



00:10

Thank you so much, Pierre, for taking the time and coming on the show today. I've been looking forward to this conversation. You are one of the most prolific voices in, in Bitcoin. You've been hanging around the space for several years now, which is a lot longer than, you know a lot of the other voices that are talking about Bitcoin these days, I know when you joined, you looked at maybe some of the the 2011 guys as the Oh, geez. But from my perspective, you're one of the Oh, geez as well. So it's great to have you. I'm looking forward to talking about Bitcoin and, and your story and things like that.

00:45

Yeah, sure thing. Thanks for having me on, Jake.

00:48

Yeah. So why don't we get started, actually, by going back to when you kind of first got introduced to Bitcoin? back in? I think it was 2013. Right. And just hearing how kind of your origin story unfolded?

01:02

Yeah, that's right. Although I think that it makes more sense for people. If we go back even further of When did I get interested in the topic of money, or monetary economics. And that was back in 2005. I was in high school, and started learning about anarcho capitalism, first on the politics side, because I stumbled onto a Wikipedia page. And then from there, Austrian economics, Ludwig von Mises, and Murray rothbard, and 100%, reserve banking, and gold is money. And that's where I really formed my views on what is good money, what's bad money? What are the consequences of bad money? And that was, so that was way before even Satoshi had started working on Bitcoin, which we estimate to be about 2007. And it was before the financial crisis. But every so you know, I wasn't until like stacking silver back then. And I think that it helps folks to know that because they think that I'm obsessed with Bitcoin, when really, it's, it's not so much that I'm obsessed with Bitcoin. I'm obsessed with sound money. And when I heard about Bitcoin, the first time around, I didn't realize it was sound money, I didn't even look into its monetary policy. I just thought it was internet money that you know, like, like, wow, gold, except decentralized, that is that anyone can create it, and there wasn't really any serious scarcity to it. It wasn't until I heard about Bitcoin, the second time that I actually heard that there were only going to be 21 million Bitcoin. And I had theorized that a money that had a fixed ceiling, in terms of quantity would actually be better than gold, because of Gold's, you know, at least 2% increase in supply every year. So



the, it immediately struck a chord with me, and it became clear to me that it was going to increase in value, because there wasn't really a way to have a better monetary policy than just having a fixed supply. And that's what threw me down the rabbit hole. And in the at the end of 2012, beginning of 2013. And so I started writing a few things, and started tweeting, although those tweets are gone now, because I deleted my Twitter account, you know, I think like in 2016, or something like that, and came back until 17. But in any case, when I did First, start reading, you know, it was very Reddit focused back then. The Bitcoin subreddit was really, I think, where the conversation was going on. And it was also in person because at my, my University, University of Texas at Austin, that's where I heard about Bitcoin the second time, and I heard about it in the context of a Austrian economics reading group called the Medici circle. And there were, you know, some Some legends there like Michael Goldstein, who were studying Austrian economics and who were going down the Bitcoin rabbit hole at the time as well.

04:45

That's a great introduction. And it does make sense to start earlier, like I think, like you did, talking about how you got into good money versus bad money in the first place. A couple questions for you on that point. If you could kind of briefly introduce what from your perspective differentiates good money from bad money? I think God be helpful for people. I like to, you know, I like to keep this entertaining and informative for people who are like really into bitcoin or really into crypto, but also sometimes ask some really fundamental questions that might be interesting to someone who's not yet so familiar. So that'll be helpful. And then secondarily, maybe, and maybe this is a part of that. I know you studied like, Keynesian economics, but then, you know, we're more so excited by Austrian economics, and maybe a couple of other types of monetary theory, if you could kind of compare and contrast those from like a very high level, that'll be helpful as well.

05:39

Yeah, absolutely. So on the first question of good money versus bad money, there's, there's different schools of thought on it. And I actually, I think that all of them have some truth to to their perspective, and they don't all capture the same parts of it. So one way to look at it is just as kind of a consequentialist perspective of, well, what money has positive effects on the economy, right, however you want to define that. So it's a very like utilitarian argument. And I think that that's not a great way to look at it. Because you're, you're it's very hard to tease out exactly cause and effect, especially if you're trying to look at aggregates of demand and demand and supply and a whole complex economy. So I'm very skeptical of that point of



view. Now, the other one is kind of the expectations point of view of a good money is the money that sets expectations, and then meets those expectations. And I think Bitcoin actually excels in that regard, where the the rules of the system are very well defined, and expectations are set very well. And not only are expectations set by the system, but because it's decentralized. The users themselves are a part of process are part of the process of setting expectations. And it's not like it's even more user driven than gold, for example, because with gold, you can have exoticness shocks, for example, the discovery of the New World, okay, but we found a bunch of new gold and it just floods the market. Or, you know, in the future, they're going to bring in a gold asteroid and mine it. So the, the Fiat system, they actually have, by design and by intent, maximum expectations, expectation, uncertainty. And I say that because otherwise monetary policy wouldn't work. If, if people knew that you were going to change monetary policy, then they would price it in, and then when you change monetary policy, nothing would happen. And so there's these weird feedback loops. Where in in the Fiat system, they have to have shock and awe and surprise the markets in order to be able to move the markets and to direct them where they want to go or manipulate them less charitably. So there's the expectations lens. And this is really important, especially with regards to the price level. So, for example, people will say, Oh, the problem with deflation is that if you have a loan, then your loan value is going to go up, and you'll never be able to get out of debt, because you can never pay off your loan due to deflation. And that's only true if you had a different expectation going into the loan. If you if you went into a loan, expecting to never be able to pay it off, like nobody would do that. So clearly, the problem with deflation is when it's unexpected deflation. And there's also the a similar effect in inflation, where people start expecting inflation and it causes it to accelerate. Okay, so back to good money versus bad money. I think that the well, another way to look at it is what wins in the market in the free market. So this is kind of the Austrian view of, well, whatever ends up getting Used as money as sound money. And so whatever is driven by free market process is sound money. So I agree with that. The problem is that we don't have a free market. And the government actually intervenes in the market quite a lot. And so it's, it's, it warps our ability to even define what is sound money or not, because now, it's not that the US dollar is sound money is that we don't know, because we don't know the alternative universe where the US dollar is not being subsidized by the government. And it's also the case that and this is a point that Nick Sabo makes, is that what's the point of economic analysis? like saying, oh, sound money is whatever the free market decides, if there's no universe where we have that free market. So there's, we have to accept as a premise that the government is going to intervene, and then we have to base our monetary



economics on that. So, the the the last piece, I would put as sound money, which is my strongly held view, it has to do with the monetary policy, first and foremost, and the credibility of that monetary policy. So by the monetary policy, I mean, what, what kind of supplier are is the monetary authority, saying there's going to come onto the market. And so with Bitcoin, obviously, that's very well defined, and the monetary authority is decentralized. And so the credibility of that, to me is, is pretty maximal. And there's not really any way to have more credibility or have a better monetary policy. And so that's what makes Bitcoin the the best money or the sound is money. And in that it always will be that way. And I don't think that there's within the world of monetary economics, that there's a lot of economists who hold that view, that it's purely about the supply. Although I think that if you look at the history of monetary economics, it all points in this direction. And and I think sayfudine and others are kind of bringing monetary economics to a post Bitcoin equilibrium, where we can finally agree that it has to do with supply much more so than anything else. Now. It does raise the question of why is it that the US dollar was able to have an advantage over gold? And, you know, we could say, well, it's because of government intervention. But I also think that it's, there's, there's an element to the credibility of the monetary policy, that is not a macro economic element, what actually a micro economic element of does the specific unit of money that I am receiving? Is it is its specific monetary policy credible? In other words, is this a real? unit? Is this authentic? And with with gold, you have to melt it down, you have to say it, and even even if it's real gold, it might be faded a little bit, it might be clipped a little bit. And then with with bank bills, kind of under the free banking system, you know, you have bills circulating at a discount or they counterfeit or they're not counterfeit. And really what allowed the dollar two made to to outcompete gold is a technology where you made it very expensive to counterfeit \$100 bills. And so it's really advancements in paper technology and anti counterfeiting and serial numbers. And then of course, computing and cryptography that allowed the dollar to be verifiable at a micro economic level. Such that even if it didn't have as good of a monetary policy, at a macro level as gold, it still had a better monetary policy than gold at a micro level of your ability to independently verify that you're holding a real dollar bill, and the cost of doing so. So now with Bitcoin, I think that that cost gets driven, even lower. Not only is it inexpensive to run a Bitcoin node, but it's also what you get from it, the assurances you get from it are orders of magnitude better than for example, being able to verify that \$100 bill is real, or that a bar of gold is real. The the confidence you have in your conclusion is far greater because of the cryptography? And not only do you have this level of almost absolute certainty at the micro economic level, running a Bitcoin node and verifying



your own transaction, you also have that same confidence at a macro level. Well, now you're able to verify the global supply of Bitcoin, which was something that you weren't even able to do with gold, and you certainly weren't able to do with Fiat. And so now, I would say that the what separates good money from bad money is can you independently verify the the money that you are receiving, and the total money supply of it of the unit? And and nothing surpasses Bitcoin on both of those?

16:46

Yeah, it's very interesting. I like how you come at the question from several different perspectives. And then what it seems to boil down to in the end for from at least my understanding, is, there's kind of like two primary factors, one macro, one micro, the macro being, can you have some degree of certainty in the supply for the foreseeable future? And so with the dollar, the answer is no, for gold? The answer is better, but still not totally. If we start mining asteroids, and things like that. And with the Bitcoin, the answer is, yes, there's only going to be 21 million. So Bitcoin kind of wins there. And then on the micro level, your theory as to why the dollar sort of overtook gold was that it's easier to have certainty, again, it comes down to kind of like certainty or predictability in the macro case, but you can kind of know, in the case of the dollar, that \$100 bill is legitimate, versus gold is a little bit more complex to verify to, you know, a strong degree of certainty. And Bitcoin, like you said, you know, wins on that level as well, where it's undeniably verifiable. So is that a Is that a fair kind of short synthesis of, of where you kind of land with that?

18:09

Yeah, that's right. And then you had another question about Keynesian economics versus Austrian economics. And there, I think that it's part of it is kind of a there's two parts to to that debate. I think that one is the political debate of what it is. And it's about, you know, libertarianism versus statism. And should the government be intervening at all? The other question, though, is one of methodology, which is, how should economists analyze the world? Or how should economic theory be developed? And the Keynesian and neoclassical economists tend to go towards? Well, you know, we got to run experiments, and we got to use the scientific method and empiricism. Whereas the Austrians favor that this is, as a social science, it's not really appropriate to use empiricism, because we're talking about things that could be looked at logically. And, you know, in the same way that math is looked at logically rather than empirically, and that we can derive conclusions from that. So, you know, that's still an ongoing debate. What I found interesting when I first started learning about this is that the, in



the school system, they don't see it as a debate. In fact, they don't even they're not even aware that there's different points of views on this. So they don't really not only do they not teach it, or argue about it. But if you ask an economics professor about, you know, Hey, could you describe Austrian economics to me, most of them will give you a blank stare, that even at a PhD level, they don't really learn about it. And so I had to learn about it on the internet. And I know that that might sound like Well, you're gonna come up with some pretty outlandish crank theories if you just do your research on the internet. But there's kind of a sociological argument for why they would not teach it, they would not teach you about it in school. And that is that the education system is geared towards amplifying government propaganda, not really about discovering a truth about the world. So for the Austrians, I think that the the main thing that, to me matters for this argument of empiricism versus what they call a priori logic, is are humans, so individually unique, that we can't generalize about them? And that, I think it's actually a weirdly, like, modern thing to think that humans could do anything. And thus, we can't have any principles about what humans can or can't do. Compared to like, if you actually study history, and you start seeing the patterns, you're like, Okay, well, humans kind of have a fairly set range of behaviors, and there's not really anything new happening today. We just think there is out of ignorance, not because humans are rapidly evolving or changing.

22:21

Yeah. Do you think that there's any, any? Like, is it reasonable at all, to think that humans may fundamentally be changing in terms of how we could interact with something as as fundamental as money due to sort of a shift, like a major shift in the history of humankind, that one could argue, is underway as a result of sort of digital technology? And maybe this information or knowledge age, as opposed to kind of the industrial age which followed the agrarian age?

23:00

Well, I guess, the Yes, the the principles remain the same. And it's the same thing with the agrarian age versus the industrial age. You know, if you look at Okay, well, what what's the efficiency of, of someone manually, you know, digging dirt, to plow a field, or using a horse to plow a field, versus the efficiency of them using a tractor to plow a field. They're still plowing a field, you know, it's, it's really the, the, the fundamentals haven't really changed. And that's where, you know, I think that with Bitcoin, okay, well, what happens when people have a better money? Well, to me, they just they hold more of it, and the general price level relative to money holding goes



down. And, you know, we call that deflation. And that's, so, you know, I think that it'll modify behaviors, but the fundamental principles of it will remain the same. And so I feel like that's what has allowed, you know, what I wrote in 2013 and 2014, to have withstood the test of time is because when I wrote it, I wrote it out of respect for the general principle, rather than trying to fit some kind of new theory or applies or create a new theory to accommodate Bitcoin, rather than applying the existing monetary economics that I was familiar with, from the Austrian School. to Bitcoin. And so, you know, the it'll seem new to us. But I think that, you know, people saving money is is pretty timeless.

25:15

Yeah, I don't disagree. I was just curious to hear your perspective there. I think some things are changing. But certainly some principles will stand the test of time, at least for the, for the foreseeable future, I want to talk about an interesting decision that you made. And maybe it wasn't like, a one moment or one day thing, but you talked about on another podcast, and I just want to hear you kind of elaborate on it, you just loosely referenced it. And that is, you know, and you referenced it again, here that the in school, you know, that they just teach Keynesian economics, even PhDs couldn't really tell you much about Austrian economics for the most part. But you kind of stumbled upon this, this Wikipedia page, like you mentioned, and then sort of started going down and learning more about Austrian economics. And you mentioned in this other podcast, how it sort of occurred to you at that point that maybe taking for granted that everything you learn in school is true, is is sort of a false assumption. And you had this sort of decision to make whether you wanted to kind of shut it down on these extracurricular kind of searches for knowledge and learning through the internet. And sort of have a what probably seemed like it would be an easier existence thereafter, or if you wanted to kind of continue to learn more outside of what the system was telling you. And, and have to kind of navigate that, well, you know, the more you learn, the more you have to navigate the differences between the two. And so it was maybe sort of a bit of a tough decision. I'm just curious to hear sort of how you navigated that, and maybe how you reflect upon that, that choice now.

26:53

Yeah, I guess. I, the decision was more subconscious than conscious. I think that while I, I struggled with it, I thought about it. It's not like I laid out the pros and cons at the time. But rather, I just kept going in that direction, I couldn't help myself. So maybe it's more of just my my nature. And, and the other thing that made it easier was that, at that time, I I'd





had schooling in France and had had schooling in the United States, and saw the kind of self serving arguments that that were, you know, kind of nationalistic about both both parties. And the other, so that that made it easier to kind of just question the schooling in general. But the other part is that the, you know, the, the the postmodern, like, critical theory, part of a French schooling of, well, you know, everything's a social construct. That's kind of self defeating. Because it's, it becomes self referential. And so it makes it easier for me to, or it made it easier for me, I think, to, to question what the school was teaching me when they were actually teaching me to question what the school was teaching me. But they, they were probably hoping that it would go into a different direction, then than it did.

28:53

Right. So. So one thing that I don't know, if I've mentioned explicitly so far, for those who don't know, you co founded the, the Satoshi Nakamoto Institute, or maybe it's just called the Nakamoto Institute, right. And so that's basically like I was, you know, surfing through the website, and you've got a bunch of correspondences of his and quotes and things alike, and also some really good reading recommendations that I actually want to dig deeper into myself and read some more things from from kind of older, monetary theory type people. But I think, you know, there may be no people who are more kind of familiar and researched on Satoshi than us. I'm curious to hear. First of all, just like sort of an appreciation for Satoshi and how you think about him, and then maybe more specifically, aspects of his sort of legend that and who he was that you think or is, or you know, the group or whatever it might be, that you think are sort of under appreciated by Not just like, you know, overall, like the world, but actually people who do believe strongly in Bitcoin, like appreciate Satoshi, but they're still under estimating maybe this one or two components of what he did and who he was.

30:14

Yeah. So, first, I'd say that, you know, to me, the founder of the Nakamoto Institute is Michael Goldstein. And he took me and others along for the ride. And he is he's the one who put together the Satoshi archive itself. And so he is far more familiar with satohis writings than I am. In terms of how I think about Satoshi. I, I think that it's best for folks to not think about Satoshi in general. And that it's really it's about the decentralized system itself. And that is much bigger than Satoshi. Now, I don't want to, you know, minimize satohis role, obviously, and how important it is that he created Bitcoin. But in terms of, for example, bitcoins governance, I think it has been a problem of people using arguments from authority of well, Satoshi said this or Satoshi said that, because it goes back to what I was talking about





with regards to expectations earlier. If people take what Satoshi wrote as setting expectations for what Bitcoin is, they're in for a huge disappointment, because empirically, that's not what sets the expectations in Bitcoin. It's the code itself, what is written in the software that you are running, that is the actual expectations. And what Satoshi said, you know, is, is tangential to that, and it's more about satoshis. So, you know, if we say that the code is law, then what Satoshi wrote might be old commentaries on old laws, laws that might not even exist anymore. And it's, you know, we could read those commentaries and have have thoughts about their their applicability today and how much for thought they had or how he didn't see something's coming. But to me the, the, the there's two things that we don't value enough about Satoshi. One is that Satoshi wrote the software wrote the code before he wrote the Bitcoin white paper. And so to me, the Bitcoin white paper is overrated. And the code itself is underrated. Both from kind of what happened first, but also, what matters today. And that often gets overlooked that the white paper was written for a particular audience. It wasn't meant to be a manifesto for the general public. And so I don't think that someone reading the white paper today would come away thinking that the Bitcoin is important, right? In fact, they might come away thinking, well, it's a good idea. Not even that it's something that exists today. So there's that. And then the second one is on what happened after Satoshi released to the code and the software, which is that Satoshi mined a bunch of Bitcoin. And approximately, I think people estimate, it's like a million Bitcoin that he mined, which is actually now it's not even that big of a percentage of the total supply. So he he could sell all those Bitcoin if he still has access to them. And I don't think that the price would go to zero it would maybe now now that we're at, like, I don't know, 55 k, this is gonna date the podcast. You know, it maybe it would go down to 10 K or something, or to five K. But he mined those Bitcoin, when the price was \$0. And the price of electricity at the time was greater than \$0. And so he mined those Bitcoin at a loss. And I think that goes under appreciated, both in the sense of you know, he he was not someone who was trying to maximize profit, because then he would not have minded All right. And he was someone who really believed in bitcoins future. And so I think that he, you know, he probably thought that the coins would accrue value. But then a brings up the follow up question of how much value does he think that they are going to accrue before he sells them? And does he still have access to the private keys? And why has he not already sold? And so I think that those three points that he wrote the code before the white paper, he mined at a loss, and he still hasn't sold. To me, those are pretty astounding things about Satoshi that I haven't heard of any other cryptocurrency project, following in the least. So and he also, he wrote the software, as far as I know, he wrote the Bitcoin software without any VC



funding, you know, he didn't have a token offering. He, people say, like, oh, there needs to be funding for developers. It's like, well, where did Satoshi get his funding? Right? Because clearly, that was enough. That was enough funding for him to do what he did. And, and, you know, the other interesting thing about open source is when people say, Oh, you know, these, these software engineers are selfless heroes. It's like, Oh, well, open source software developers write code to scratch their own itch. You know, they're not like Mother Teresa, you know, they're, they're doing it for themselves. They're not even necessarily doing it for others at all. But anyway, yeah.

37:04

That's a super interesting response, much more than I could have possibly expected. I'm really glad I asked, because it's interesting. I mean, you have this, you're even if you consider Michael Goldstein, to be like the founder, your LDS colleague, a co founder, and have had somewhat of a significant role in the whole thing. And you started off the answer by saying, basically, like, people should stop thinking so much about Satoshi. And then, you know, proceeded to talk about like, the white paper being overvalued relative to the code is not something I've explicitly heard before, that's that really, it's like, you start to think about it as the white paper, trying to describe the code for a very specific audience versus the white paper being sort of like the Bible, which is a very different perspective to take, which I think is super interesting. And then the whole part about about him, you know, mining at a loss, and still holding is also quite intriguing. Let's talk about Bitcoin more directly for the last, you know, couple of 15 minutes or whatever that we have. I know, you know, I've heard that you come to believe that Bitcoin will be sort of the global reserve currency. And correct me if I'm wrong on any of this, but you believe that there will only be one major cryptocurrency that it'll be sort of like a Pareto thing, where it'll be 80 plus percent of the overall value of the global system. And you clarified I heard previously that, you know, that's not like something that you wish to happen. But that's something that you believe will happen. Can you talk a bit more about why you think that it will boil down to ultimately one main currency and why that currency will be Bitcoin?

38:57

Yeah. So it goes to what the purpose of a money is, which is something that you can hold that is going to that has liquidity. And so, the, to me, though, the main argument for why, historically we've ended up with having one global money, you know, it was gold under until the 20th century, and now it's US dollars. And the reason that is is because of the network effects of liquidity. So the more liquid liquid a currency or a money is, the more



liquidity it attracts, and it kind of snowballs from there. Why will be Bitcoin? Well, that goes to the first question about good money versus bad money. And here, it's really I think that it's confused. For folks, because we experience money in, in reverse order. But by that I mean that we weave in a Fiat system specifically, we experience money as a payment system, not as a store of value. And so we think of it, you know, as like living paycheck to paycheck and that the US we thought that adoption would happen in that way of, well, merchants will accept Bitcoin, and then magically, we'll be spending Bitcoin all the time. What, really what happens in a scenario of a strong money replacing a weak money is hoarding. And so we see not merchants accepting Bitcoin as being the adoption driver, but rather, merchants like MicroStrategy going out and buying a bunch of Bitcoin and borrowing money to buy bitcoin, barring Fiat to buy bitcoin? And so the, the adoption driver isn't the transaction costs, or the point of sale user experience being better for Bitcoin than for Fiat. Rather, what the adoption driver is, is that you can borrow at a low interest rate, you can borrow Fiat, and then you can buy bitcoin, and that it's a carry trade. And the reason you can do that is because Bitcoin has a better monetary policy than the dollar. And the only way for the dollar to stop that from happening is by the dollar improving its monetary policy. And that's just not possible. And we can get into that, but the reason I think that Bitcoin will end up dominating as kind of the global reserve currency is because it has the best monetary policy and that all of the other competitors, and I, you know, I said Pareto like 8020. I don't know. I don't know anymore, how true that is, I'm starting to you're starting to become more maximalist, you know, it might end up being 98 to the only reason I would stick to 8020 is if we end up having governments have their money be backed by Bitcoin. So that would be the 20% would be governments with monies that are backed by Bitcoin? And they might do that they would probably, I would guess that it will be authoritarian governments to do that, because they want to have maximum surveillance over the currency. But even in that case, I don't know I'm skeptical. I'm skeptical because I really think that the desire to inflate and to even if and this happened with gold, right, like they had a gold backed currency. And they wanted inflation so much that what did they end up doing? They ended up breaking the exchange rate the fixed exchange rate they have to gold and so I think that governments will do that with Bitcoin too, if they end up trying to have a Bitcoin backed currency. So all this to say that if fiat currencies can't have a better monetary policy than Bitcoin, and all the other kryptos can't either then it it just seems like a no brainer to me that Bitcoin will continue to ascend to having the global reserve currency status.

44:12



Right so when you first discovered Bitcoin and or rather the second time you discovered it, when you realized that this was good money from your perspective, it had a much smaller valuation than it does now. Obviously, I'm not sure where it was exactly, but maybe Where was it?

44:31

It was \$20 or something like that.

44:33

Yeah. \$20 even better so it was you know, the the market cap was not not indicative of like what it could be obviously at that point, it could be argued that it's nowhere near they're still today at a trillion dollars. But when did you you know, you out you identify you said like conceptually, and like, functionally via the code like this is good money. Got out At that point, I would assume that you saw vulnerabilities to it actually playing out whether it could kind of gain enough steam, whether it had certain vulnerabilities. Can you kind of share where you are today? versus where you were then in terms of sort of your thinking on the inevitability of Bitcoin, specifically, not just the idea of Bitcoin becoming like, the new the new form the new global, you know, form of money, but actually like Bitcoin being the one that succeeds? And maybe you did think from from the beginning that that, you know, you saw it, and you were like this, is it, for sure. But I'm curious if like, from a probability perspective, at that point, you were like a kind of maybe 30% chance this sort of achieves its, its destiny that I could see it achieving. And maybe now today, you're like, 98, or wherever you might be?

45:58

Yeah, I guess. When the flips switched, sorry, when the switch flipped it when I, when I was going down the rabbit hole, it went really went from zero to 100. Because two things, one is the that it was at, I think it was like \$200 million market cap. And I figured that, you know, a, a good hacker, right? A good software engineer, who would, would want to make money, that hundreds of millions of dollars would be more than enough to pay for their their troubles. So it kind of seemed like the honeypot was big enough, and that if nobody was breaking it, then it was good to go. And that if it was good to go, that the monetary economics were good, that it was just kind of a straight path to, to world domination. The so that I think that I was probably irrationally confident. At the time, you know, although hindsight 2020 you know, I was exactly right. But I yeah, I had a tremendous amount of confidence in it. The moment that I saw how much value was riding on it already. And that, you know, at that point, it had been working for four



years or so or whatever. And, and I was young, I guess I still am young. But I think when you're in your early 20s, you don't have you're not wise enough to be skeptical of things like this. And so maybe there was some some youthful ignorance involved there, too.

48:06

That's interesting. And I sympathize with the view that you took on like the honeypot being big enough that if it's like I'm not a technical person, so for me, I have to kind of approach it from like a social intelligence perspective, seeing what other people say. And, you know, I can read things for myself, of course, but there's a large component of social intelligence. And then just like, practically speaking, like, I see, you know, someone early, like last year, I guess, hack Twitter. And what did they do with that incredible power to be able to, like tweet from like Trump's account, or Putin's account, or whatever, they just went on a bunch of celebrities accounts and asked for Bitcoin. And to me that's like, well, if they need to hack Twitter, to get a hold of Bitcoin, and maybe it's not like a perfect example, but you've seen other examples as well, where people are making like, pretty, seemingly tough to do hacks. And in that case, it ended up being like someone internal. So maybe not like the hardest thing in the world, but they get in a position of large power due to a hack, and then all they want is Bitcoin. It tells me that, and I mean, plus today, it's at a trillion dollars. So that's proof in and of itself, but that specific idea that it's like hackable for me, I've also sort of ruled out by similar logic, I think granted, you know, a few years later, I think the last thing I have to ask you is you know, you have already taken a pretty drastic like evolution maybe and what you might have and I don't know about like what you might have imagined in like high school or even college like I know you were you were studying accounting, I think you got your masters in accounting as well. And then Bitcoin obviously shifted things a bit for you and you started heading down a very different path than one that you might have imagined. Like you said, You're still relatively young. I'm curious what you in your mind like what's in store for for your future Bitcoin or otherwise, I know it's you know, a large component of what you do obviously but I'm curious kind of what what you have in store especially given like being involved with Bitcoin early. I think a lot of people who are kind of early in the crypto space have some opportunities to do some pretty interesting things with you know, the the monetary benefit maybe from being involved early. So I'm just kind of curious what you what you have in store.

50:27



Yeah. My, my first priority is keeping my head screwed on straight because I've seen others, you know, kind of skid out of control. And, and some Oh, geez, you know, kind of lose it. So, in Matt Adele's words as staying humbled stacking SATs, priority number one, and then obviously, being a good dad. That's, that's another focus of mine. Professionally, you know, I'm, I'm at crackin. And I enjoy it here a lot. And we'll have more news coming out. This year, more announcements this year about different things at cracking that I'm working on. But the Yeah, I really, you know, I don't necessarily need to be working at cracking anymore, or anywhere, but I like it a lot. And I like the I like that, I don't really know, honestly, I don't really have a good answer for you. Because something new is always happening in in the world of Bitcoin. And even when I look at what kind of products and use cases are going to be unlocked by upgrades like taproot and improvements to the lightning network. And the it's just, it's mind boggling to me now on the kind of what to do in terms of humanity, right. Like, I think that there's folks who are very focused on space. Find space interesting as well. But like, when I watched Interstellar, I, I kind of got anxious, I get too much anxiety about going into space. So I don't think that I'm like Elon Musk, you know, go to Mars. So, yeah, I don't know, I don't know, maybe I'll just end up gardening, honestly. Because I, the the idea of going on a rocket is not super appealing to me. In fact, even now, now that I don't have to go on airplanes, because of COVID. You know, there I've got that excuse. I've realized how much I didn't like flying to begin with. So yeah, I don't really know what the future holds for me. Just trying to, you know, take one day at a time, get my work done, and have fun on Twitter. You know, that's the number one thing maybe I'll just be like, you know, retired and tweeting all day. Because that's something I do enjoy doing. But yeah, the, the amount of opportunity from kind of what this technology unlocks is pretty astounding. I like the idea of rebuilding the financial system. And I think that this is something the Ethereum folks are really focused on. I just, I questioned the engineering and the economics of what specifically they're building today. But I applaud their their spirit and the, the enthusiasm they have for Okay, now that we've got a monetary layer, let's think about what does financial intermediation look like on top of it?

54:24

Yeah, that's a great response. I think, you know, I'm certainly a fan of taking things one day, one day at a time myself and focusing more on like process and, and habits versus like goals. And there's certainly a lot between, you know, your garden and Mars. So I'm sure there's a lot of things that could become interesting and attract to you to work on them and do things you know, other than maybe what you're doing now in the future, but



glad you're enjoying what you're doing and Congratulations on becoming a father. Thank you so much generally for coming on. And sharing your perspective. In closing, where can people go and find, you know, well, first of all, they need to go check out your Twitter. So if you could share where the handle is, and I know there's a bunch of impersonators where they so let's make sure we get the right one. And then yeah, secondarily, anything else you want to point people towards would be great.

55:18

Yeah, thanks for having me on. So you can find me on Twitter at PRP, e r e underscore Rashard r o CH, ar D, and go to the Nakamoto Institute if you just search google search Nakamoto Institute. And, yeah, my dams are open on Twitter. So if you have questions or comments, happy to chat about Bitcoin favorite topic. And yeah, thanks again for having me on, Jake.