DEF042 - BITCOIN IN ONE LESSON TRANSCRIPTION

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INTERVIEW TRANSCRIPTION

Peter McCormack 00:00:41:
So you want to learn about bitcoin, the currency of choice for drug dealers, terrorists, and money launderers. The one that's killing the polar bears and a ponzi scheme which turned a few lucky nerds into billionaires. Well, these are just a few of the myths that I've become used to defending since I fell down the bitcoin rabbit hole three years ago, a journey which would take me around the world, where I would see how bitcoin is used to keep kids out of gangs in El Salvador and help Venezuelans avoid the effects of hyperinflation, and I would meet the techies, economists, and activists who believe in a better form of money. Bitcoin, a currency misunderstood by those on the outside, and passionately defended by those on the inside, because those on the inside understand that bitcoin is the best form of money the world has ever known, money which can't be stopped or controlled by any government and the best performing investment of the last decade. This show is all about bitcoin, but before I tell you what it is, we're going to start with why we need it.

Andreas M. Antonopoulos 00:01:33:
So why bitcoin? Because the 21st century needs a 21st century system of

internet money that is open, borderless, neutral, censorship resistant, inutable and permissionless that serves the needs of commerce for every person on this planet, no matter where they are, no matter who they are, any time, anywhere, and that's bitcoin.

Peter McCormack 00:01:59:
Ever since I discovered bitcoin, I've always been interested in helping new people understand what it is and why it is important. So this year, I gathered some of the leading experts and produced a 17-part beginners guide for the listeners of my other podcast, What Bitcoin Did. Proud of my epic 20 hours of content, I sent it out to a few friends, to which I was told, "Pete, I do not have 20 hours." So I did the only thing I could do and crammed that 17-part beginner's guide into a single episode to give you and them a kickstart into what bitcoin is. From Bedford, UK, I am Peter McCormack and this is Defiance with Bitcoin Explained in One Lesson.

Friend 00:02:41:
Hey, Pete. Is now a good time to invest in bitcoin?

Peter McCormack 00:02:44:
This is the most common question a friend will ask me when they get interested in bitcoin. It's an understandable question, because most people hear about bitcoin when the media reports that the price has exploded or it's telling the story of some 25 year old traveling the world on his bitcoin profits. To most newcomers, bitcoin is just another asset to make money on, an investment like gold or stocks. And while investing in bitcoin can be profitable ... really profitable if you time it right ... the timing bit is really hard and the volatility will test anyone's patience. Yes, bitcoin is an investment, but it requires an investment of time as well as money to avoid the painful lessons which others have experienced. While some people have made a fortune, others have lost money in a number of ways, from being hacked to losing their bitcoin by trying to become a trader in a market which is very difficult to trade.

Peter McCormack 00:03:30:
This show is not designed for those looking to make a quick buck. Bitcoin rewards patience, and this is a primer for becoming a long-term hodler. Now, you might be asking what a hodler is. A hodler is someone who has forged their bitcoin investment thesis in a long term opportunity that bitcoin offers. A thesis where profit alone is not enough, where patients are nervous, still required, and there are some fighting in the trenches defending Bitcoin from its enemies. Now, this might sound dramatic, but in this show, you will learn about the insidious tactics of government and how Bitcoin threatens their power. Now of course, you can treat Bitcoin like any other investment. You are free to buy or sell it at will. But this is risky, even for seasoned traders.

Peter McCormack 00:04:08:
So if you're going to try and outsmart the market, I just have one question for you. What is so special about you? Bitcoin is super volatile. One day it can accelerate in price and another day it can crash. The most hardened of hodlers have the battle scars, which allow them to ride out the long bear markets enjoy the rallies each time Bitcoin explodes into life. Based on my previous Beginner's Guide, this is a starting point for you to head down the Bitcoin rabbit hole.

Andreas M. Antonopoulos 00:04:32:
We're heading into the 21st century now with a system of money built in the 16th century, and a system of banking and finance built in the early 20th century. And both of them are plagued by politics and fighting and restrictions, which are not suitable for the kinds of problems our planet is facing. So we've got these global markets. We've got this global community, we've got this global Internet. And yet our money is fragmented, and plagued by these petty considerations of nationalism and putting the flag and faces of old dead people on bits of paper. The money system is controlled by governments in such a way as to promote nationalistic ideals rather than improve commerce, which is what money's supposed to do. And even while in the Western world, we kind of have the best forms of money and banking, that money can buy. Even those are horribly fragmented, slow, inefficient and full of mistakes. But the truth is that that's the best.

Andreas M. Antonopoulos 00:05:46:
It gets depressingly bad from there on. So if you go to South America or Africa or even Southern Europe, if you go into Asia, the money systems get progressively more political. More about surveillance, more about control, less about commerce, and even more inefficient. And these systems exclude a huge number of people counting in the billions from the world economy.

Peter McCormack 00:06:13:
That was Andreas Antonopoulos, talking about the problems with the modern financial system, which for me was a natural starting point for this show. You see, when planning my Beginner's Guide to Bitcoin, it would have been very easy to jump straight in and tell you the listener what Bitcoin is, but without understanding the disease, which plagues our current financial system, how can you understand the cure? So many of us have been conditioned to this current financial system, where our governments have a monopoly on the issuance of money and we the workers, the value creators have to play by their rules and pay the cost of their mistakes.

Andreas M. Antonopoulos 00:06:45:
A lot of the problems we see with money have a lot to do with moving money

across borders. So borders are very big thing in traditional money and also the difficult politics of various repression dysfunctional and corrupt governments, right so if your government isn't repressive, corrupt or dysfunctional, your money still is a giant surveillance system. But you don't notice the impact of that because it happens slowly. It erodes democracy, it erodes the institutions of popular will. It erodes a lot of those things. And it enables kind of the corrupt criminal activity at the highest levels within your society. But you don't notice those because they don't generally affect your day today. In countries where those problems are much more in your face the question why Bitcoin doesn't come up. Instead, the question becomes, how do I do Bitcoin? And how quickly can I do it?

Peter McCormack 00:07:46:
Ask yourself this. Why should politicians get to create arbitrary rules about how you can spend your money and impose increasingly draconian levels of surveillance to track what you are spending it on? You went to work, you earn the money, right?

Andreas M. Antonopoulos 00:07:58:
Cash is deliberate being taken away from us. And that is a very deliberate political strategy that started in the 1970s and is gaining momentum, especially in countries like the United Kingdom. And it is a very, very dangerous trend, like many of the other control surveillance, authoritarian trends we've seen, even in supposedly free and democratic countries. So why is privacy in financial affairs so important? The reason is that, if you understand that money is the language by which society not only coordinates but also expresses value, and where caches the last remaining mechanism before cryptocurrencies, that allows people to coordinate and express value to each other without anyone else in the transaction without intermediaries, then it becomes obvious that if you lose the ability to have privacy on those issues, it undermines many of the other fundamental freedoms. If you strip away financial privacy, then, in many practical ways, your ability to exercise all of your other fundamental human rights is significantly eroded. So first of all, with modern credit cards and payment systems you get surveilled in three different ways.

Andreas M. Antonopoulos 00:09:19:
You get surveilled in terms of your network, meaning the associations you form. You get surveilled in terms of the content of your purchases so people can see which books you're buying, which organisations you're subscribing to not just create a graph of your associations, but look for specific types of content. And then the third one that most people don't think about is the geographical aspect of it, which is every time you do a transaction, it reveals

the location that the moment you did a transaction and that means that if you string enough of these together in your daily life you are you can basically be tracked as to your awareness. About through your bank account without even having to activate the GPS on your phone.

Andreas M. Antonopoulos 00:10:06:
So all of these are critical aspects of freedom because if you take them away, what happens is that all of the other human rights and freedoms gradually start to crumble and the government on the other hand that has power over financial information and the ability to do financial surveillance, censorship and control gains enormous political power, they can monitor the activities of dissidents and political opponents. They can monitor their campaign spending directly related to things like that. But they can also apply consequences by for example, penalising democratic expression, and I'm not talking here about North Korea. Let's come in a lot closer why don't we? How about Catalonia? Right. How about the ability of a Spanish government to apply those kinds of extra judicial controls over people who associate with the Catalan Independence Party, or right in the UK with a Scottish devolution movement or Northern Irish and Irish devolution movements, and all of those things. So even in free societies, the power given to governments to control is enormous and financial surveillance is one of the most powerful tools they have.

Peter McCormack 00:11:28:
This is why I started with why we need Bitcoin. As I said before, to understand the cure, you first must understand the disease. We must dissect how governments use money as a tool for oppression, surveillance and control. And we must also understand the global macro issues at play, looking through the lens of the 2008 financial crisis and the financial impact of Coronavirus. We are able to see how central banking is the enemy of money. Bitcoin is not just an investment in a new asset class. It is also a peaceful revolution, one which takes the power back from the corrupt and incumbent In creating a fairer financial system for everyone.

Travis Kling 00:12:02:
We are in the midst of the largest monetary experiment in human history.

Peter McCormack 00:12:07:
This is Travis Kling. Chief Investment Officer at Ikigai Asset Management.

Travis Kling 00:12:11:
And that's not hyperbole that's unequivocal fact. And there is no plan to in that. And in that monetary experiment is in a really straightforward way, led to drastic wealth inequality that started a couple decades before the financial crisis. But on the back of quantitative easing is massively accelerated, that

wealth inequality is giving rise to populism. And that populism is going to push for large scale changes that we're going to see across many facets of our lives over the next call it 10 years or more. And, in my opinion, I think those changes which are of a scale that are difficult to implement it or not, often are easily implemented, they're going to be implemented on the back of what I think is going to be a pretty vicious global recession and asset price collapse at some point, likely in the next decade.

Travis Kling 00:13:15:
And that's going to occur right around the time that boomers are retiring and dying, and wealth and power being transferred to Gen X and to millennials. And that's a really important sort of backdrop for Bitcoin as well too, because of the generational differences and how Bitcoin is approached from younger generations to older generations.

Peter McCormack 00:13:40:
So money is an experiment. How'd you realise this? All those hours you've slaving away to pay your rent and put a little money away for your retirement is just based on an experiment. Have you ever considered that your savings could be wiped out? The more you look through the cracks in the system, the more you will see how central banking is counterproductive to wealth creation where a few guys get together in a room to make decisions which affect all of us, the millions of hard workers who pay for their mistakes. So why do they keep getting it so wrong?

Travis Kling 00:14:08:
It's a misalignment of incentives. And it's the potential for a group of individuals fallible, influence able individuals that have the monetary policy under their complete control, and there's not an efficient set of checks and balances on that power. And the incentive for a business which you should always assume the business is going to act in its sort of best interest profitable manners. There's too much incentive for business to come and try and corrupt those individuals for the sake of those businesses profits. And that was what the founding fathers were warning us of. At the beginning of this country's history, it's what the politicians that were against the Federal Reserve Back in 1913 were warning against, and it's the exact same problem that we're facing right now.

Peter McCormack 00:15:06:
The Founding Fathers is a topic I've personally been diving into recently. And it is interesting to note their thoughts regarding money, like when George Washington said to contract new debts is not the way to pay old ones. And Thomas Jefferson said, the modern theory of the perpetuation of debt has stretched the earth with blood across its inhabitants under burdens ever

accumulating. Modern economics is based on spent more spent internal growth built on cheap debt. But this is why we get bubbles, like in 2008 when the whole system came crashing down. And this is why we need Bitcoin.

Travis Kling 00:15:37:
It is an insurance policy against monetary and fiscal policy responsibility from central banks and governments globally. And it's like the comparison that I always like to make is how much does hurricane insurance cost in Kansas? Like it didn't cost very much. It's not the hurricanes in Kansas. And how much is hurricane insurance cost in Miami? I'm not even sure you can get hurricane insurance in mind. Miami because of how many hurricanes they have, so the more irresponsible the monetary and fiscal policies are, the more valuable the insurance against that is. And I say this a bunch too if there is no such thing as quantitative easing, if we're still on the gold standard I think Bitcoin would still be a science experiment in the closets, a bunch of computer science nerds, because the need for a non sovereign form of money would be diminished if the sovereign money that we were using was being well tended to, but that's just that's not the world that we're living in right now.

Peter McCormack 00:16:32:
So how did we get into this mess? Have you ever actually sat down really consider what money is? What gives it value? Why some people keep gold under the mattress while others get into mountains of debt?

Parker Lewis 00:16:43:
Money exists as a tool that man created or humans created to essentially advanced civilisation to advance the ability to facilitate trade and to benefit from the gains of specialisation and trade.

Peter McCormack 00:16:57:
This is Parker Lewis from Unchained Capital explaining how money is just an invention.

Parker Lewis 00:17:02:
People will gravitate to, in an AB test, a form of money that performs its function better than its lesser competitor. And so while Bitcoin can be considered an investment, I think at the end of the day, I think it would be wrong to say it's an inflation hedge is just a better form of money that has stronger foundational principles that will allow it to fulfill the role of money better than the dollar the year the end. We have all been lulled to sleep by this idea that 2% inflation is normal. And that we as a result of that, kind of explain away Oh 2% this year, no big deal. But when you add that up, like multiply that by a decade, and multiply that by two decades, if you have 2% inflation, then

you're losing your money is losing its purchasing power by 20% over a decade and 40% over two decades.

Parker Lewis 00:17:58:
And the analogy that I like to think about that is 2% and that that slow degradation seems fine. But when you multiply it over a decade or decades, what it essentially equates to, is having to recreate your monetary savings 20 to 40% of it. And what you end up doing as a result of that is saving less and going in trying to run faster on a treadmill. You're basically on a hamster wheel, you're recreating 20% and 40% of your monetary savings just to stay in place. And what happens when you do that is there's a lot of mal-investment that occurs. People rather than having a stable form of money that shouldn't be losing its value, they're making investments to try to grow their money, rather than just finding a stable form of money that holds its value.

Peter McCormack 00:18:48:
Traditional economists will teach you about the virtues of inflation, but inflation is just a hidden tax on wealth. It chips away at your purchasing power year after year. And if you aren't outperforming inflation, then it's quite simple, you're getting poorer. Bitcoin changes because Bitcoin is sound money. It has superior properties than the paper money that government issues.

Parker Lewis 00:19:07:
Beyond the question of what is money. It's a tool to facilitate trade. Well, when humans start looking around for where are the tools that will help me do this and ultimately help me measure value. Over time, there were certain properties that needed to exist in a form of money that would be better than others. And those are scarcity, durability, fungibility, or uniformness, which then allow things to be subdivided and aggregated, such that if you needed more of it or less of it to trade for something that had lesser perceived value you could, and then also the ability to transport, we've essentially been perfecting money over time, from yap stones and salt ,to glass beads , to metal, to base metals. Each one of those times, somebody figured out a property that would make trade more reliable and more efficient.

Parker Lewis 00:20:01:
We went from this period of overtime, all converging on a better, better, better form of money until we ultimately got to maybe the worst money of all time, which is essentially paper or a digital representation that's inherently infinite. And but if we ignore that small blip in history, that is Fiat that's not actually reserved back then we just look at gold relative to Bitcoin, it is that in gold, we found the the good, that had all of those characteristics that would facilitate trade, and it had the lowest rate of supply and as a result, because of that low rate of inflation, it more effectively measured the exchange ratio between

other goods. Well, what do we have in Bitcoin we have the good that has the optimal money supply and monetary policy. Scarcity alone is not sufficient to make something money. When combined with other properties. And when we think about the specific purpose that and the specific reason why we need the tool that is money, and it's to facilitate trade, a key aspect of that is the ability to transfer.

Peter McCormack 00:21:13:
Gold has always played an important role in money, like Bitcoin has properties which make it superior to sovereign currency such as the dollar and the pound. But for convenience, we moved to paper money. Opening the gates to abuse by central banks.

Parker Lewis 00:21:26:
Via a currency emerged because of the limitations that existed in gold. It was the most effective form of money that that man had converged on until that point in time, but the limitations were, it was difficult to transport even though it was transportable and more transportable than other forms of money. It was still difficult to transport, it was susceptible to centralisation from a security perspective, and that ultimately, while gold is divisible, you can melt down gold and come up with smaller units of gold and mint smaller units of coins, that in order to get precise, changed or to get smaller amounts of gold from a practical perspective, while it was divisible, it wasn't as divisible as potentially the economy that it was trying to serve needed. So the dollar or banknotes initially, and in part, a combination of both are merged as that fractional representation to really be a technological solution to the limitations of gold.

Peter McCormack 00:22:23:
If you've made it this far, you now understand why we need Bitcoin to fight against government mismanagement. And you also understand the properties of sound money, and that Bitcoin is the soundest money ever created. Now it's time to get into the weeds of what Bitcoin is used for. And I'm starting with my buddy Matt Odell, the co-host of the Tales from the Crypt podcast.

Matt Odell 00:22:40:
I think that the way you store wealth in this world now is it's just everything relies on all these different trusted third parties where you have other people basically holding your money for you. And Bitcoin is separate from all of that. So in like a worst case scenario, maybe bitcoin keeps its value or goes up. And then the other reason I'm in Bitcoin is because of speculative reasons. I think the number is going to go up, I think the price will increase. It's a scarce asset, it's more scarce than anything else we've ever seen. And I think as more people realise that, like the price should naturally go up. But in other places, I

mean, we're, we're both from Western countries, we can accept payments and use the traditional financial system if we want.

Matt Odell 00:23:29:
But for a lot of people in the world, they don't have bank accounts, they can't access global marketplaces. With Bitcoin, you're able to accept money through the internet. Doesn't matter where you're located. You just need the internet. For a lot of people, you can't open a bank account with Bitcoin. It's as simple as just downloading an app and then pasting this code into WhatsApp and you can receive money like that's pretty powerful, and then for a whole other subset of people and of course there's overlap here you have political turmoil and unrest which goes back to my first point and because Bitcoin is independent of any company or government it's particularly well suited for political turmoil type situation where you can't trust your, there's nowhere to put your money. So if you have no other option, you still have Bitcoin.

Peter McCormack 00:24:17:
Now, let me ask you something. How do you feel when you go to the bank, and you try to take some money out, and the bank asks you what it's for? Personally, I want them to mind their own fucking business, or worse, off those people in Greece or Cyprus, how they felt when their governments raided their bank accounts to finance the bailout plans after they're incompetent governments settle the countries with debt. Or the people of Venezuela or Zimbabwe, who savings were wiped out by hyperinflation.

Matt Odell 00:24:40:
Everyone who's interacted with the bank knows what that relationship is like, where you have withdrawal limits, and they're asking you questions about every single little thing you do and there's tons of paperwork, but with Bitcoin, it's just independent. All of that. It's just it's pretty crazy. It feels more real like it's imaginary internet money. If feels more real to me than like any other stocks or like my bank account or stuff like that. It feels more real than that, to me. These money systems that we have nowadays, these Fiat systems are they're completely reliant on the government. It's just a full trust in the government. And you see in countries like Venezuela, and Argentina, where this trust erodes, and there's gross mismanagement, and the currencies become worthless, and that can basically happen anywhere. This is a very new experiment, this whole Fiat idea, and it's like 50 years old.

Matt Odell 00:25:32:
That's pretty crazy. When you think about everyone just says to themselves, oh, that's the way it's always been. So why be so cocky about that? The way I look at it from like, a Western perspective, like when I pitch it to my peers and stuff is I say, this is a an insurance policy that may go up in value significantly.

And so you out you just put a little bit you don't put everything into bitcoin. You just put in an amount that's a high risk investment.

Peter McCormack 00:26:04:
Before we get into explaining what Bitcoin is, there's one more thing we need to cover, where it came from. Because this is an important part of what makes Bitcoin so special. Bitcoin was not the first attempt at creating a new form of digital money outside of the control of government, it is just the most successful. For decades people have been trying, but when Satoshi Nakamoto, the mysterious, unknown creator of Bitcoin, dropped his invention on the world. He had assembled the pieces of the jigsaw, which made this new financial paradigm possible.

Aaron van Wirdum 00:26:32:
Yeah, it definitely didn't come out of nothing, which some people may still think there was nothing and then there, all of a sudden this Satoshi demo, God created Bitcoin and there it was.

Peter McCormack 00:26:44:
This is Aaron Van Wirdum, a journalist whose Genesis files research looked into the projects which led to the creation of Bitcoin.

Aaron van Wirdum 00:26:51:
No, yeah, it was more of a step by step process and if you see all the steps then you also see that Satoshi he didn't invent anything. Particularly knew he just put it together in a very clever way. In a very clever way. I mean all credit to him. I don't want to take anyway away from that, like it was genius, but it's like all of the pieces of the puzzle were there.

Peter McCormack 00:27:15:
Bitcoin would not have been possible without the invention of public key cryptography in 1976 by Whitfield Diffie and Martin Hellman. Prior to this encryption was a tool that the public did not have access to. Now people could engage in encrypted communications, one of the building blocks which would allow for the creation of Bitcoin. But it was a man named David Chang who would change the game. He could foresee the importance of privacy with the internet, saying cyberspace doesn't have all the physical constraints. There are no walls. It's a different scary, weird place. And with identification, it's a panopticon nightmare, right? Everything you could do, could be known to anyone else, could be recorded forever. It's antithetical to the basic principle underlying the mechanism of democracy.

Peter McCormack 00:27:56:
And he figured out a way to use encryption tools for money and with his

creation signatures, he created Digi cash, a way of layering privacy onto the existing banking infrastructure. Now, while Digi cash ultimately failed, it was an important step in the journey to the creation of Bitcoin, which is further by the cypherpunks. They were a group of activists advocating for the widespread use of cryptography and privacy enhancing technologies to drive social and political change. Eric Hughes, a founding member famously said, privacy is necessary for an open society in the electronic age. We cannot expect governments, corporations, or other large faces organisations to grant us privacy. We must defend our privacy if we want to have any cypherpunks write code. We know that someone has to write software to defend privacy, and we're going to write it.

Peter McCormack 00:28:43:
And in October 2008, Satoshi Nakamoto released his Bitcoin white paper on metzdowd.com, a cryptography mailing list associated with the cypherpunks. Now I want to dive a little bit into the tech to explain what Bitcoin is and how it works. The unique infrastructure design which stops individuals exerting too much influence over it, and governments from shutting it down. I will ask my friend and fellow podcaster Stephan Livera to explain what Bitcoin is both the currency and the protocol.

Stephan Livera 00:29:08:
Yeah, so you're right, there's two parts to it. And so the currency of it the token, if you will, you can think of it like how we've got dollars and cents. We've got Bitcoin and satoshis, right? And every Bitcoin is divisible down to 100 million satoshis. Or in the community, we say SATs, right. And so this money, if you will, has been designed with a hard cap in mind, and so there will never be more than 21 million Bitcoins.

Peter McCormack 00:29:35:
One of the tricky things for new people to get their head around is what really is unique about Bitcoin. Why would I want to use it to send money to someone when I have PayPal or my bank account ways I've used for sending money for years.

Stephan Livera 00:29:46:
There are a few differences there with PayPal because PayPal, think of it like they are maintaining a central database of who has what, and fundamentally the unit that's being transacted on PayPal is different. So for example, you might be sending me pounds or US dollar. Whereas with Bitcoin, there's it can be a little bit confusing because Bitcoin is the payment network or the protocol. And it is also the token the unit. And the other part that's different with Bitcoin is it's intended to be like a peer to peer cash right? Now, that means that you're not trusting a third party. So in that, in that PayPal example,

you and I were both trusting that PayPal will not censor or stop that transaction. Whereas in the Bitcoin world, it's much more difficult for that to be stopped because it's just basically you're running this software and I'm running this software and we use it to just send to each other.

Peter McCormack 00:30:41:
And this is what makes Bitcoin unique. Legacy financial systems rely on central authorities to manage things with PayPal and your bank. You are trusting them to make the payments you request, which is fine when it works for you. But the problem is they are a gatekeeper to your financial decisions. They can block payments, they can take money from you and they can eat Tell the government what you're spending your money on. Bitcoin solves these problems. It removes the need for trusting a central authority by distributing the ledger of payments. It is this decentralisation of Bitcoin, which removes gatekeepers offering financial freedom. But it also goes much deeper than this.

Stephan Livera 00:31:15:
There are some people who don't have access to PayPal or credit cards. Or they've been de-platformed, or debunked those people basically have to use something like Bitcoin, because it's much harder for them to use cash in over the internet, obviously. So that's one way that they are able to still accept payment for their services. And this can happen in different scenarios where somebody's been so kicked off social media, or maybe the payment processes don't like them or for whatever reason they've been debunked. That's one part of it. And then the other part of it were people who buy bitcoin and over the longer term, when they have really taken a long time horizon on their purchase of Bitcoin. They've been up in purchasing power terms and part of the reason for that is that now again, this is being honest and being open. This is speculation, right? So this is basically you're speculating on future adoption of Bitcoin and also speculating on this future value of Bitcoin relative to other forms of savings that you could have held.

Stephan Livera 00:32:17:
And so in some ways, it's kind of like a hidden tax of inflation. If you keep pounds in your bank account, or I keep Australian dollars in my bank account, over time, the amount that I can purchase is going down. So in that way, people can think of Bitcoin as a kind of savings outside sort of independent of the mainstream banking system and independent of the government. And so, people can speculate on that with a percentage of their investment or if they want to regularly accumulate right known as dollar cost averaging or stacking sets as we say, these are ways that people try to accumulate a position in Bitcoin and they do that typically because they have a future belief on Bitcoin.

And this has sort of proven out over the history of Bitcoin is that there are people who bought at a high and then lost money, but typically, they weren't that many people who bought at that high.

Stephan Livera 00:33:13:
And typically, the people who held for a long enough time eventually got out into the positive. But again, that is a speculation, right? So we should be upfront about that. So it's two prongs, right? So it's a savings technology and a payments technology that are difficult for somebody to stop you. And that's kind of one of the powers or special things about Bitcoin.

Peter McCormack 00:33:35:
So how does this all work? How are you able to send each other Bitcoin and trust that it works without a central authority? Well, the software which runs the Bitcoin protocol, which any user can download, has a set of rules. Each time someone posts a transaction to Bitcoin. Everyone else has software checks, the rules have been followed. If someone tries to break the rules, then the transaction is rejected. But new people come to Bitcoin need to understand that the way it works comes with consequences. You aren't entirely responsible for your money. We call this being self sovereign.

Stephan Livera 00:34:05:
There are no bailouts in Bitcoin and so that is why it might be a little bit scary at the start, but we have to learn to basically advance our knowledge and our accountability personal accountability, what happens with Bitcoin is if you lose the seed and the pot and or passphrase you basically lose access to that Bitcoin. So it's basically like those Bitcoin will get trapped in the ledger forever.

Peter McCormack 00:34:31:
Now you understand what Bitcoin is, it is important to consider its monetary policy, or Bitcoin as a tool for financial freedom, it is the monetary policy which drives value. Remember earlier when we talked about how central banks fuck with the money, we're a few guys get together in a room to make decisions which affect us all? Well, Bitcoin flips this. Bitcoin is designed so that everyone is fully aware of the monetary policy and it never changes.

Dan Held 00:34:53:
A **21** million hard cap is a, I would argue satoshis most brilliant innovation the 21 million hard cap drew me to it in 2012 that was a pretty rare sort of trade. Most people felt like decentralised money or a cash like digital currency was kind of the cool thing about it, or gold 2.0. But gold 2.0 isn't valuable unless there's a monetary policy that ties with it that makes it a gold, good gold 2.0 and not many people appreciated it back then. And that's what makes it so

rare is that to me was my aha moment were 21 million hard cap. That was a huge breakthrough.

Peter McCormack 00:35:30:
This is Dan Held one of my favorite writers on the topic of Bitcoin.

Dan Held 00:35:34:
It could be 21,000, 21 billion or 21 trillion, as long as it is fixed. And this is the brilliance of the breakthrough in monetary policy is that previous monetary policies were flexible. So governments and central banks and investment banks all work together and they kind of come up with the optimal rate of inflation. But that inherently comes with several problems. One is that it's an impossible problem to solve. There is no way to even properly calculate the rate of inflation. For example, in the United States, we have something called CPI, which is an attempt to calculate inflation. But that excludes many different assets. I believe it excludes food and energy. And it also excludes real estate, and equities. So capturing inflation or even measuring it is a really difficult issue. And there's actually a term in computer like in software development on the product side, which is called if you can't measure it, you can't manage it. So like if you have an app and you're trying to track the number of signups are getting if you don't measure that accurately, you can't manage to either raise or lower the number of signups.

Dan Held 00:36:43:
And so, with an economy, choosing the proper rate of inflation is an impossible task. So first of all, ingesting data, parsing it, analysing it, that's an impossible task. And then let's say if you could do that, then you could also let's see you could properly manage it. Well, what's the proper rate of inflation? Is it 1%, 2%, 3%, 4%, 10%, 100% percent, there is no appropriate rate of inflation, it is a completely subjective term. And so, because it's subjective that means that the inflation rate will always be up for debate. And because of that, that means that the monetary policy will always be malleable. And typically, people in power will move that monetary policy to be malleable to their benefit.

Peter McCormack 00:37:29:
The monetary policy of Bitcoin is beautiful in its simplicity, it also never changes. So where central banks are always changing their policies. Bitcoin is the opposite. It is entirely predictable, where central banks will create complex rules to manage the economy with their decisions affecting everyone else. With bitcoins, monetary policy fixed, it is you, the user who has to adapt.

Dan Held 00:37:50:
What's nice about that is first you can easily understand your monetary policy in one sentence. 21 million. That's it. That's all you got to know versus the

existing Fiat system where you've got this deeply lengthy explanation around how much like the monetary base of the monetary policy and the entities that interact with that and how it all works. Bitcoins is extremely simple. Two it means that there will never be a political influence on bitcoins monetary policy. Now, Bitcoin, the only reason why that monetary policy exists and exists and has existed from inception is that those rules have been hard coded in and bitcoiners have rallied around that code. And that's called social consensus. So we have all rallied around that code and that 21 million hard cap and that is very core to the ethos of Bitcoin. If all the bitcoiners came together and decided to change the 21 million to 22, that could happen but the likelihood of that happening is infinitesimally small, due to everyone who has bought Bitcoin has bought into the 21 million hard cap already. That's why often we central banks have a mandated policy to stimulate the economy through inflation. If you keep 21% of, if you keep your cash in your bank account, you're losing 2% a year versus putting it into as they call it productive assets or stimulating consumerism where you go purchase items because you want to spend today versus saving and consuming later.

Dan Held 00:39:22:
So, Bitcoin you have flipped this on its head where Bitcoin has a disinflationary monetary policy, where Bitcoin the rate of Bitcoin issuance halves every four years to the total Bitcoin number of 21 million Bitcoin, and that will happen about the year 2140. 99% of bitcoins, I think will be produced in the next decade or two, though. So largely, most bitcoins will be produced and after that moment, no more will be produced and that's all entirely predictable and entirely understood by all the participants in the economic system. Now, what's cool about Bitcoin is that it really is a rejection of all mainstream economics, not just a rejection of like the banking system in the Fed, but of all academics, all like almost nearly every single economist in the world is rejection of their ideas. And it goes back to an older form of economics that was popular called Austrian economics. Essentially, you know, in Keynesian economics so there's two types of economics Keynesian and Austrian Keynesian is the current modern day economics thought, which is about government should heavily influence the economy and stimulate growth. Whereas Austrians were more hands off decentralised sort of economics. And so Bitcoin harkens back to that day back to that sort of thought.

Dan Held 00:40:41:
And what people worry about with like a Bitcoin monetary policy is for example, people will withhold their spending in anticipation of price increasing. And so that's what often worried that in a Bitcoin style economy people would forever withhold their spending and the economy essentially grind to a halt as no one wants to spend because the value of their coins keeps increasing. With

Bitcoin right now, it's very early stages. So the price of bitcoin increases dramatically. As Bitcoin succeeds and stabilises in price it becomes more useful as a medium of exchange and unit of account. So in that final stage, that's when bitcoins monetary policy will be criticised in terms of encouraging people to hoard versus spend. However, as we've seen with consumer electronics, consumer electronics like my TV, I've got a 65 inch TV on my wall. It's $1,000. 10 years ago, that was like $100,000. And that technology didn't even exist in my iPhone. My iPhone today versus 10 years ago, is an incredible feat. And so, when we look at consumer spending with electronics, electronics get cheaper and better every year, but we still buy them.

Dan Held 00:41:58:
Even though we can anticipate that they will become cheaper and better in the future. We still need to consume now because we're humans and we have needs. So in a Bitcoin economy or in Bitcoin monetary policy, we shouldn't worry about people when Bitcoin becomes like the standard medium of exchange a unit of account for everyone in the world, we don't need to worry about the implications of that because people will intuitively spend if they need to. They're not going to withhold spending until they die and shrivel up in bed.

Peter McCormack 00:42:26:
Now, if you're following and you're sold on Bitcoin, you may be reaching a point where you're thinking about investing. So now's the time for a big warning. You may previously heard that there are these other cryptocurrencies and if you haven't, you soon will. You may hear about other things with Bitcoin in their name, like Bitcoin cash or Bitcoin ship version, or even fancy things like a theorem. If you are considering other cryptocurrencies, then I have two warnings to you. Firstly, if you just want to trade them, and you just want to make money, then I wish you good luck. It is really tough to beat the market and if you don't outperform Bitcoin, then you've just wasted your money.

Peter McCormack 00:43:00:
Secondly, even if you do want to hold on to them as an investment, if you think they're a good long term prospect and ask yourself, are they a better investment than Bitcoin? Perhaps go through the price charts for some of them and compare them to Bitcoin. Now, I don't actively trade Bitcoin anymore. I did want a founder is really hard, even seasoned traders struggle with the volatility. I personally, though have an unwavering long term belief in Bitcoin, I believe that there will be a growing demand for it, and it's limited supply will drive its value. So I am happy to just buy and hold right out the years as Bitcoin grows. Now, back to the other cryptocurrencies. I understand it might be

difficult for you as a newcomer to understand why Bitcoin is superior. I mentioned a theorem earlier. I'll let Dan explain this project to you.

Dan Held 00:43:44:
There was a VC in Silicon Valley who wrote an article called tech crypto versus money crypto. So tech cryptos, engineer focused money crypto is ex finance, ex banker types who really understand economics and the theorem largely appeals to the tech crypto types. They like to tinker with things they like to poke and prod and change things. They're engineers know, they're meant to go build things. They like to build apps, and they want to, they want everything they want in an app platform like the App Store or Play Store or the Ethereum blockchain, to do everything they want. And so the protocol becomes largely very malleable because of that, because it's constantly changing at the whim of all of these engineers. But none of these engineers have really a good grasp of economics or monetary policy. So Ethereum largely ignored monetary policy or just a very primitive like, at all really talking about it that much. Until 2018, I remember a theorem coming out and almost no one ever mentioned the word monetary policy and a theorem in the same sentence.

Dan Held 00:44:51:
The theorem was a smart contract platform and eth was the oil or the gas or wherever you want to put it. And the Ethereum community has seen a lot of failure with their narrative of a dap platform smart contract platform a fundraising platform, as we saw Icos collapse and these daps failed to find product market fit is cerium, the theorem community is scrambling to find a new narrative. And that new narrative is that Ethereum is a good goal. 2.0, or Ethereum is a good money, because of its usefulness that copper is worth more than gold, because copper can be used for so many things.

Dan Held 00:45:28:
And we're only seeing them pivot to that narrative as their narrative around data and everything collapsed. So they're desperately grasping at straws for something that's tangible, something that's real. And so they're trying to make themselves equivalent to Bitcoin. And this is the first time that I've seen the theorem community talk about monetary policy was in like, early 18 is where they go okay, wait a second, we got to figure out the new narrative and we have to figure out why our monetary policy, how we can compare and contrast that to Bitcoins.

Dan Held 00:45:57:
What's funny is that the theorem community is trying to meet and trying to align themselves with bitcoins, fixed supply monetary policy, but they don't realise that they've they will continually and perpetually be less people will have less confidence in their monetary policy than Bitcoin. Bitcoin has already

won, it is far too late for them to do this now. You can't just say, Hey, we have a low rate of inflation, because I don't trust that you will in the future, you could choose to change the rate of inflation. It's about the continuity of the monetary policy that is paramount in the belief in the continuity of the monetary policy, the faith in it, and there's no continuity to Ethereum for monetary policy, and there's no faith that it will continue that way, whereas bitcoins is super strong. It also has a largest network effect in terms of market cap holders of the currency and liquidity, and faith in the monetary policy.

Peter McCormack 00:46:49:
A theorem is not the only alternative cryptocurrency there are thousands of tokens and all coins which make up the cryptocurrency industry, from those which are scams to legitimate though misguided attempts of creating alternative currencies. If you are still tempted by these, and please please be aware, the industry is plagued by failure outside of Bitcoin. Many people have enriched themselves by creating new monies at the cost of investors, the opposite of Satoshi. And this was something I discussed with Nick Carter from Castle Island ventures.

Nic Carter 00:47:19:
Satoshi also chose anonymity in and so they were never able to publicly take credit for their invention. So whoever they are, they've shown some extreme restraint in staying anonymous all these years. And that is something that really distinguishes Bitcoin from virtually everything else.

Peter McCormack 00:47:36:
Bitcoin has become hardened in their opinion of these alternative currencies. And when you head down the rabbit hole, you will witness this intolerance to the creation of new old coins.

Nic Carter 00:47:45:
It shouldn't be easy to create a new money and Bitcoin shouldn't have succeeded. It succeeded against all odds. Like every digital cash prior to Bitcoin had failed miserably and the founders went to jail. And then Satoshi comes along with this revolutionary idea and says, Well, what if we decentralise everything and no one's in charge? That's the only reason Bitcoin succeeded. But even despite that, it had a very brittle and risky, you know, early days, like Bitcoin had an inflation bug had a rollback its largest exchange, Mt. Gox, collapsed, it could have failed in a myriad of ways. And it's absolutely amazing that it succeeded. So many altcoins took that model of Bitcoin as this behemoth. And they just presumed that they could kind of piggyback on its success.

Nic Carter 00:48:35:
But the truth is that like, the hardest problem is maybe not even technical. It's just convincing the world that you've created a valid alternative money. And just because it's technically maybe easy to do that in the wake of Bitcoin, does not mean it's politically or economically viable idea. So it's not surprising to me that virtually all of these altcoins have failed. That should be the default. New monies shouldn't come around every day.

Peter McCormack 00:49:01:
So back to the original question, is now a good time to invest in Bitcoin? I'm sorry, but this is a really hard question to answer, because Bitcoin is volatile. If I knew the best time to buy and sell, then I'd be very wealthy myself. Trading Bitcoin is difficult as his time in the market. So if you're only here for the short term gains, your experience might be painful that all those strategies people employ to de risk their Bitcoin investment.

Matt Odell 00:49:25:
I like stacking SATs, right, so I like dollar cost averaging, I think that people Bitcoin is a very scarce asset. And it's as close to a free market as we've ever had. So you have these marketplaces running 24 seven around the world trading this super scarce asset that is not very liquid, there's not that many Bitcoin being traded around. And that means the price is going to move up and down tremendously in the short term, up and down will take you know, we had huge hits what last year it hit 14K and 3500 in the same fucking year. So this thing will move up and down a lot and no one has any idea where it's going in the short term, but long term, the prediction is that the price will go up long term.

Matt Odell 00:50:09:
So if you dollar cost average and you put a little bit in every week, then you're able to not freak out at what the price is in any given on any given day. You can just say, okay, this is just a long term investment. I'm just averaging in maybe quit cigarettes or something like that and put that $10 a day into bitcoin. Money that you probably would have just thrown away anyway.

Peter McCormack 00:50:33:
So if you're ready to dive in, there are a few more things you need to understand. Payments are irreversible. Something Stefan mentioned earlier. This is known as immutability. Once you send Bitcoin, it can't come back.

Matt Odell 00:50:45:
There's no customer support line to call either. So if you send this your money to a Bitcoin address, and that's the wrong address, like you're never getting that back. So always double check your addresses. You got to be very careful

with Bitcoin because anyone you pay can track your payments. Anyone who sends you money can then track your payments from there. The actual addresses aren't necessarily tied to your name by default, but if people can tie them to your name, that's when they can end up tracking you. There's there's no privacy. The Bitcoin blockchain is a ledger that shows every transaction publicly, and it's going to last forever. Like it'll always be there, people can always look back so even if someone's not trying to track your transactions, now they could in five years time, six years time, you never know if it'll happen.

Matt Odell 00:51:35:
So you have to assume like that you're just anyone who pays you can track your transactions or anyone who links your address. So if you like post your address on Twitter or something like that, then they can link it to you and take it from there and try and make judgment calls based on your addresses. If you go to BTC privacy.org. You can there's a bunch of reading material there if you want to try and use Bitcoin privately but it is complicated. So this is a beginner's guide. So just keep that in mind.

Peter McCormack 00:52:04:
Before we get into how to Bitcoin, there is one very, very important thing you need to be aware of and be ready for. With Bitcoin you are self sovereign. I've told you this already. What it means is that you are entirely responsible for securing your money, and therefore you're entirely responsible for managing your private keys. This might sound scary to begin with, but it is something you will learn quickly when you first buy bitcoin or send it to a wallet.

Matt Odell 00:52:27:
Bitcoin is all about personal responsibility, there's no customer support line, you have to take matters into your own hands and make sure that your Bitcoin is safe and secure. We've had multiple exchanges get hacked, Mt. Gox is the big one that everyone knows about Quadriga just happened recently. We have a saying in Bitcoin, not your keys, not your coins. So basically, there's two different ways to use Bitcoin. You can use Bitcoin in a way that someone else is holding your Bitcoin for you, which was the case with mount Gox and everyone lost their money who is holding it with mount Gox or there's a case where you hold your Bitcoin yourself. And then you could lose it, because you forgot your password or you could get hacked. But at least you're not trusting someone else with your Bitcoin. And that's become a lot easier lately. So lucky for you beginners, you get to come in on that note.

Peter McCormack 00:53:17:
Now, if you're ready to get some Bitcoin, your starting point is to get yourself a wallet and understand how it works and how to backup your private keys.

Matt Odell 00:53:24:
The first wallet I suggest to most people is block stream green wallet, because you'll hold your own keys. And you get to keep a backup of it offline. They're going to give you these 12 words you write down the 12 words. And if you have those 12 words, you can recover your funds, and it's on your phone and phones are relatively secure. They're not the most secure thing. But if you don't have a large amount of money on it, it's free. And you can download it today just from the App Store.

Peter McCormack 00:53:52:
So what are these private keys we keep talking about? What is the seed? I know this is starting to sound a little bit complicated, but it will make sense once you start playing around with Bitcoin.

Matt Odell 00:54:01:
So you're going to download the wallet, like any other app on your phone. And once you download it, they're going to give you 12 words to backup. And so these words derive your keys for you. So that's all you need. If you have those 12 words, you can put the words and then you'll have access to your Bitcoin. So you have to be careful that also means that if anyone gets those seed words, they can spend your Bitcoin as well they can take your Bitcoin so you have to keep those that 12 word phrase safe, however you deem fit. Don't like put them on a post it note next to your computer.

Peter McCormack 00:54:36:
Well, Bitcoin is tricky to get your head around. I've always felt you learn by doing. So my personal advice is just to dive right in. I recommend the starting point is to follow these five steps. Go and download a wallet, something like green wallet. Right now in your recovery seed words. Buy a small amount of Bitcoin from an exchange and send it to your wallet, say $10. I would then delete that app, download it again and restore it from your seed. Just like that. During these five steps, you will learn about sending or receiving Bitcoin and backing up your seed. You must also keep the seed was hidden and in a secure place. If you lose your seed, and you also lose your phone, the Bitcoin in that wallet will be lost forever.

Matt Odell 00:55:14:
Don't put those seed words and on any internet connected device like don't put it in like Apple Notepad or whatever. Don't put it on in your Gmail drafts folder on Evernote or anything like that, the beauty of having it offline is someone has to physically get it wherever it is. If you have it on an internet connected device, you have to rely on the security of that device as well. It's all about personal responsibility. So you're going to have to figure out a situation that works best for you. And you have to iterate on it and improve on it over

time. Phones are a nice stepping stone but really ultimately where you want to be is you want your Bitcoin to never touch an online device and that's why you have these hardware wallets. The three best hardware wallets are called card ledger and treasure ledger and Treasurer are easier to use, I guess if you want to use your friendly one, probably the ledger X, which is the newest ledger, because you can use it with a phone app as well.

Matt Odell 00:56:09:
It's a little USB stick. And then if you want, the better one that's more advanced, you get the gold card is like basically my recommendation now, but this is like a little USB drive that holds that secret for you on it, and it's got a pin. So someone needs to get that device and the pin to be able to take your Bitcoin and then you also still have that that word phrase, that seed phrase, those **12** words where you can back it up if for some reason the device gets lost or stolen or broken.

Peter McCormack 00:56:40:
There are many ways to buy bitcoin for the first time to get yourself started. Firstly, if you have a friend of Bitcoin, you can always ask them for advice about where they get their Bitcoin from. Or you can sign up to an exchange like my sponsor, Kraken register, buy bitcoin, and then send it to your wallet. But there are some other things I still need you to be aware of.

Matt Odell 00:56:58:
Whichever service you choose, you have to be ready that you're going to have to give them that the exceptions are huddle, huddle, and bisque. And they both have their own UX issues. It's hard to use for a beginner, you should definitely check them out, especially as you go down further down the rabbit hole. But any of these more user friendly ways to buy bitcoin are going to require you to give ID information and America give social security information, we call this KYC it's know your customer anti money laundering laws. So they like are going to make you give tons and tons of personal information and then you have to remember that you're trusting whatever this company you choose, you have to choose a reputable one. Don't do it just based on whoever is the cheapest, because you're trusting them with all this fucking information.

Peter McCormack 00:57:48:
Okay, we're making good progress. You have a wallet, you've bought some Bitcoin and you've learned about storing your seed. Now it is time as a self sovereign Bitcoin to take your privacy and operational security seriously. Now, this is another big rabbit hole, something you need to spend time on after the show. But there are some basic things you should be thinking about. This is Jameson Lopp widely regarded as one of the leading experts in Bitcoin privacy and Opsec.

Jameson Lopp 00:58:12:
It's all about who your adversaries are and what you think people are trying to do to you. So, from the operations security perspective, you kind of have to come up with a threat model of you know, who might try to use private information against me and as a result what is the information that is most important for me to keep secure? And so it really comes down to what are the most common types of attacks and what is the information that the most number of adversaries out there are trying to get from you and use against you. You don't know what's going to happen in the future, you don't know where like some data that you can currently consider to be unimportant might suddenly become much more important.

Peter McCormack 00:59:05:
As I said, this is a complicated subject. But specifically with regards to Bitcoin, there are a few important things you should consider.

Jameson Lopp 00:59:12:
For most people, I think that the easy thing, the most important thing to do is just not post your addresses in public places. This is actually something that I've run into a lot as I've been doing various research of historical events in Bitcoin is that I've gone back eight, nine, ten years ago, and back then people were just publishing their Bitcoin addresses and forum posts and leaving trails all over the place. And so that was terrible for them. They're very helpful for me when I wanted to basically D anonymise some of the early adopters in what they were doing many years ago. It comes down to Who you're trying to protect yourself against? I think if we don't worry about nation state level attackers, then really the most important thing is not to broadcast your addresses all over the place publicly. Also not to reuse addresses at the very least, when you're receiving coins, it costs you nothing to generate a new address.

Jameson Lopp 01:00:27
And that means that whoever is sending you the coins can't look up on the blockchain and say, oh, you've received all of these other coins at the same address. As I mentioned earlier, the flip side unfortunately is then when you are sending money to other people, they could potentially look back in your history, but you may not necessarily care about that. It just depends on the sensitivity of what you're doing and whether or not you're worried about your Counterparty, learning more information about you but at least by having those funds you know, split up amongst more addresses, it would be difficult for someone you're sending money to see your entire wallet.

Jameson Lopp 01:01:12:
But there are many different types of adversaries on the network that are

doing many different types of listening for data, whether it's on the blockchain or the network, or harvesting data from various providers, like exchanges and so, it's hard to stay completely out of the off the radar of everything, but I think by keeping a low profile, not associating your real identity with any coins at least on on social media in the public, that is going to get you a lot further than what I think a lot of people do by default.

Peter McCormack 01:01:56:
Now, as this show closes out, I do hope it has been useful, less trying to cram a 17 episode introduction to Bitcoin into a single show does come with challenges, there has been an awful lot I've had to miss out. But before we end, there are a few things I want to tell you about. Firstly is the lightning network. As you start to spend more time learning about Bitcoin, this is something you will hear more and more about. One challenge with building a decentralised form of money is scaling it to be used by millions and even billions of people. Today is not the time to explain the background to this. It is a whole other rabbit hole. Right now. All you need to understand is that the lightning network is another way of sending and receiving Bitcoin, which is faster and cheaper. But rather than explain how lightning works, which is for another day, Jack Mallers, a lightning application and wallet developer will explain why it is important.

Jack Mallers 01:02:43:
I think instant finality for this commodity in markets is going to be a huge deal. There's going to be a lot of demand. I think instant finality in online commerce and consumer payments is going to be a big deal. I think instant finality for remittance payments that are can make remittance payments now that are generally Close to free, extremely cheap compared to Western Union, and they settle instantly. And they no borders. So I think all of this stuff to beginner like everyone should be really excited that this is one of the more important enhancements and inventions in money. If we think of money as a technology, lightning is a huge development in money as a technology. It's a really, really big deal. We've never seen a money be able to act like this and so at to a beginner, I think everyone should be generally pretty excited. How would instant finality affect your life, I have no idea but everyone has an opinion and so many people are working on it. And so it's just generally exciting time.

Peter McCormack 01:03:39:
As we get close to the end, I hope you're starting to see the potential of Bitcoin. The possibilities are endless, and this new paradigm in money can lead to a better and fairer financial system for all and despite all the turmoil in the world. Bitcoin has a promising future, which my buddy Jeremy Welch will tell you all about.

Jeremy Welch 01:03:56:
I can predict that short of kind of collapse of Internet and power consumption in some massive casualty event that results in just massive kind of catastrophic failure of a lot of our other civilisational systems. Bitcoin will be around, right? That's the one kind of thing is that there is this kind of codependence interdependence between Bitcoin and between the kind of social and economic system and the civilisation that we have. And so if that collapses, then sure there's a risk of Bitcoin also collapsing. But as long as those two are live like that, it's going to be around, it's going to be growing in 25 years, even 10 years, the banking systems will have all changed. And we'll have all realised and further internalised the reality of Bitcoin and so you will see some very different systems there.

Jeremy Welch 01:04:44:
I do think that we'll see kind of more stable systems long term, I think that we'll see a more peaceful future and a lot of ways long term as some of these things realign, but it's in that chaos of realignment that things are going to be complicated. On the Bitcoin specific side, I do think that there's no way around people managing keys in some capacity. So that's something that again at Casa, we've invested a lot of time in, and we're doubling down on this year. And I do think that usability around Bitcoin is important. But just usability around key signing more widely is going to be really important for the future of Bitcoin and the future of a lot of systems and a lot of kind of personal data and personal wealth for people. So I do think that we will get to kind of mass adoption and mass thinking around key signing and key management.

Jeremy Welch 01:05:33:
And I think that overall computing experience is going to change pretty dramatically, I would predict it and expect that at least one of the major kind of Fang type companies, you've got Facebook and Google Amazon, at least one of those will kind of go the way of Kodak and being and losing a lot of market share or just totally collapsing or something. Just as again, I think all the computing stuff is actually intricately tied into the monetary system as well and how things work and so as Bitcoin grows again companies are going to have to adapt to so there's going to be a lot of activity.

Jeremy Welch 01:06:08:
I think Bitcoin itself is going to be relatively boring. That's a great thing that on Balkanisation, and we're going to see more isolation and Coronavirus is accelerating that but overall I think the future is quite bright and I'm very optimistic for where things are going in terms of our personal wealth and family wealth. There's going to be a bumpy road to get there and but we've all

got as bitcoiners and as one big community we've all got to kind of band together and work together to build this better future.

Peter McCormack 01:06:36:
That is it. We are done. The entire 17 episode guide filtered down to a single introduction to Bitcoin. If you enjoyed this, I do recommend going out and checking out the full episodes. They're available on my website for my other podcast what Bitcoin did calm. If you click on specials at the top, you can then click on the beginner's guide. We're going to close out with John Carvalho, someone who more than anyone has hardened me to the importance of Bitcoin and protecting it from bad actors.

John Carvalho 01:07:01:
We have a lot of human rights talk and a lot of freedoms and a lot of like, achievements we've made as a species overcoming our own idiocy and greed and evilness that we can sometimes have. But I don't actually think we've ever actually achieved true freedom for ourselves. I think the current government dynamic with the way things operate with border controls and money controls and, we're all still kind of slaves in a way. And it feels that way when you're traveling and you're crossing these borders or getting letters from the government about your taxes or whatever, just every interaction for me at least, it there's this underlying like paranoia, because you know you're kind of their slave in a way that like, at any moment, if there's something they don't like about your behaviour, they can just lock you up and it's over, kill you or whatever.

John Carvalho 01:07:56:
For most people, in most situations, it never gets to that point, but Bitcoin is like the first time I've ever in my whole life and probably all of us have had an opportunity of achieving an ideal kind of better setup that maybe dismantles the power of governments in one way, and makes them have to behave more like what we designed them to like to serve the people and provide centralised efficiencies for us, which I think is what they're really supposed to be for. And I'm not like anti government. I'm just anti evil and anti corruption.

John Carvalho 01:08:30:
I think the current design allows for too much corruption, too much inefficiency, too much, basically arbitrage of ignorance, and that Bitcoin helps cure that. I feel totally impotent to participate in politics, to vote to make the world a better place to volunteer to make the world a better place. It just feels totally miniscule, but when I help Bitcoin, when I do something to even just buying a little bit of Bitcoin just feels way more powerful like I'm doing way more for the future of everybody just to put that.