

Disrupt Yourself Podcast

EPISODE 367: CHRIS DIXON

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Welcome to the Disrupt Yourself podcast. I'm your host Whitney Johnson, CEO of Disruption Advisors, where we help you build high performing people and teams, -- because organizations don't disrupt, people do. Meaning, the fundamental unit of that disruption - it's you.

Many of us feel comfortable navigating a city. Whether it's New York or Kyoto, the rules remain mostly the same. Count the amount of blocks you've walked, remember that the E train runs express to Manhattan, if you see the Duane Reade, you've gone too far. We can get lost, for sure, but there's a joy in knowing that you have the freedom to get lost. A wrong turn could mean your new favorite Mexican restaurant, or a new friend.

Now think about how you navigate the internet. Think of all the websites in the world as streets and stores. Think of Safari or Chrome as your metro. We don't explore and get lost as much when we stay within one small neighborhood - Facebook, Twitter, Instagram, LinkedIn. They control who we meet, what we see, what's on the menu and the best train to get there.

Our guest today is fighting back against this centralization of our virtual city. Chris Dixon has been a partner at Andreessen Horowitz since 2012, most recently in charge of its crypto investing wing. From that birds-eye view, Chris has taken the charge on reimagining how we interact with the internet.

And now he's out with a new book, *Read Write Own*, all about the Web3 revolution on our doorstep. So – a lot of buzzwords, and a lot of metaphors. But what does it all mean for you? I hope you enjoy.

Whitney Johnson: So, Chris, we're going to get to blockchain in just a moment. But I want to start first with your childhood. Where did you grow up and what was your first experience with the internet?

Chris Dixon: I grew up in Ohio in a sort of a smallish town called Springfield, Ohio. My parents were professors, English professors at the local university, called Wittenberg. And I, you know, I got into computers really early. I was given a kind of an older computer and started programing and got really into it. And then, even in the sort of late 80s, got into the internet a little bit because my parents were academics and they had these, you know, for those who know the history of the internet, it began with universities. And they had, it was text based. You had to type, you know, but you could, like if you were into programing, you could like download programs and talk. There was a thing called Usenet, which was sort of like, kind of, you know, forums or discussion groups for technical topics. And then the 90s, of course, you know, as most people who lived through that era, I got very excited about it. And I, eventually, of course, I've now spent my career working on the internet. But in the 90s, I think I really fell in love with the idea that, it was, you know, that the internet is this, it's I sort of see it as inevitable that we would have connected all the computers in the world. Once you have computers, why don't you connect them like all science fiction does that. And it just seems like an obvious thing to do. But the way that we connected them as a kind of decentralized, community owned network was, to me, really exciting and interesting. You could have imagined an alternative history where sort of the internet was controlled by AOL or some other big company. And so that was really, you know, to me, it felt like, and I think we saw this as sort of a golden period in the 90s and some 2000 of innovation, entrepreneurship, you know, as a kind of flywheel for creativity and entrepreneurship, I guess, is what really excited me about the internet.

Whitney Johnson: How old were you when all this was happening, Chris? Were you like ten?

Chris Dixon: I was in my 20s. No, sorry, in the 90s I was in my 20s. Yeah. So, I finished college in 95. And so, you know, so then I worked a little bit professionally as a programmer and then discovered the world of entrepreneurship. And that for me, that was kind of a revelation that you could start a company and, you know, work with great people and create products and just all these exciting things. And its sort of, you know, this kind of just exciting, you know, sort of risk taking and I fell in love with that.

Whitney Johnson: So, it is interesting. Okay. So one thing that you just said that I want to ask you, did you have a favorite science fiction or fantasy book as a child that was sort of capturing your imagination as you were thinking about, because your parents are English professors, maybe you read a lot, you've got the internet, but what was what was happening in young Chris's brain that was capturing your imagination?

Chris Dixon: I, you know, I really liked programing computers. I think that programing is sometimes misunderstood as as sort of pure engineering. I think it's; I think of it as a much more creative activity. And so, I would sit around, and I think if you talk to people who got into it young, they also would say that. And so, for me, it was kind of my canvas to do, to be creative. And so, I would, you know, come up with ideas of like, I would make games and fun apps and come up with ways to build them and work with my friends on it. And it was just, you know, it was like Legos or, I don't know, something like, it was just this really kind of, for me, it felt creative. And so, I really fell in love with that. In terms of books, I got, you know, I used to read, very much into science. I was interested in, I ended up studying philosophy in college because I got interested in kind of cognitive science and AI and philosophy of mind and logic. There were some books that were really influential on me. Like there's a philosopher named Daniel Dennett and a guy, a computer scientist named Douglas Hofstadter. And they, Hofstadter wrote this book called: *Gödel, Escher, Bach*, which was like probably the most influential book on me, which was about the about kind of the commonalities between Bach, the composer, Gödel the mathematician, and Escher the artist, and just sort of like, I guess, ideas, things. I mean, I also read a lot of science fiction, like Ray

Bradbury. I loved *Foundation*, Isaac Asimov, I don't know, I was into that kind of stuff, but more, I would say more philosophy, science fiction.

Whitney Johnson: Have you seen *Dune* (Part) Two yet? That's the question.

Chris Dixon: I haven't. I'm going with my son tomorrow. We got tickets in the Imax, so I'm excited for that.

Whitney Johnson: All right, so you said that your imaginations captured your reading. You're creating. This is a very social activity for you. And then you discover that you can become an entrepreneur and build a business. Can you just tell us about one of your first entrepreneurial adventures? Well, ventures and adventures. What did you do? What was your ideation process?

Chris Dixon: Yeah, it's funny. So, I discovered this a little, I mean, like toward the end of the dotcom bubble kind of era. So, around 1990, I mean, I'd done, I'd been working as an engineer. But then I said, I'm going to do it myself. And I tried to do a few things that were kind of bootstrapped. I built the software product called... So, when phishing started, um, phishing, p, h, phishing.

Chris Dixon: But in sort of like early 2000 people started getting these emails, like fake PayPal emails. And so, me and my friend created, we didn't have any money or venture capital, but we just did it, you know, with ourselves. And we hired a few people, like with our savings and we created a product that was called Fraud Eliminator that was basically would detect phishing and block it, and that actually did reasonably well. And then I, as I was thinking about it, I was like, why am I just blocking phishing and why not block like, why not block spyware? And there were all these bad problems. The internet was kind of worse back then. And like if somebody has a fraudulent pharmacy or something like some crazy, you know, there's bad stuff on the internet, why don't we block that too? And that actually led me to end up raising venture capital and starting a company that that was transformed into this company called SiteAdvisor, which was really my first genuine startup, which was a is basically a tool, like you download this toolbar and it would overlay on search results and in websites, and it would basically give you a big red warning if you're about to do something bad. But to do that, in order to do that, it was hard. We had to go and like crawl the web and analyze websites and do all this. We did a lot of work to get the right ratings. And that was so, that was early 2000. That was my first sort of real startup. We ended up getting acquired by McAfee, the large security company, in 2006. So that was, you know, that was my real kind of entrepreneurial beginning.

Whitney Johnson: Well, yeah. When you say real, though, it's like, that's my real first job. But you'd had like part time jobs for five, ten years leading up to that.

Chris Dixon: Yeah, I'd been thinking about it.

Whitney Johnson: Like I was cook, I was a server. I was, you know, I delivered papers. What's a lesson that you learned from starting SiteAdvisor around building a business, around working with people that you still carry with you today?

Chris Dixon: Well, I think, you know, I think you as you, you're much deeper on this topic than me and write about it. I think that sort of the team, you know, I mean, this is almost a cliché, but it's very true, is that the team is everything. And so, I spent, to this day spend, you know, 50% of my time kind of finding people to work with and recruiting people. But one thing you learn when you're an entrepreneur is you just end up, especially when you're in an early stage, you just end up pitching over and over and over. Meaning first you pitch your VCs to raise money and then you start. And I was like, great, I'm done pitching. I'm done saying the same hour-long speech. And then I started recruiting employees, and then I started recruiting partners, and then I started explaining it to the press. And it's just like, I just did the same, you know, it was just basically I was just constantly going out and trying to, you know, sort of like you're just trying to kind of create a movement in a way. And you really need and especially that early core. We only had about 20, 15, 20 people when we were acquired, but they were really, really good. They've all gone on to do interesting stuff.

Chris Dixon: Some of them actually started later on, started another company with, so really spent, like I used to. It was in Boston and, and we'd go, this was like 2004, internet was out of fashion, and we'd go over to MIT, and we

would just like go to every... I would literally just sit down at the lunch table and just start meeting people and then, like recruiting people. I was like, it was just all about the people. And then I heard so and so was really smart. And then I'd go just like visit that person and start talking to them. And it was, I saw it all as like a multi-year, like a few of the best people I got out of MIT probably took me a year and a half of just constant, you know, going back. A lot of, I've learned a lot of recruiting I think has to be kind of outbound, especially in these early-stage startups. Like I just sort of like, who are the best people in the world and how do I go find them? And it's just transformative if you take that approach. There's many, many lessons from startups. That's a big one.

Whitney Johnson: Okay, so, Chris, one of the things that's really interesting for me is, I'm thinking about in your book, and I know we're talking about, you know, protocol networks and corporate networks and blockchain networks. And we'll get to that in just a second. But something you just said, which was really powerful about how you went about recruiting people, that you would just go over to MIT and start talking to people and meeting people. In your book on page 17, with a Roman numeral 17, you say, "Pause for a moment. Social networks, whether in person or online, are the essence of human connection and coordination." It's fascinating to me how you you're living that online, but you are absolutely living that out in your in-person world. Interesting to observe that.

Chris Dixon: It's a very interesting point because as much as I am, you know, obviously an internet person. If you want to talk about, I thought the whole Covid experience was interesting where at first, I thought, okay, now we can live in this remote world and do everything from Zoom, and people can live wherever they want. I've come full swing back to being, to realizing, to believing it's very hard to make work, and that ultimately there's no replacement for in-person human connection.

Whitney Johnson: Well, it's interesting, there was an article. I think it was in *Nature* not too long ago that said that you can do a lot of sustaining innovations, and we'll talk about that in a minute. But a lot of sustaining innovations with remote work. But the breakthrough, the real disruptive innovations happen with in-person work.

Chris Dixon: So yeah, I think that's right. I think it's the sort of the creativity, the serendipity. There's that aspect, the sort of intellectual aspect and then the emotional aspect. Right. It's very hard to, you know, I mean, you can sustain like, I have people on my team who I worked with in person for years, and now we work on zoom, and that's fine. But would we ever have built that original relationship over zoom? Right? I don't know, it's fascinating.

Whitney Johnson: Okay, let's go to your book. But before we have you talk about the book; I want to read the very first epigraph of the book as an introduction to this topic. So, this is from Freeman Dyson. And the book's obviously, actually, since we've got video, it's, *Read, Write, Own*. It is a terrific book everybody. Here's your first epigraph, "When the great innovation appears, it will almost certainly be in a muddled, incomplete and confusing form to the discoverer. It will only be half understood to everybody else. It will be a mystery for any speculation which does not at first glance look crazy. There is no hope." So, with that in mind, I would love for you to talk about the transformative power or potential of blockchain and really break it down for those of us who are smart and educated but don't know much about this.

Chris Dixon: Yeah. So, I would say a couple of things. So, with respect to that quote, I think I have a part in the book where I talk about what I believe are two types of innovations, and I call I call one type inside out and the other outside in. And the idea is that and this especially applies to software and computers, that there are certain innovations that inside are inside out, meaning they come from established institutions. So, you know, smartphone is a good example. Apple, you know, made the iPhone and then Google made Android. And then it sort of propagated out from those established institutions. AI has been something that's been developed for decades at universities and big corporate research centers. There are also outside in and that's where I've spent my career. So one, I think really important example of outside in is open-source software. So open-source software began as an Aids like kind of a radical political movement as a bunch of people that didn't believe in copyright, but then transformed into a pragmatic technology movement. And today, you know, something on the order of 95 plus percent of software that runs in the world is open-source software. People may not know that, but like Linux is by far the dominant operating system in the world. Every Android phone runs Linux, every back-end software runs Linux, new devices, and so and so open-source software had you sort of looked at it in the 90s to the Freeman Dyson quote, you'd say, what is this? This is like a bunch of people on the internet with no company behind them, no product managers, and they're trying to build an operating system to take on windows.

Chris Dixon: Like, it's weird right now if you analyze it and you really understood it and you spent the time, you'd realize, well, okay, so they're chaotic and it's less organized, but they also have the ability to tap into all of humanity, right? Anyone in the world who's smart can come and can add a little piece to it. And so, I, it's like basically software ends up being like Lego bricks and you can assemble them and build bigger things. And when you have, you know, 8 billion people with access to that, those Lego bricks, magic happens. Right. And so, I've spent my career kind of trying to looking at these kind of weird outside in innovations and trying to understand them and make sense of them. And that's what my book is about with respect to blockchain. So, I think blockchains are like open-source software and that they came from the fringes. They began, I mean, very fringe as pseudonymous white paper in 2008 by this character, Satoshi Nakamoto, who was sort of the original, on Bitcoin was where the original idea of blockchains came. And then today, you know, it's a global movement. It's you know, hackers around the world, many of it, much of it happens outside of established companies.

Chris Dixon: And so, you know, I've spent the last decade, um, in that, you know, in that world full time and for the last five years and thinking about, you know, sort of making sense of it. And in this book, I try to share what I've learned and help others make sense of it. So, a very simple way to think of it, I think, is blockchains allow you to create new internet services where there's no gatekeeper. And so, what do I mean by that is you take an internet service like Facebook, there's a gatekeeper meaning the company Facebook and that that what that means is they have both. They get most of the money. Meaning, so, Facebook, you know the top five social networks last year made \$150 billion in revenue, and they kept that revenue, even though the people that do the work on those social networks are the users. You don't go to Facebook or TikTok or Instagram to see, you know, Facebook's content or TikTok's content. You go to see other users. So, they were very cleverly designed systems where by being the gatekeeper, they get all the money or the vast majority of the money, and they also get control. They can change the algorithm, they can remove people, they can do what they want. Right? Blockchains will let you make social networks, games, financial services, you know, whatever you might want to any kind of internet service that you might use today but do it in a way where instead of being owned by a company and having a gatekeeper, it's owned by a community.

Chris Dixon: And I go through in the book, in the first sort of part of the book, I walk through the history of the internet because this might sound like a radical idea, but it's actually how the internet began. The internet began with community owned systems. The World Wide Web is a system built on top of the internet that has no owner, has no gatekeeper. And I argue in the book that that led, having no gatekeeper, led to vastly better economics and incentivized innovation, incentivized creativity. But that over time, as the internet has become more consolidated around these big tech companies, we've lost a lot of that. So, sort of the first half of the book kind of diagnoses the history that goes through the history and diagnoses what happened. I think that part is probably less controversial. It sort of, I think it's, you know, internet veterans, I think would generally agree with that first half. In the second half, I offer my prescription for how to fix that. That might be more controversial. And it involves blockchains which, you know, are controversial. But and I explain in detail how they might fix that and then go through in detail a bunch of applications like social networks and games and other things and explain how those might work.

Whitney Johnson: So can you... One of the things I thought you did, just such a beautiful job of just giving a simple and you've kind of touched on this, but the difference between a corporate network, a protocol network and a blockchain network, and maybe use the analogy of the city because everybody understands the construction and the architecture of a city and, and talk about that at a high level to help people say, okay, I'm following you. I get the idea of agency that comes with a blockchain network. But help me understand what that looks like?

Chris Dixon: Yeah. So maybe just quickly on definitions and then I'll jump into the city. The protocol network. So, the internet began with what are called protocols. I call them protocol networks, which are the email and the World Wide Web. So, these are these are systems that are built on top of the internet. People sometimes use the web synonymous with the internet. It's not. It's a system on top. When you go to your browser and, and go to a website that you're using that system. And the key feature of that system is there's no intermediary, there's no gatekeeper. You're going directly to its sort of a I think of it as a public space. You're in a public space and you can build a private space. So, when I go to google.com, I'm now in Google's sort of private space. But the web itself is, is a public space, much like city streets. So, this is where the sort of city analogy comes. Like I'm in New York City right now and I love New York City. I've lived a long time in New York City, and I love New York City, because I think it

has a wonderful balance between the public and private space. The parks, there's streets, you know, open streets and then, of course, there's also the private space, which means there's entrepreneurship.

Chris Dixon: There's a pizza shop, there's a chess shop, right? There's a bookstore. And I think if you, you know, those two reinforce each other. Right. Like the fact that there's public space generates foot traffic, and the foot traffic allows the entrepreneur to build a pizza shop. Right. And I think that and the city is very good at doing the public things like ensuring the streets are safe and open and free and clean and free, and free by the way, not, you know, charge for them, and the parks and everything else. And then I would argue the private sector is very good at the other thing, which is sort of coming up with a new type of restaurant like, I don't think that would be something the public sector would be very good at. And so, it's got a nice balance. The other key feature of a city is its bottoms up. The successful cities. There have been a lot of attempts to plan cities, but if you look at the great cities, you know, France, Paris, London, they grew from the people, right? They have mayors. And policy is very important. I'm not dismissing that. But ultimately the energy and the creativity came from the bottom kind of organically. Right? They're almost these sorts of organic structures.

Chris Dixon: And I think of the early internet as being very much like that. So, the World Wide Web, you know, I go to Google and I'm sort of walking on public streets. There's no one standing in between me and Google. There's a whole bunch of, a lot of the 90s internet, the sort of early internet was sort of these public networks, and then you'd have sort of areas you'd put a nonprofit, an artist might make a website, a business might make a website, and you can do whatever you want, just like a city. I mean, there's laws and rules and things, but within the laws, you can do what you want, right? You can create things. And you own a little plot of land like, like when you own, you know, I own Sea.org, and that's my plot of land. And I can put up art or I can do this. And look, if I decide, if I have an audience, I truly own that audience. No one can insert an algorithm in between and take it away the way they can on a social network. I can choose to charge them for subscription, and if they do, I get all the money. That doesn't happen on these big social networks. And then fast forward to today. I think of it much more.

Chris Dixon: I analogize it in the book to theme parks. I like theme parks. They're fun. I don't think we'd want the world to be built that way, where a single company controls the entire experience end to end. But that is what we live in today. We have basically an internet. Now there's five companies that control 95% of the traffic and the money and I worry that, you know. AI is an amazing invention. And I think it will be very important. And I'm pro AI, but I do think it will tend to further consolidate the internet because it rewards companies with large troves of data and, and capital. And so, I worry that we've kind of lost a lot of what made the internet great. And, you know, and I started feeling this way about ten years ago. I go through it in the book. I think that's when the real reversal happened. And things started to really trend this way. And I was working on this sort of that, you know, obviously on sort of traditional internet companies and things. So, I was sort of part of the problem in a sense. But at some point, I realized this. I don't think this is headed in the right direction. And then I discovered the world of blockchains. And to me, this is a potential antidote.

Whitney Johnson: Yeah. So, it's interesting when I hear you describe this and the idea of, you know, do you really want to live in a theme park all the time? Like, it is fun, but you don't have control over it. And there's something really important and fundamental of what you're talking about, which goes to agency. This idea of allowing people to be agentic and, and the internet that you grew up with, it allowed for agency and this sense of controlling your own destiny. I mean, you can't control, there's a lot that you can't control, but there's just a greater sense of agency. And while Facebook and Google are all fun, like you said, a theme park, but there's an element of if you surrender your life to that, you're surrendering some agency and sense of deciding what you want the world to look like.

Chris Dixon: Yeah, I think so. I think you I think you lose agency. I think you also, I believe, you know, I'm a big fan of, I read a lot of history and I read a lot of history of innovation. And a lot of innovation I believe comes from kind of the fringes. I mean, there's a reason the Wright brothers, you know, had a bicycle shop and they weren't in the, you know, like there's just sort, like computer science. Computer software has a long history. You know, Steve Jobs and Wozniak were flip flop wearing hackers at the Homebrew Computer Club. Right? Tim Berners-Lee, the inventor of the World Wide Web, was a physicist at CERN. Like, none of these people came from central casting. I'll just tell you a very practical example, which is the Apple App Store is now the gatekeeper and they, they kick out a lot of apps. And this is not just kind of blockchain. This is throughout our firm as a venture capital firm. It's a

major issue that if they don't like the app, they just say, they just kicked Epic, the maker of Fortnite, out because they didn't like a tweet of theirs.

Whitney Johnson: Wow.

Chris Dixon: This just happened last week. There's a lawsuit going on between Epic and then the more kind of dramatic thing is they take 30% of the money and they just have sort of this chokehold, right? And I think, look, the tax they take, the 30% is one thing I worry more about. Like, you know, you think about the early web browser that that my partner Marc Andreessen created Netscape in the 90s. Like that was a pretty radical invention at the time. You could, anyone could go anywhere. Look, you could make a bad website. You could make, like it was a permissionless system, right? I don't, I worry that stuff like that would be banned by the App Store. That wouldn't be allowed today, and you obviously need guardrails around. I'm not an advocate for like full laissez faire, no rules internet. But sometimes these things start off at the edges and they're weird and yeah, and there's some issues. And then you kind of fix the issues. And I just worry that we've, that we're entering an era where these sort of five companies just have so much control and that we'll lose creativity, innovation and as you say, agency.

Whitney Johnson: Yeah. So, two more quotes from the book that I loved. Network design, the way nodes connect, interact, and form an overarching structure is a single most relevant factor in determining rights and money distributed. And then you said network design determines outcome. Which reminds me of a wonderful Edwards Deming quote, which I'm going to paraphrase because I'm not going to get it right. But basically, you know, your system is designed to get exactly the result that you get and so, what is it that you want? So, could you, before we move to asking you to share a practical example? So, if there's 1 or 2 things that you want people to say, okay, I just listened to Chris talk, I understand blockchain better. Now, what are two things that you would have them take away that they could repeat to someone like, what is blockchain? What would those be repeatable phrases that you could give?

Chris Dixon: I think it's a, it's well I would say a couple, I would say one way to think of blockchains is there is, it enables you to build internet services that sophisticated advanced internet services without gatekeepers that are owned by communities and not by companies. That would be my simple explanation. And then I would say on the systems mentioned in the book, I mean, I think with respect to network design, I think my broader point there would be, you know, when you think about, most people have a pretty good understanding. Your listeners, I assume, have a pretty good understanding about how the world works. They understand, you know, economics, they understand, you know, unemployment, inflation, like these are sort of technical terms at one point in economics. They know what they are. They understand how companies work. I think a lot of people, even educated people who aren't in the technology business, sort of treat the internet like a black box, like they don't, you know, and I would say what my book tries to do and, you know, is, is peer behind the black box and say, how does specifically, how does power and money work on the internet? Like how do you accrue power and money on the internet? How did that happen historically? What are the rules of the game, so to speak? And you can, even if you disagree with my prescription for how to solve it, I would argue that first, sort of first half of the book of like the diagnosis of how power and money works. I think that should be a more mainstream discussion. Like I think people should be should be aware of that, should be discussing it. And, you know, maybe the answer is what I propose, like a new set of internet services. Maybe there's a policy answer, but I'm just I think that we should be having that discussion. So that would be the other kind of thing I'd hope people take away.

Whitney Johnson: That makes sense. All right. So, as a practical matter, you said you've got some prescriptions of what you would do. I would love to hear your thoughts on how could blockchain disrupt an industry or disrupt, in a way that's really easy for listeners to understand.

Chris Dixon: Yeah. So, we have, one example is uh, social networking as an example. That's important because people spend something on the order of seven hours a day on the internet and 2.5 hours or so of social networking. So, it's the most popular category. It's also a giant business. So, 150 billion in revenue. So, there's a, there's a bunch of which we're investors in some of them, there's a new wave of social networks that are built on blockchains. And the key feature is that the, you know, so you think about Twitter, I'm on Twitter and I have the handle key, Dixon. Okay. And I have an audience on Twitter. And if I don't like what Elon Musk is doing or how they change the algorithm or how they change the economics, I'm kind of stuck there, right? If I leave, I have to start over. I've built

that audience over a long time. You, I think you have a huge LinkedIn following, right? Hopefully LinkedIn treats you well. But if you don't like it, too bad they own it. Right. Contrast that with how email works. I don't know if you, if you have a Substack or a MailChimp email list and you don't like what that provider is doing, you can switch and take your audience with you.

Whitney Johnson: Got it.

Chris Dixon: So, the blockchain based social networks work like email and not like Facebook. The user is in control. The user control owns their name, their handle. They own their audience. There are software providers. You can download a software a piece of software. There's different. Like just like with the web browsers, you can choose to use Chrome or Safari. But if you don't like what the software does, if they change the algorithm or they take your money or something else you don't like, you can switch, right? And just that one little design and that is enabled by a blockchain. Yeah. That's enabled by blockchain. So, it's like you get all the good things of TikTok and all the modern graphics and all the other kinds of stuff, but you can switch. And that one thing I would argue that one thing of being able to switch shifts all of the power on all of the power, but a lot of the power back to the user. Right. And if they charge too much money or they do whatever, you can switch. So, that's something I'm very excited about. And then you can sort of take that pattern and apply it to games and financial services and whatever it might be.

Whitney Johnson: Okay, so I know that compliance is listening to this, but is there, so when you think about these new social platforms on blockchain, because I'm finding myself, oh, I'm really curious, like you said, I'm on LinkedIn. I'm sort of on Instagram. I'm not on Twitter so much anymore. So, my question for you is, what are some of these new social networking platforms that you're excited about that you can talk about, or you have to disclose that you're invested in?

Chris Dixon: Yeah. We're investors in one. It's called Farcaster. It's small. It's like a few hundred thousand users. I mean, it's only been around for a relatively short period of time, but it's nice. I mean, you could download it now and it feels just like it works, just like a sort of a Twitter type thing. But there are many different clients. So, they have, there's one called Warpcast that's popular, there's other... Meaning, when I say clients, you can switch software. So that that's one. And I think they've done a really nice job. It's, you know, these things are, these things will take time. But one of the challenges with blockchains is they kind of like all computing. It just takes time to get the kind of underlying infrastructure good enough. I think we're finally there now. So that's why we're seeing as of the last year or so, things like what I'm describing. And so, then it will take time. So, like I would say, the product is working well. They've got a good user base. But you know the internet's now 5 billion people. So, it's going to take time to build these things up to be mainstream.

Whitney Johnson: Well again, but this is just like the adoption curve, which, you know, I know you love S curves as I do. You know, you're at the launch point for a long time and then suddenly you hit the tipping point. And so, you're saying lots of growth is happening. It's not yet apparent, but at some point, it will be.

Chris Dixon: I hope so, and I believe so.

Whitney Johnson: So, can you just talk briefly about the connection between Bitcoin, Ethereum and blockchain? What's that constellation look like?

Chris Dixon: Yeah. So maybe I'll just give a quick history. So, there was this this pseudonymous white paper about Bitcoin that came out in late 2008. And in that paper, it described essentially a financial service, a payment system that had no gatekeeper. That was just sort of it just existed and was owned by the kind of community, and in part of that, as part of that paper, it described kind of how the system works and that has come to be called how the system works has come to be called a blockchain. A blockchain is a, it's a computer. I think of it as a computer. So, what is a computer? If you go back to sort of Alan Turing in the early computing discussions, a computer is something you write software for that can run code and can store information. Right? That's what your laptop does. That's what your phone does. A computer doesn't have to be a device. There's a whole, you know, history of things called virtual computers that, that are computers that run on other systems. So, a blockchain I think of as a virtual computer. So,

you can write code for it. And you can run that code. It happens to be a computer that runs on a network of other computers.

Chris Dixon: And it does that, I can explain, because one of the key features of a blockchain is that it can make strong commitments about the future. You know, if I, if Chris Dickson puts up a Google, said, I'm going to create a Google coin and I'm going to compete with Bitcoin. Okay. And they said there's only ever going to be 21 million Google coins. Bitcoin also says there's only going to be 21 million bitcoins. The difference is with Google they can just change their mind. They can they run the computers. They can just say no. Now there's 22 million or now here are the rules. Or they can change the rules just the way, the same way that Facebook changes the rules on their social network. So, what's interesting from a computing point of view with blockchains is you can encode rules and software, and those rules can't change. And so that was and to do that you need this. There's this sort of mechanism that's designed this kind of I won't go too much into detail, but there's a computing kind of architecture where you build this computer, this virtual computer that sits on a network of physical computers, and then there's this sort of economic game theoretic design that makes it very hard for any of the physical computers to undermine these rules.

Chris Dixon: That's why you have these things called bitcoin miners and things. So, it's basically this kind of very clever system that the original whitepaper came up with that made it really hard to undermine these commitments. Okay. That's sort of the takeaway. Ethereum came along in 2015 and said, well, what if we take those ideas and generalize them instead of just being a system built as a payment system, a financial service? Let's make it a general-purpose computer where anyone can write applications for it. So, you can kind of think of it as in the same way the BlackBerry was just sort of for email. And then the iPhone came along, and it had an app store, right? And so, anyone could write anything for it. And that was 2015. That's when I got really excited about it. So, I'm like, okay, anyone can write an application for it. Now you're going to unlock all of the creativity in the world because, you know, I'm a big believer, as I was saying earlier, that software is a creative medium. It's sort of like saying, now here's a word processor you can write a novel and 5 billion people, they're going to come up with something interesting. That's kind of my philosophy.

Whitney Johnson: Throw this out here and then you can correct me. So, blockchain is the infrastructure or process. Bitcoin is something that's a payment system that's made possible because of that that infrastructure of blockchain and Ethereum is, so Bitcoin is an application of it. And Ethereum is something in between that makes payments and all sorts of other things possible.

Chris Dixon: That's basically perfect. The only distinction. So, Bitcoin is both a blockchain. So, it's sort of think of it as like the BlackBerry. It's both a device but it's a device built for one application okay. So, you're basically 99% right. Just the one nuance is and then Ethereum is just like an iPhone. It's just a computer. And then you can build stuff, you can write applications for it.

Whitney Johnson: Metaphors are the best. Okay. So, let's just talk about Clay Christensen for a minute. You referred to him and it was interesting hearing sort of this outside in, inside out. It sounds like, that sort of, there's some influences there from Clayton. But I would just love to hear how he influenced your thinking. Did you know him? I mean, as you know, he was an important mentor for me, and I thought it would be fun just to hear some reminiscences.

Chris Dixon: You know, I took his course, actually. And I had the honor to take his course. And of course he's, you know, was a genius and incredibly great person and, and also spent a lot of he was, so generous with his time. So, I did, you know, I was very, I kind of had this, the book I wrote, I was sort of interested in the same topics, obviously, that was 20 years ago, so it was a different world. But I actually, a lot of my, I mean, so I, it would be, I tried to attribute in the book, I do cite him a bunch and I have him in the endnotes, but I think probably even more of my thinking, like other parts. I was like, I think this came from Clay Christensen. And I went through his stuff, and then I was like, at some point I was like, maybe that came from a conversation. So, I think that, you know, look, obviously the *Innovator's Dilemma*, I think is probably the, I think is the maybe the greatest tech book.

Chris Dixon: It's just such a, you know, it's so rare that you have these relatively, you know, simple. I mean, you know, it's really that one graph. Right? It explains so much. And it's so, I think it's misunderstood. Right. Because a lot of people think it means like the management is bad, his whole point was the management was good. Right.

They're listening to their highest profit customers. But then I think there's just and he wrote some of this and teased it out. But there's all of these follow-on consequences. So, I have a section in the book called Squeezing the Balloon, which really came from him, which was really is this idea that every technology has a tech stack and there's sort of different layers in the stack. So, to give you an example, do you want me to talk about this?

Whitney Johnson: That was a great, great example. And I hadn't, you know, actually I hadn't ever heard someone explain the value chain piece of it so. Well so yeah, talking, touching on that would be interesting.

Chris Dixon: I'd love to because I like that part of the book. And it's been, I think, less talked about. I think maybe it's sort of technical or something, but so, this is mostly his ideas. I'm, I'm adding to them. So basically, the way to think about it is every technology exists in a stack. And what that means is, so think about Google search. So in between. So, there's a human and a human is going to Google search. They're clicking on an ad. Google's getting paid for that ad. Maybe the human then goes and buys a product, and that product gets shipped back to the human. So, you can kind of think of it like a loop, right? And within that loop there's a set of technologies. So, there's I'm on a phone, the phone has an operating system, I have a web browser, there's a search engine, there's an advertiser, there's an e-commerce site, there's a fulfillment center, and there's a delivery service. Right. I'm probably missing payments, there's many more. And the way that the tech world works is essentially like Google comes out with search. They're awesome. But then to defend their turf, they need to make sure that they either own or commoditize every layer in that stack. Right. And so own, of course, means they build a product and they own it. Commoditize means there's basically no value there. For example, the most common way to do that in software is to open source something. And so if you look at Google, like what I just described is exactly their strategy for the last 15 years. So, they have a browser Chrome, they have an operating system, Chrome OS. Right. They have devices, Android or sorry, they also have Android. They have the Android devices they've now gotten into. Their biggest competitive threat in many ways is Amazon. And this, by the way, everything I'm saying, you don't really hear it in the press. If you actually talk to Google Strategy people, they'll say, oh yeah, of course this is how we think. Like, this is not, I'm not, this is not original in that sense. It's just sort of not as popularly known. And so basically what, the way to look at and then of course, what happens is Amazon sits at a different place in the stack. But then they need to like defend themselves. So like if you look at Alexa or if you look like, that's their attempt to sort of jump ahead as Google search goes away, they want to own AI, right? Because they're trying to own the device layer. Facebook with VR, they're like, they lost the device layer in this round of the combat, right? And actually, that had a huge negative impact. If you saw that, if you followed a year ago, Apple changed how they do tracking and Facebook stock dropped like 30%. That's because they don't control the device layer, right? By the way, the, I think the latest number. So, one of the big mistakes Apple made, sorry, Google made, was to allow Apple to get so dominant in the operating system world. And so, as a result, they paid them I think the latest report was like 30 billion just last year to be the default search engine on Safari on the iPhone. So, that's an example where Apple is using their leverage at the device layer to squeeze the balloon. And so, the squeezing the balloon idea is that sort...

Whitney Johnson: Yeah, show us. Show it to us.

Chris Dixon: Yeah. So, sort of think of a balloon. There's like a fixed amount of air, sort of the tech stack, and then you sort of squeezing it, meaning like if you, if you reduce the profits in one area, it ends up going to another area. So, it's this idea that, this is Clay Christensen, I think he called it the conservation of attractive profits. And so, and that, of course, is an allusion to conservation of energy. It's almost like a law of physics. The idea is its sort of a certain amount of profits in the tech stack and that if you, if you kind of reduce profits in one, it increases it in the other. And what's interesting about this, right, is most people think of business as battles between substitutes like Coke and Pepsi. But in fact, in the tech world, that's rare. That matters. Android versus iPhone like choosing. But a lot of the battles are between the different layers of the tech stack. And if you don't understand that a lot of sort of product releases and tech news will kind of, be puzzling. Because that's really where the brutal competition comes because its tech stacks tend to be zero sum. There's like a dollar, you know, you're fighting over the dollar, right?

Whitney Johnson: We're actually watching a Korean drama right now because we're big Korean drama fans and it's called Captivating the King. And it's all about a go game. And so, what you're saying is that as you look at these five major companies, there is this go game happening. And lots and lots and lots of different pieces. And it's not just, no product is in isolation. It's part of a much bigger constellation of pieces.

Chris Dixon: That's right. And I think what Clayton's, his genius, I mean, he had many genius properties, but one of them was this sort of systems thinking. Right? It was understanding, sort of taking a bunch of things that seem like disparate, complicated things and seeing it as a system. And that system could be understood if you and sort of like you said, like a game, like, what are the like... He was so good at saying, what are the rules of the game? And when you understand the rules of the game, suddenly it's sort of like the clouds part and everything becomes easier to understand, right? I mean, he had many, I think many contributions.

Whitney Johnson: Okay. So, as we start to wrap up and going back to this idea of sort of S-curves. You wrote this really great article 15 years ago called, *"Are You Climbing the Wrong Hill?"* Just tell us the gist of that article, because what I think, what I loved about it, of course it had the S-curve, but there's also this element of you were really combining your philosophy, your computer science background and just putting this all together for people. So, can you just talk about the gist of that article?

Chris Dixon: It's funny, I wrote that, it's the way blogging works. I wrote that article. I was sitting in the office and I was talking to this young person who worked for us, and he was talking about how he was sort of at a consulting firm or something, and he wanted to leave and do something else, but felt like he was about to get promoted. And I was thinking about how I'd seen a lot of people in their career kind of you get caught on sort of climbing a hill without thinking too much, enough rather about which hill you're climbing. And as I was thinking about that, I thought about an analogy to computer science, which is in computer science, there's a whole field around hill climbing. And they call it hill climbing or optimization. It's actually a closely related machine learning. And so, the idea is sort of you metaphorically like think of a hilly countryside, and your goal is to get to the top of the highest hill. So that's in this metaphor. That's your best career realization. Right? It's like, whatever that might be and in computer science and so and so simple strategy, you drop somewhere, it's just sort of climb up the hill that you land on. Right?

Chris Dixon: Now, of course, that will be good for getting to the top of that hill, but you might be on the wrong hill. And so, computer scientists, there's a whole thing called simulated annealing. And there's a bunch of algorithms where basically, it turns out the best answer is to do some combination of randomness, sort of meandering around and then sometimes sort of climbing hills. And so, as I was talking to that kid, I thought about, I was like, wow, that's a lot like the computer science idea. And I whipped off this little blog post, and it turned out to be probably my most popular blog post I ever wrote.

Whitney Johnson: Really?

Chris Dixon: Oh yeah, it goes viral like every year or two. For some reason someone tweets it. Well, it's kind of a timeless, it's like career advice, but, you know, it's just really interesting. So sort of what I would suggest, right, is in your, let's say your 20s is like, don't just, I think that specifically for people who may be like listeners or maybe they're, you know, friends of listeners, if you went to a fancy school and you got a fancy job, there's, I think, a real danger in just sort of like constantly kind of going up that hill.

Whitney Johnson: Staying on Fancy Hill, we have a fancy hill.

Chris Dixon: Yeah. On Fancy Hill. And like, for example, doing a startup can be really jarring to people who are on the fancy hill because it's not fancy. You go to a party, and you say, I'm X, you know, blah blah, startup. Like, it's not, it's not Harvard, you know?

Whitney Johnson: Yeah.

Chris Dixon: So, that can be jarring. And so, that's the idea of that blog post is just that, that one should add sort of randomness. And that's a lesson that I had taken away from computer science.

Whitney Johnson: Okay. So, Chris, what's been useful for you in this conversation? It could be something that one of us said, but it also is potentially just something that you thought or observed about yourself in the course of, of, of us talking.

Chris Dixon: I'm not good at self-reflection.

Whitney Johnson: Well, you get to practice right now.

Chris Dixon: Okay. Well, I thought this. I love talking about the kind of Clay Christensen stuff, and I feel like it never, maybe it needs to be re-popularized or something, because I don't, for whatever reason it doesn't come up. I think, you know, maybe the new generation of entrepreneurs just haven't fully digested it. But I think that whole kind of framework and the work you do, kind of applying that, you know, to careers and organizations. I think just generally this kind of systems thinking like, I just, I think there's a lot more interesting work to do there. And so, I really enjoy talking about those topics.

Whitney Johnson: Love it. Okay. Any final thoughts to wrap this up?

Chris Dixon: No. I really enjoyed this and thank you. And I hope if, you know, some of these topics are interesting to people, maybe one last thing I'll say on the book is, I worked very, very hard to make the book accessible, non-technical.

Whitney Johnson: You did.

Chris Dixon: I think a lot of books are hypey. And, you know, obviously people can disagree or agree, but it is meant for, I hope your audience too, and the intro alone I think will hopefully kind of summarize the thesis and I think does it in a clear way. And if that's interesting, one might read more of it. And I also chunked it up. So anyway, I would just love, you know, I'm hoping it'll be something that that, I don't expect to convince everybody, but I hope it demystifies the topic and explains why people like me are excited about it.

Whitney Johnson: Yeah, you know, it's interesting. I thought it was so well written and it, you know, I've done a lot of reading on this. Not a lot, but some reading and there's a lot of hype and I just felt like it was really useful and practical and understandable. And, I don't know, Chris, I would almost say that I don't think this is about, I didn't take this book as you were trying to convince. I took it as you were trying to explain, here's how you're seeing the world and here's what you think is important. So, thank you so much for joining us.

Chris Dixon: Thank you, Whitney, I appreciate it. Thank you.

The early internet grew out of a want, even maybe a need. ARPANET and MILNET were both Department of Defense projects, partly because they saw the need to share information across networks instead of keeping it all on one device in one office. The same happened with early academic networks – you could share and collaborate with MIT on the East Coast and Stanford on the West.

There was this sense of creative potential locked up in the minds of other colleagues, other people we just didn't have access to. And now those virtual towns, where every neighbor knew each other, have merged into a metropolis, where our movements are controlled by a select few. Our “agency,” as Chris calls it, has been taken away in favor of, well, ease of use.

The solution is to look back to the internet's founding principles – at its most basic, a need to connect. Blockchain connects us by making the stewardship of our virtual agency everyone's problem, everyone's role. Every user holds up a small portion of the bargain.

What I'm really taking away from my conversation with Chris is that as humans, we tend towards the mean, the average, and Chris' work suggests that our mean includes an innate sense of community. After the intellectual boom of the post-World War 2 era, campuses were strong yet isolated. ARPANET was born. Now that centralization is threatening our sense of agency (and therefore community), bottom-up innovation gave us the blockchain. We'll always find a way to return to our center.

For another primer on understanding blockchain and Bitcoin, there's my talk with Jamie Leverton, CEO of one of the largest crypto mining operations today. That's [episode 332](#). On the power of these disruptive technologies to augment our own human abilities, there's [episode 336](#) with Adobe's Chris Duffy. And for a dose of calming energy in the face of all this tech upheaval, there's [episode 261](#) with Amy Webb.

Thank you again to Chris Dixon and thank you for listening. If you enjoyed today's show, hit subscribe so you don't miss a single episode. Thank you to our producer, Alexander Tuerk, production assistant Etta King and production coordinator, Nicole Pellegrino.

I'm Whitney Johnson.

And this has been Disrupt Yourself.