

**EPISODE 941**

[INTRODUCTION]

**[0:00:00.3] JM:** Ben Horowitz started Loudcloud with Marc Andreessen in 1999. He ran the company for eight years and chronicled his experience in his first book, *The Hard Thing About Hard Things*. In his time running Loudcloud, the dot-com bubble burst, but Loudcloud needed cash so badly that he took the company public in 2001.

Loudcloud went through layoffs, downsizing and a difficult strategic maneuver in which Loudcloud sold its cloud provider business for cash and then used the core competency that it had developed to create new software for building and running cloud services. This new software was the core product of the company Opsware, which was sold to HP in 2007 for 1.6 billion dollars.

The Loudcloud story looks like a rational, straightforward execution in retrospect. At many points in the timeline, Ben was unsure he was making the correct decision. As the subtitle of his first book states, there are no easy answers. *The Hard Thing About Hard Things* tells the story of Loudcloud and Opsware in harrowing detail.

Most founders of software companies will end up reading the book at some point when they're building their company, because there are so few books which capture the granular details of what it feels like to run a company. A CEO is completely alone in their understanding of the company. Nobody else has nearly as much information as the CEO. Not the board, not the market and not the employees. When you are a CEO, there is simply nobody to turn to who can give you the actionable advice that you wish you could have access to. Because there is nobody else, it means that the CEO's own psychological state is extremely important.

*The Hard Thing About Hard Things* provides a CEO with solace. While the CEO is alone within their company, they are not alone in the world. Every CEO has a set of issues which they have never faced before. The CEO can learn to face those issues confidently and competently. Like any influential book, *The Hard Thing About Hard Things* presents the reader with useful answers, but also raises many questions. How can a normal person foster the mentality of a

leader? How can a leader convince smart people to follow their direction? How can a seemingly crazy direction be framed as completely rational?

The second book by Ben Horowitz is called *What You Do Is Who You Are*. This book surveys a set of case studies in leadership, including a Haitian slave revolt, the Mongol Empire and a dominant prison gang. By studying violent environments, Ben frames leadership in the context of the highest stakes. These stories are about life and death. When a leader's performance is measured in blood, it frames the true nature of leadership in the starkest resolution.

Ben uses each distilled example as a base case, which inducts into broader applications. The cultures of Netflix, Facebook, Uber and McDonald's are explored alongside editorials about Hillary Clinton and hip-hop culture. Throughout all of these stories, the most important thread is continually reinforced. The leader creates the culture. The culture is the leader. What you do is who you are.

Ben joins the show to discuss his writing and how he has applied his beliefs to building Andreessen Horowitz, the venture capital firm that he co-founded and leads today.

[INTERVIEW]

**[0:04:04.9] JM:** Ben Horowitz, welcome to Software Engineering Daily.

**[0:04:06.9] BH:** All right. Thank you. Thank you. Excited to be here.

**[0:04:09.8] JM:** Andy Grove wrote about inflection points in technology.

**[0:04:14.2] BH:** Yeah, only the paranoid survive.

**[0:04:16.2] JM:** That's right. Inflection points also exist in warfare. Describe how a leader should correctly evaluate an inflection point.

**[0:04:24.6] BH:** Well, Andy – the way Andy always said it was there's got to be a 10X change in something. In business, that was a 10X change in competition, a 10X change in the market, a

10X change in the supply chain, that thing. Then if that happened, then that required a strategy change. I think, war is a similar thing and you can imagine that happening with competition or supply chain and war as well, or any escalation like that.

I think that's probably the most correct definition. It's used super loosely now. It's like everybody's always at an inflection point when they come see us, for example. I think that's really going on.

**[0:05:14.1] JM:** Andy Grove's model of the breakfast factory. We know that it maps to building technology companies. Does it also map to building a military force?

**[0:05:26.0] BH:** Well, I think there's some analog there. Probably, my business knowledge is much better than my military knowledge. I think that example in particular was very manufacturing-oriented of course and had to do with process measurement. Really, I think the big insights out of the breakfast factory were that a lot of people have metrics for okay, I want to achieve this, or I want to achieve that. Which really you have to think about it as okay, if you want to achieve this, then what is that going to cost you? What's then, he called that the parrot indicator.

Great that you want your software to ship on time, but what better you be worried about, like a quality, or how many features you have, or that thing if you're going to focus on that metric. Then also, he did a very nice job of distinguishing leading and lagging indicators and how that works. I imagine in a military context to the point that you were trying to understand the output of any operation, I think that military operations tend to be a little more one-time in nature. Whereas, what he was talking about the breakfast factory was a repetitive process that you refine. It depends, I guess on how you're going to apply it.

**[0:06:51.3] JM:** Mike Ovitz is another of your influences. What do you disagree with Mike Ovitz about?

**[0:06:58.8] BH:** Well, he's also a friend of mine, so I don't want to get too much on that. Look, I mean, I think the way he ran CAA was different than for example, how we run a venture capital firm for example. One of the things I talk about in the book is he had a very specific idea about

how people should dress at CAA. I don't know that I disagree with him on that. I think we haven't implemented that here, just because I think it won't work as well, given our strategy.

At CAA, their strategy was we're going to come off as the most professional talent agency. While everybody else is wearing tie-dye shirts and this and that, we're going to wear dark suits, ties and white shirts and that thing. Very effective for him and not so effective for us, but different context. He's in the talent agency context and we're in the venture capital context, but a lot of other things did translate that.

**[0:07:55.7] JM:** CAA was able to package actors and directors and command higher pricing for their production.

**[0:08:04.0] BH:** Yeah. Way higher pricing. Yeah.

**[0:08:06.3] JM:** Within a16z, have you figured out any analogous strategies for containing deal terms, or some differentiated advantage like that?

**[0:08:17.2] BH:** I don't think there's a great analog for us in venture capital for that. What Michael did there was in those days the studios had all the leverage, because if you're going to be in a movie, you had to sign whatever contract they had and that's how Hollywood worked. The top actors in those days got paid the equivalent of \$500,000 of film. I think now it's over 20 million upfront film. That changed – I'm talking in real dollars, inflation adjusted.

The change in salary, the 40X increase was due to Michael Ovitz's packaging. What it did was it changed basically the power structure from the studio to the actors, because all of a sudden, you couldn't make a movie without the actors, because he would have them all. You needed 90% share to do that. I don't think – as well as we're doing, we're definitely not at 90% share. Venture capital is harder to get to that market share, because it's an open system, not a closed system.

**[0:09:24.0] JM:** What have you learned about managing your own psychological state that you did not learn at Loudcloud?

**[0:09:30.9] BH:** Look, I think that these days, I don't know, I have an easier job than I had at Loudcloud. When your company's melting down, it's much harder on your psychology than it is when everything's going well. I don't know that I'm tested as much, but I think – look, I think the big thing is experience helps you a lot in managing your psychology, particularly if you've been through things that are worse than what you're going through. You know where your limits as a person are.

**[0:10:06.0] JM:** What do you do when a portfolio company CEO is suffering from mental health issues?

**[0:10:12.7] BH:** Well, I don't know that we've had one that has had a real mental health issue when you talk about something like bipolar, schizophrenia or some of the real things that people deal with. If they were to have a mental health issue, I think that one of the big mistakes we've made it as a society is even calling it mental health. It's health. If somebody has a health issue, the thing to do, any health issue is that's the priority. If we need to make a change, backfill that, make a temporary fix, whatever we have to do, that's what we have to do. I think that goes for sure for mental health as well.

**[0:10:55.4] JM:** Some people are successful despite very idiosyncratic habits. The first protagonist of your book Toussaint, “Slept two hours a night and could live for days on a few bananas and a glass of water.”

**[0:11:09.9] BH:** Yeah. Yeah. You wonder with these war stories how much stretched just because it is a war story. Yeah, that was the legend of him. Even his enemies would report like, “This guy is literally everywhere. We can't even believe – he knows every single person on the colony. He's everywhere all the time. We just can't deal with him.” He certainly have that level of energy where that would make sense, where he would sleep two hours a night and eat a couple of bananas.

**[0:11:42.6] JM:** If a founder told you –

**[0:11:43.6] BH:** He was very – actually interestingly, he was really, really paranoid of being poisoned. There was a lot of poisonings. His predecessor in the – one of his predecessors who

attempted and failed to lead a slave revolt in Haiti was a guy by the name of Mackendal and he was actually poisoned. That's part of the reason he only ate two bananas, because one knows a banana, you peeled it and you won't be poisoned. Then the other was you don't want to eat anything else.

**[0:12:13.2] JM:** Would you trust a founder who came into your office and said, "Look, I've got this amazing idea. I've got some amazing software. By the way, I only eat bananas and sleep two hours a night."

**[0:12:24.4] BH:** We've had founders with not quite that, but similar things where they would literally stay awake for four or five days straight and then sleep for three days. We have run into that for sure. It's definitely a special personality, but they exist out there.

**[0:12:44.7] JM:** Toussaint was imprisoned by Napoleon and then he died. Napoleon later expressed regret that he imprisoned Toussaint. He should have ruled Haiti through Toussaint, so he said. Here we see the dire consequence of Napoleon essentially making a decision out of emotion, or out of envy. This decision was clearly good for nobody. This was a lose-lose –

**[0:13:10.3] BH:** Oh, yeah. Well, the replacement was Dessalines, who of course within I think three days of taking over, killed all the white people in Haiti, or at least all the French people in Haiti. Yeah. Yeah, that was probably a mistake for him.

**[0:13:24.8] JM:** Focusing on the emotional aspect or whatever was driving Napoleon to make that decision, we see these kinds of decisions all the time in the software industry. Why is it that with all of our technical advancements, we still make these short-sighted negative-summed decisions?

**[0:13:43.9] BH:** Well, look. I think that it's a careful balance, because as we're learning now your gut is very connected to your brain. A lot of times, what you feel is the sum total of all your knowledge and it translates literally into an emotion. It's often that emotion is right. Yeah, sometimes particularly when you get into things like revenge, or jealousy, or any of the seven deadly sins, then you get into a situation where you would be better off using logic and forgetting what your gut is telling you, so to speak.

**[0:14:24.9] JM:** Is it harder to manage your own psychology as a CEO, or as a successful mainstream hip-hop artist?

**[0:14:32.0] BH:** Well, it's funny speaking of mental health issues. Yeah, I think it's actually quite a bit more prevalent in hip-hop artists, probably than in CEOs. In that sense, it's probably harder as a hip-hop artist, not being a mainstream hip-hop artist. It's tricky. One of the things that writing this book brought me to a little bit, which I found interesting is if you have the first thing that you put out is a success, like the last book, *The Hard Thing About Hard Things*, then the next one is scary, because if I just left that book out there then my reputation is fine, it's great, it's whatever.

If I put out the next one, and the analogy I always used to like as Terence Trent D'Arby's second album, I think it's called *Neither Fish nor Flesh*, or some crazy name like that, but it was horrible. Everybody listened to *Wishing Well* and they were like, "Wow, this guy's going to be the next Prince." Then the next thing it's like, he's gone. If he never put out another album, he would have been better off.

I felt like that and that's a bit of a psychological trick, because if you get too much into outdoing yourself then you're going to – that's not the thing you want to think about if you're writing a book, or making an album. You want to think about what is – how can I translate this truth best, not how do I top my last one? That's a very dangerous idea.

**[0:16:00.0] JM:** If you were Biggie or Tupac in the mid-90s, how would you have avoided that confrontation becoming fatal?

**[0:16:06.8] BH:** Not ever hire Suge Knight.

**[0:16:10.9] JM:** Fair enough. What are the lessons of leadership that we can learn from RZA?

**[0:16:15.6] BH:** Well, so the thing that RZA I would say that was most amazing to me and I still don't quite understand how he did it is he had nine guys in the rap group, which is basically six more than anybody else ever successfully did. He was able to – he created a new – you

couldn't run it as a typical group where okay, we have the group. Even when they were getting signed, people were like – there's just not going to be enough money to go around with 90s in there.

What he did was he created this open structure where they could make their own albums. He would still produce them. That that organizational construct of the Wu-Tang Clan with nine people could work. I think that that reminds me a little of open source and it reminds me a little of what's going on in crypto, but it was a very advanced organizational idea, which I don't know that I quite understand exactly how to interpret it yet, but very interesting. Super talented musically obviously, but also a very smart organizational thinker.

**[0:17:25.1] JM:** DJ Premier was perhaps the best producer in the early 90s. He actually studied computers.

**[0:17:32.9] BH:** Dr. Dre. Dr. Dre.

**[0:17:36.2] JM:** All right. Sure. I mean, very different types of producers.

**[0:17:39.4] BH:** Yeah, but I don't think you can put him above Dr. Dre.

**[0:17:42.2] JM:** All right. Fair enough. He studied computer science before he became a producer.

**[0:17:46.6] BH:** Yeah. Well, a lot of the guys, a lot of the producers are very much like engineers. Grandmaster Flash also was – if you watched, they had a great segment on him in Hip-Hop Evolution. You listened to him talk and he sounds like any engineer talking about his childhood. He was fascinated with how everything worked, took everything apart, all that stuff. Yeah, yeah, that definitely – there's a link for sure.

**[0:18:17.7] JM:** Much like in the software industry, in hip-hop there are these technological inflection points, like the MPC for example.



**[0:18:26.2] BH:** Yeah, yeah, yeah. Now definitely lots of them. A lot of music in general. There was the advent of singers and pop music came with the phonograph, which didn't exist in the same way before. You'd like folk music and classical music, but you didn't have this pop music idea.

Then very interestingly, the original LPs the technology was such that if you made the grooves too narrow, the record with skip, so songs were limited at three minutes or less. All those James Brown songs are two minutes, two and a half minutes. That was a technological thing that caused that style.

**[0:19:07.1] JM:** There are entrepreneurs who seem to be completely comfortable in any domain, like Jeff Bezos for example. There are also artists who seem to have this ability for – like Kanye, for example.

**[0:19:20.9] BH:** Kanye, Quincy Jones.

**[0:19:22.5] JM:** Quincy Jones.

**[0:19:23.6] BH:** Ray Charles. Yeah.

**[0:19:24.9] JM:** What are the defining traits that are common between the most flexible artists and entrepreneurs?

**[0:19:33.6] BH:** Yeah. Well, I think it's a little bit the highest level, because you're not speaking the language of jazz, or speaking the language of hip-hop, you're speaking the language of music and similarly, I think you're not in the discipline of computer science, or rocket science, or what have you. You're just in the area of engineering and invention. It's a higher level, broader concept and most people can't get to mastery at that level, but a few very special entrepreneurs can, and musicians can. I think that is very much the same.

You won't see people doing – most people would kill their companies if they tried to do it. Elon Musk did, but he can do it. Most people can't work with Count Basie then write, “It's my party

and I'll cry if I want to," then work with Michael Jackson then write Sanford and Son. Yeah, that's a special guy.

**[0:20:31.2] JM:** The Berkeley AMPLab was one of the most influential sources of technology in the last decade. What can we learn from the culture of the AMPLab?

**[0:20:41.9] BH:** Yeah. That's a great question. I think you have to give a lot of credit to Ion Stoica and Mike Franklin and all those guys who were involved in it. I don't know that I know the answer to that. I do think that one thing that they did was they didn't cross line all the way over into business, but they took themselves out of academia and said, "We're really going to build open source projects that go. We're not going to do the academic, oh, I proved this out and I'm going to write a paper." That wasn't what they were going for.

What they were going for was like, "We're going to write software. It's going to work. It's going to scale and people are going to deploy it." If you look at Spark versus what normally comes out of academia, Spark was a way more finished project. I think that just that attitude really differentiated them.

**[0:21:40.3] JM:** What can startups learn from the dynamics of prison culture?

**[0:21:43.9] BH:** Yeah. Well, question. I'll give you a couple. Let me start with this one. When Shaka Senghor first entered prison, he went to prison for murder he did commit and he gets to prison and they put him in the quarantine area. Then he comes out of quarantine with whatever, five or six guys who also came out of quarantine. First day in the recreational area, first day in prison, one of the prisoners walked up to another prisoner and stabbed him in the neck. Pulled the shank out, the prisoner bled to death and died and the other guy threw the shank in the garbage and walked to the cafeteria and had a sandwich.

I'm talking to Shak about that and he said, "Look, when I saw that, I had to ask myself, "Could I do that?"" I said, "Well, you were in for murder. Of course, you could do that. You already did that." He said, "No, I didn't do that. What I did was I'm in a drug deal, a guy jumps out of the car, he's rushing at me, I have a gun in my pocket, I react, I shoot him. That's very different than spending a week filing a 2-liter bottle into a weapon and then deciding whether you're going to

stab somebody in the stomach or stab them in the neck, or whether you're going to wound them, or you're going to kill him and then kill him and keep moving to the cafeteria and have a sandwich. I couldn't do that." He said, "I had to ask myself, could I do that, because clearly that's what you needed to be able to do to survive in this place?"

If you think about that you go, well clearly, it's experiences like that new prisoner orientation that make prison so violent. That sets the culture. As soon as somebody asks, "What do I need to do to succeed?" And that's the answer, then you've set the culture in a very violent way. Every company in the world when a new employee walks in in their first day week on the job, they're going to look and see who's successful in that company. However that person is behaving, that's how they're going to behave and that's your actual culture.

Your culture isn't the values you have on the wall, in your all-hands meeting and what you say, or your values in the performance review. None of that is anything. That's just whatever you wanted it to be, but that's not what it is. What it is is what do I need to be successful here, because that's what I'm going to do. What you do is who you are.

**[0:24:11.7] JM:** At Loudcloud, Mark Cranney changed your culture in a way that you would not have expected. It was a cultural change that you actually needed. I mean, you were in a spot where you absolutely needed a culture change. At a16z, do you look for people like that, despite the fact that you're doing well?

**[0:24:31.8] BH:** Oh, yeah, yeah. We're doing well, but we do different things and we need to get better at things and so forth. For example, when we went to do the bio fund, we knew we didn't have anything about that culture, even from a venture capital standpoint and that the entrepreneurs and bio are scientists and they're a lot of times doing science as opposed to engineering. We didn't have a science culture. We had an engineering culture.

We brought in a scientist, Vijay Pande to help us get to that but. Yeah, absolutely. As the business evolved, you end up needing new elements. It's very hard to create a new complex cultural element without incorporating outside leadership. One of the great learnings I had from Toussaint, because it's like, well how do you go from a slave army to a great military force? Something nobody had really ever done before.

One of the great tricks he pulled off, which I'm sure nobody had ever tried before was he incorporated the enemy into his army. He incorporated French and Spanish and British soldiers as his lieutenants alongside guys who had been slaves and enslaved by those same people. That got him that European military culture, those elements that he really needed. He ended up doing that better than they did even, because he picked the parts of that culture that were really powerful and he kept and he ran them very tightly.

**[0:26:08.6] JM:** Netflix sees itself as a pro sports team, not a family. Is this a universally good cultural idea, or should some companies cultivate a sense of family?

**[0:26:20.3] BH:** Yeah. To give you a quote from my old boss, Jim Barksdale. He used to say, "Look, this is not a family, because I'm not your daddy." What he meant by that is your daddy's not going to fire you, but I am. I think the family metaphor is a little tough in business, because you have to be willing to fire people and that's a very dysfunctional family if you start firing your family members. I do think the sports team is a better analogy.

**[0:26:50.4] JM:** When you were building Loudcloud, none of the management books you read were useful. What about books on psychology?

**[0:26:58.1] BH:** Yeah. I mean, I do think – well it's interesting, because the organizational psychology books which I looked at a lot for this book, because they are more about culture, I think our – I think they're useful. They tend to be a little academic, as opposed to practical. They have limitations. I mean, I think not all management, but high output management. There's a great book obviously, *Only the Paranoid Survive* is great book. There are some good management books.

I think a lot of management books though as I said, focus on the easy things and they make things into 3-step methods that aren't three-step methods and that thing and that's not useful. Yeah. A lot of psychology I found useful. I mean, in fact, *Thinking, Fast and Slow* by Daniel Kahneman was very, very influential in a lot of my thinking about how inclusion actually works, goes. For sure. Yeah.

**[0:28:02.1] JM:** Is *The Lean Startup* a book about strategy, or a book about tactics?

**[0:28:07.6] BH:** It's a book about tactics, but impacts strategy. The way I would think about *The Lean Startup* is a startup's core issue is finding product market fit. That's a very, very difficult complex task that requires incredibly precise communication among the people you're working with. You generally don't have a lot of leadership in any company that can get you to that, even if you're a 10,000 person company, you probably have only a handful of people who can get you product market fit and then a new product.

If you expand your startup, like say by putting in a lot of money, let's say whoever, some big giant fund gives you a huge check to build we everything or whatever, once you get to that, the danger of it is for any entrepreneur, it's pretty hard to distinguish your best two ideas from your 9<sup>th</sup> and 10<sup>th</sup> best ideas. If you have enough money, you try all 10, but the problem is you might have enough money, but you don't have enough leadership and you don't have the communication to find product market fit on 10. No way.

What typically happens is if you do 10, none of them are good, as opposed to one of them being good. Whereas if you do one, that one will be good. It might be the wrong idea, but at least you can get it home. In a sense, it's a book of tactics that helps you get to a better strategy, is the way I might phrase it.

**[0:29:49.2] JM:** Is there anything about the book *Zero to One*, that when you read it, struck you as particularly notable, or insightful, or particularly inflective for you things that were new?

**[0:30:04.4] BH:** Yeah. Well, because I know Peter and I had also read his class notes, it's a little – Yes, those ideas when I first heard them from him, many of them were really interesting. I think the monopoly versus commodity paradigm is a really great lens through to which that – to think about how valuable a business is going to be.

Now he's stated in the starkest terms imaginable, but the thing I really liked about it is it's confusing, because right? Whatever, it was Eric Schmidt at the time, but Larry Page or Sundar would say like, "Oh, no. We don't have a monopoly." There's all this competition for search, but of course they do have monopoly.

By the same token, somebody owns an Indian restaurant is going to say, “Oh, no. We're very differentiated. We've got these red tablecloths. Everybody else has white tablecloths and all that thing.” It's actually the opposite of how it sounds. The more somebody tries to tell you how different they are, the less likely they are to be a monopoly. That'd be a very valuable insight.

**[0:31:14.2] JM:** A quote from your book, “The extent of one's courage or cowardice cannot be measured in ordinary times. All is revealed when something happens.” We have been living through a ten-year bull market. Many of the founders that you probably encounter have never experienced a significant downturn. How do you test that such a founder will be durable to adversity?

**[0:31:39.1] BH:** Oh, you don't know. The only thing to test a founder is a test. Yeah. I mean, I think the only way to test somebody is to test them. Some people who come across as you might think they're soft or whatever can pass a test. People have come off as super strong and tough-minded can't. That goes even on little things, like firing an employee. The people who are good at it are often not the people you expect.

**[0:32:12.4] JM:** Oprah is successful as an interviewer, because she's able to navigate to the most difficult parts of a person's background. Do you ever try to do something like that when you're evaluating a founder for an investment?

**[0:32:25.9] BH:** Oh, yeah. All the time. Yeah, definitely. One of the things that we do is we don't let them start with their narrative. We always start them on our narrative, which is who are you? The reason for that is we can ask some questions. It's much more difficult to anticipate questions about who you are, than your business, because you've prepared to answer those questions all the time.

We find that to be very instructive in terms of just understanding like, okay, what motivated this person? What did they run into in their life, like how'd they overcome it? Did they overcome it? How do they interpret it? Very revealing as to how they'll deal with it the next time.

**[0:33:15.9] JM:** What is something subtle that you measure at a16z?

**[0:33:19.9] BH:** Subtle. It's a good question. One of the subtle things – I mean, I don't know how subtle they are, but we do a lot of measuring of how – of network engagement, how engaged our own network is. Then we care about that, of course a lot with the entrepreneurs and so forth in terms of their products. There are subtleties how customers engage with a product that are very, very important.

Like at a course level, it's like yeah, we have an engagement level of this and it's like, well what are they doing? It could be anything. Oh, they're logging in. Are they using it, or are they just logging in? Or are you spamming them and then they – that causes them to log in and they stay there and all – It gets subtle in the measurement of that, I think.

**[0:34:14.8] JM:** Venture firms often have a practice where the partner writes a deal memo to justify an investment, or just to propagate information internally. Does the media branch of a16z serve a similar purpose, where it has internal value as well as the external value?

**[0:34:33.7] BH:** It does for me. I read and listen to all the stuff that we put out. It's just a good way to understand our own thinking, which a lot of it is original. I'm sure that's true for other employees as well. I mean, I don't know who all reads what on our site, but I imagine most employees read a lot of it.

**[0:34:58.7] JM:** You profile Don Thompson in your book. He's a McDonald's CEO and he was one of the best engineers that worked at McDonald's before he became CEO. It was not actually the engineering work that led to him becoming CEO, it was his interactions with regional managers and understanding what went on the ground.

I think this bears – there's some resemblance between McDonald's franchising and modern marketplace companies where you have Uber, or Airbnb, or Thumbtack and these companies where there's all these constituencies within it. The idea of these labor platforms is – labor platforms as a technology business is a new thing. Give me the biggest lessons you've learned about how to build a sustainable labor marketplace.

**[0:35:49.4] BH:** Yeah. Well, I think that one of the keys and this is one thing that McDonald's was brilliant at, it's a labor market, but nobody wants to be thought of as labor – People want that dignity that and they want to be invested in. That can be whether you're driving for Lyft or Uber, or whether you're doing experiences on Airbnb, or whatever it is you're doing. It's very different to say, “Okay, you do a job and we're going to give you some money.” Than what McDonald's says, which is, “We're going to come in. Bring you in.

We're going to train you to work. Not just work at McDonald's, but to work period, like how you show up on time, how you wear clean clothes to work, all that.” They really invest in – and their employees are kids.

I think one of the stupid things about some of the antagonism that they get it's like, “Well, oh, you can't support a family of eight on McDonald's.” Just well, most of their employees are 16 to 21. These are not those kinds of jobs, but they do invest in those people and that – and I think Don told me and I might get this number wrong, but 60% of McDonald's franchisees, I mean, people who own McDonald's restaurants started out as early employees. That's how effective that training is in building not only loyalty, but success over time. I think those lessons need to be in some cases, learned again and in some cases are being re-learned, but it's very, very powerful.

**[0:37:31.9] JM:** In the 90s, Apple was widely criticized for a vertical strategy. People wondered why Apple was not going horizontal. It took years for the vertical strategy to come to fruition. Tell me a technology company that is as misunderstood today as Apple was in the 90s.

**[0:37:52.8] BH:** Yeah, that's pretty hard, because everybody got that one wrong. Well, okay. I'm going to – I don't want you to take this the wrong way, but I think that WeWork is getting misinterpreted and I don't – I'm not saying that they're necessarily going to make a comeback. I think that the way WeWork is written now is it's just like a straight-up scam. There were some things that they did exceptionally well. They had a very big vision about how they were going to change the world and all that and they attracted tremendous talent and capital. You have to give them some credit for that.



They also did something that is very rare in the industry therein, which is they created a consumer brand for a commercial real estate company, which like name another one. That's a real accomplishment. I think that sometimes people when things go wrong, they look past everything. In their case, they certainly have. Now, they do have a lot of real issues, so I don't – and then they no longer have the founder, which I think could probably be the fatal blow.

**[0:39:00.8] JM:** The two most thriving open source distributed systems ecosystems are Kubernetes and Bitcoin, arguably.

**[0:39:09.8] BH:** Yeah, that's an interesting to depict. Yeah.

**[0:39:13.1] JM:** What's strange about them – I mean, you could – Spark is another one, I guess you could say, but there's almost no cross-pollination between Bitcoin and the industrial distributed systems projects. You would think there's great knowledge to be shared between these groups. Why do you think that is?

**[0:39:33.7] BH:** Well, so Bitcoin is different. There's distributed with shared state and there's distributed without shared state. I think that Bitcoin being shared state distributed is a different animal than Kubernetes in that sense. Yes, they're both distributed, but having a common state in a distributed system just causes you to make a lot of different design decisions.

Then the other thing about Bitcoin of course, is that the security requirement is much higher and the ability to survive active attacks is much higher. I think, yes, they have distributed in common, but they have a lot of things that are different as well. That's probably why they don't have whatever, common codebase, or something like that.

**[0:40:22.7] JM:** It's a spectrum, right? I mean, you have layer-two stuff and then until the state propagates to the entire network, it's essentially non-shared state. You'd imagine the paradigm –

**[0:40:34.3] BH:** From a transactional standpoint, right? There's one single source of truth that never diverges and that's the big feature area, a very big feature of the platform. To achieve that particularly with distributed control, where there's no central entity who dictates what's going on,

it's a design requirement that Bitcoin has that and Ethereum has that, like Kubernetes just doesn't.

**[0:41:07.6] JM:** I still find surprising. You walk around the Kubernetes conference and you ask somebody about Bitcoin, they still think it's a joke.

**[0:41:13.7] BH:** Yeah. Well, I think that everybody thinks everything they don't understand is a joke. That's the beauty of technology, that's why you can keep making money, investing it. I mean, it's – I mean, you remember in all the smart people who thought Facebook was a joke in 2004, 2005, 2006, 2007, 2011, 2016. Now not only is it not a joke, but it must be stopped by the US government.

I just think people underestimate things that they don't understand. I mean, what I always say to people who go, “Bitcoin’s a joke.” I'm like, “Well, go ahead and why don't you write a piece of software, put it out there, don't touch it, let it run and then see how much value will it collect over a 10-year period?” Can you collect over a 100 billion dollars’ worth of value and hold it? It's just such an impossible thing that Bitcoin pulled off. How can that be a joke? That's some serious magic right there.

**[0:42:15.6] JM:** Toussaint lead from the front and was wounded 17 times. Genghis Khan was surrounded by his army, which protected him. Contrast those two tactics.

**[0:42:26.4] BH:** Well, I think that although they were very similar in some ways and that Genghis Khan – They were trying to achieve different things. I mean, I think the thing that Genghis Khan did was each unit in the army was interchangeable. They were all cavalry. They were able to ride in a circle. Then from a communication standpoint, having the leader in the middle made sense. I think when Toussaint led the charge, it was a cultural statement. It was very similar to Alexander the Great. It was like, “Look, this is how important this is. This fight for liberty. I'm out in front.”

I think with Genghis Khan, the things motivating his army were – they were rolling through, they were pillaging, they were getting rich, there was a different – I would say the incentives were different. Genghis Khan's incentive was to win and get rich and build a stronger and stronger

army and a bigger and bigger empire. Toussaint was a revolutionary who was fighting for liberty and very importantly, outlawed pillaging among his soldiers. When he outlawed it he said, "Look, you can't pillage, because remember, we're fighting for liberty. You can't take somebody's liberty and be fighting for liberty. That's a cultural problem."

In his case, actually led to him getting this amazing support, because he was the only army not pillaging. The European armies were all pillaging and raping and doing all this stuff. It was so powerful that the white women in Haiti in the colony supported him over the Europeans. They even referred to him as father, so that's how they felt about him. To get that chain, like what an amazing cultural statement he made, but that's what he was going for as the revolutionary, as opposed for the conquering army, which is what Genghis Khan was.

**[0:44:30.4] JM:** Is there a lesson about mergers and acquisitions to learn from the Mongol Empire?

**[0:44:34.9] BH:** Oh, yeah. Definitely. I mean, I think that mergers and acquisitions and inclusion in general, I mean, I think that what Genghis Khan did just amazingly well was he could see, even though he was a Mongol, he could see in the Chinese, or the Europeans the talent that he didn't have and that he needed, which I think companies have a hard time doing that today, where if you're not whatever. If I'm Chinese, I need Chinese employees. If I'm white, I need white employees. If I'm a woman, I need women – Everybody's trying to hire two themselves.

He could see talent he didn't have. He personally didn't have. Then he went the step beyond that, which is he made sure that once he brought that talent in, they were first-class citizens, to the point where if there were orphan kids in the guys he was incorporating, he would adopt them into his own family, just to let everybody know. Not only are they part of us, they're part of the Khan, the Great Khan. Khan, not Con, by the way. Genghis Khan, as in Genghis Khan. Yeah, he was amazingly forward-thinking on that.

**[0:45:42.9] JM:** It's clear that you long for a world with improved race relations. Today, there seems to be a debate about the ideal relationship between races. Can you give me some advice on how to navigate relationships with other races?

**[0:45:59.8] BH:** Well, look. I mean, I think that people get – I think the worst way to do it is assume everybody is racist, not that everybody isn't racist. People have their racial biases and so forth, but I think if you understand people who are not like you, then there's a huge benefit in that, which I say. Benefit not only in a personal context, but in a business context. You really actually have to understand. You can't just say, "Oh, well I want the gold sticker from the New York Times for hiring women, or hiring Hispanics or whatever. I'm going to hire them. I still don't understand them. I only understand me." Then that's not good for them and it's not good for you.

I think that's what most people do right now. The right way to approach it is to understand okay, how are we the same, but how are we different? Then, do I really get that difference and do I value it and do I understand the things that that person can do that I can't do? That's I think how you get to very, very powerful solution in life and business. If you do the other thing, right? If you're just literally applying racism in reverse or sexism in reverse by making gender and race your criteria, you're going to get that. People are not going to be able to un-see that that was what it was when they came in.

**[0:47:22.6] JM:** Thank you, Ben.

**[0:47:23.6] BH:** All right. Thank you.

[END]