh, jeez!

Laura: So, you know, pretty much everything fit from end-to-end, beginning to end and by the way, he is a fluent English speaker and he, at that time, was living in Singapore, he may still live there, I don't know where he lives now.

Peter: Are the authorities...is there anything happening?

Laura: That would be for them to answer, but what I can say or what I do need to add here is that Toby did send me an email saying that he wanted to say that my statement and conclusion were factually inaccurate and then he offered to give me more details, if I wanted. I asked him for those details, but he did not respond and we sent him emails also for the Forbes article and there was no response to that.

Peter: Right, right, okay, okay. Moving on, you end the book in January 2018, it was really the height of the first bull run, was there a specific reason to end it then or why didn't you sort of take it a little bit further into the future or closer to today's time?

Laura: Yeah. Since I wanted the book to answer that question and power the initial coin offering phase happened and that was the climax of it then it felt like it was that moment to end the book, it just follows a natural story arch where there's building of tension and then you have the climax so that just seemed like a very obvious ending point.

Peter: Okay. Before I let you go, a couple of more things I want to ask you. There's a lot of talk in Ethereum circles about the Merge, I know you're very well aware of sort of the people and what's happening there. Can you explain what the merge is and why it's happening?

Laura: I'm sure you probably have more mainstream listeners of your show and the mainstream community is definitely much more concerned about the environmental impact of what are known as proof-of-work blockchains which are blockchains where in order to provide security to the network a lot of electricity is used and some of it is not clean. So, Ethereum currently runs via this, you know, proof-of-work consensus algorithm, it's called and they're switching to something called proof-of-stake which is much more environmentally friendly, doesn't use nowhere near as much electricity.

And so, what they've done is they already have this new proof-of-stake blockchain going, but there's no economic activity happening on it, they just wanted to have this period of people basically doing the staking which is part of this proof-of-stake where they deposit a certain amount in Ether and then they will earn interest in, you know, their kind of different levels of interest rate and how much Ether has been deposited to staking and blah, blah, blah.

But, anyway, the Merge is when they now move all the economic activity in Ethereum over to this proof-of-stake blockchain and the reason why it's so tricky is it's often been described as swapping out the engine in an airplane in mid-flight and when you think about it, it's not just the economic activity happening on Ethereum itself, but there's so many coins on Ethereum. There's NFTs on Ethereum, there is DAOs, other DAOs on Ethereum, there's like, you know, beyond the economic activity on Ethereum itself there's the other economic activity that they're supporting. So, it's a very, very tricky procedure, they are definitely taking their time with it though, they're being incredibly cautious, it was delayed yet again which a lot of people made fun of them for, but I think it just goes to show how careful they're being with it.

Peter: Right, right. And it is supposed to happen later this year, but not a guarantee we keep hearing. So, I want to end with just to get your thoughts on when you step back and look at sort of not just Ethereum, but crypto in general and, you know, how right now the impact on the financial system has been, I don't know, I'd say minor overall if you look in the whole scheme of things, but what do you think is the long term impact of crypto and how do you think it's going to play out?

Laura: I truly think that the number one biggest impact that crypto will have is in this kind of decentralized business model or into centralization and, you know, the way that I like to describe this is if you think about Bitcoin, you actually don't know what the market cap is right now, but it's probably near \$1 Trillion, somewhere in that ballpark and there's only a few companies in history that have achieved market cap of a Trillion dollars or more. Bitcoin did this without having a CEO or a board or hiring any employees and the way that Bitcoin achieved this was by having this coin at the center that was incentivizing people to do things that would help grow the network.

So, for instance, a lot of people have heard probably about mining and mining is, you know, this process by which people can win new Bitcoins, but the thing is when they do that they're adding security to the Bitcoin network. So, instead of Bitcoin having to like hire an IT department, it should just incentivizes people to add their computer power to the network and that makes it harder for anybody to kind of attack the network basically so the main attack, people will be concerned about is what's

known as the 51% attack which is where somebody commandeers more than 51% of the network or adds 51% of the power in the network and then tries to change some of the transactions.

You know, I can give like many other examples of like ways that either Bitcoin or other coins have been designed to basically have different people provide services to that blockchain without having to actually hire anyone to do it. I think we're going to see a lot more of this and I really think it's going to shake things up.

Peter: Okay. We'll have to leave it there, Laura, really fascinating chatting with you. Congratulations on the book, just really, really think it's such a fascinating story and I'll obviously be linking to it in the show notes.

Laura: Thank you so much, I really enjoyed this conversation.

Peter: To me, really one of the most interesting things that I think about Ethereum is Laura shared there, it's four times the number of developers on Ethereum than the next most popular blockchain and that, to me, is really why I'm so bullish. I am bullish and full disclosure, I own a few Eth, but I'm bullish on really the future of Ethereum and how I think, you know, decentralized finance, how it's really been built on Ethereum and it's going to be I think such an important part of the financial system that's why I think everybody should read this book to be able to understand sort of how it really came to be and what it means. It's a great story, it's a saga that takes lots of twists and turns along the way, but it's an easy read, you will come out of it with a better understanding of Ethereum and it's place in the finance world.

Anyway on that note, I will sign off. I very much appreciate you listening and I'll catch you next time. Bye.

(music)