

The Economic Club of New York

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Dan Schulman  
President and CEO  
Paypal

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Interviewer: David Solomon  
President and Co-Chief Operating Officer  
Goldman Sachs

## Introduction

President, Barbara Van Allen

I'm Barbara Van Allen. I'm the President of the Economic Club, and Terry Lundgren, our Chair, is traveling and asked me today to preside for him. The Economic Club of New York is the nation's leading nonpartisan forum for speeches and conversations on economic, political, and social issues. Over 1,000 prominent guest speakers have appeared before the Club over the last century and have established a very strong tradition of excellence. I'd like to take a moment to recognize the now 260 members of the Centennial Society, each of whom has made a one-time donation of at least \$10,000, and they are seated at the Centennial tables in the front of the room. In addition, to this traditional donation level, the Board of Trustees recently created two new levels of giving with special associated benefits. And I'm pleased to say that these new levels, effective January 1 of this year, have already begun to attract member donors.

We also have room still for some applicants, if you'd like to nominate, for the 2018 ECNY Fellows Program, which is a special program designed for the next generation of diverse business thought leaders. Finally, the Board recently agreed to approve for the first time in 111 years an Associate Member Term Program that may be of interest to some of you for individuals ages 40 years and below, and the details on these three efforts are in your programs at your table.

We'd also like to give a very warm welcome to the students that are in attendance today –

compliments of several member sponsors – from Columbia Business School, St. John’s University, and Pace University Lubin School of Business. Welcome.

It’s now a great pleasure for me to introduce to the Club, the President and CEO of Paypal, Dan Schulman. (Applause) Dan is focused on transforming financial services to make life easier for billions of people around the world. He previously served as Group President of Enterprise Growth at American Express where he led the global strategy to expand the company’s alternative mobile and online payment services. Prior to joining Amex, Dan was President of the Prepaid Group of Sprint Nextel Corporation following its acquisition of Virgin Mobile USA where he led the company as its founding CEO. Earlier in his career, Dan was President and CEO of the Priceline Group. He began his career at AT&T, ultimately serving as President of the Consumer Markets Division. Dan is the recipient of the 2017 Brennan Legacy Award and has been recognized as one of the Top 10 CEOs in the world by *Fortune* magazine. He serves on the boards of Flextronics and Symantec.

Our format today is a conversation and we’re fortunate to have as our interviewer, David Solomon, who is President and Co-Chief Operating Officer of Goldman Sachs. As a reminder, this conversation is on-the-record and we do have media in the back of the room. With that said, gentlemen, can I please have you take your seats and begin the conversation. (Applause)

Dan Schulman, President and CEO, Paypal

DAVID SOLOMON: Thank you Barbara. Good afternoon everybody. I'm very, very pleased to be here, very, very pleased, Dan, always to be with you. We've done this together once before so we'll try to make it a little bit the same, a little bit different. But obviously I did a good job the first time because I got asked back. So I'm happy to be here. You know, I want to start kind of with where you are, but a little bit about your journey because I think one of the things that I've been so impressed with just in talking to you about your career and the path you've taken, you've done a bunch of different things. You've run a bunch of different companies, a bunch of different kinds of companies, and you've always seemed to have a knack for kind of moving toward something that's a little bit more disruptive, a little bit more next in terms of having an impact on what we all do. So talk a little bit about your journey, how you wound up in the seat that you're in. You know, how you got there, to where you are today.

DAN SCHULMAN: Well, first of all, thank you for having me and thank you everybody for being here. David, as always, it's so nice to see you again. So, Bill Clinton, I think once said that he knew, I think when he was like two years old, that he wanted to be president or something like that. So, I still don't know what I'm going to go do next. So I tend to think most people in the world over-think, kind of where they're going and underestimate just the importance of taking that next step, whatever it might be. So, I had no idea that I would ever wind up eventually on Wall Street with American Express. I mean I dress like Occupy Wall Street so that

you would never have thought that would happen. But I think the first part of my career just sort of unfolded one step at a time. But I think it was really in 1994 or so, this was early on in the internet era where, it was before browsers, you had still FTP and Archie and Veronica, for those of you who remember some of that. Mosaic hadn't been invented yet. And I was running kind of strategy for AT&T, and I mean I was, I really felt deep in my core that the internet was going to be like a digital tornado, that it was going to – and most people did not see it at the time – that where it touched, it was going to suck up industries, suck up existing business models, spit out different companies, different ways of thinking about the world, be quite disruptive, and that's what I wanted to do moving forward. So, you know, at the time I was one of the, I was 39 years old or something, one of the Top 10 executives at AT&T. I had this giant office, had its own bathroom in it. It was this crazy thing. And I remember my dad came in and said you should never, ever, ever leave this job. I mean it's like, never, ever.

DAVID SOLOMON: He liked the bathroom.

DAN SCHULMAN: I mean he couldn't believe there was a bathroom in there.

DAVID SOLOMON: I've never had a bathroom in my office.

DAN SCHULMAN: You would never use one in your office, like why would you do that? It's just like too embarrassing. And so a year later I left for the startup called Priceline.com. And I

told my dad that I didn't want to be the king of the death of long distance, that it was evident to me that long-distance was being displaced by mobile, by various other electronic forms of communication, and you could fight an elegant retreat but you could not win, but it was going to be a retreat. And so really what I've looked for is I've always wanted to be, since then, in some form with the internet. I'm always attracted to great brands that can stand for something, that have the ability for disruptive growth in some way, and importantly can make some sort of difference to a group of consumers or other segments of the market in some way. And really eventually it's what drove me to go to Paypal, and I know we'll probably talk some, a little bit about that.

DAVID SOLOMON: So, you're on this platform with Paypal, it's a fascinating platform. You have 200 million users. You wrote an article a little while ago talking about financial inclusion and kind of tying it or driving it to financial health. And so even with all the users you have on your system – and your system is really unique – there are two billion people in the world that are outside the financial system, when you and I have talked, you know you've talked a lot about your vision for how you can really get the world connected in, you know, financially. Talk about Paypal and talk about how Paypal kind of looks at that opportunity and how you're thinking about that.

DAN SCHULMAN: So only because we work so hard for every subscriber, there are now 225 million plus.

DAVID SOLOMON: Sorry, I didn't mean to shortchange you. This is probably a few weeks old, you're growing at such a fast pace.

DAN SCHULMAN: So, there's a saying that it's expensive to be poor. And that saying is very true in many places, but it's especially true in financial services where the things that many of us in the room take for granted – cashing a check, paying a bill, sending money to somebody you love, getting credit – are often either very difficult to do, very time-consuming, you stand in line for hours, and very expensive as well. The average person who is under-served by the financial industry spends about 10% of their disposable income on really what are unnecessary fees and interest rates, which is about the same amount they spend on food. And so that's ridiculous with technology, we, today have all the power of a bank branch in the palm of our hands with mobile phones, and almost everybody has a mobile phone. And mobile phones are actually disproportionately penetrated in lower and middle class income levels because it's their only connectivity device. They don't have a desktop. They can't afford a desktop so they buy a mobile phone, and in India today you can buy a mobile phone for \$25, \$30, a smartphone that you can do. So, my view is that our responsibility as those in the financial services arena, like the moon shot that we should all rally around is this idea of financial inclusion and driving financial health through technology, that managing and moving money should be a right for every citizen. It shouldn't just be the privilege of the affluent. And so I think we have an obligation really, a moral obligation, all of us, to bring in those that are not previously well-served before. And the

way we can do it, and you and I have talked about this quite a number of times, is we have technologies today where you can serve those that are, you know, outside the financial system at 80% less cost than what you can do in a traditional bank branch structure. And so when you think about taking platforms, software platforms, connectivity to built-in distribution of mobile phones, and you think about, you know, the Goldman platform and the Paypal platform, and maybe different banks around the world and networks, you take the best of what our platforms can do, you hook them up through API sets, and you present a differentiated value proposition. It's not the extension of what was, it's sort of re-imagining what could be in financial services using platforms and new technologies. And you can do basic consumer financial transactions at a fraction of the cost, but not only at a fraction of the cost, you can do it much faster – you don't have to wait in lines – much more secure. People who go to cash checking locations are 12% more likely to be victims of crime because that's where the cash is. And I think one other thing – then I'm going to get off my soap box here – it's really important, my favorite quote about democracy is that democracy needs to be more than two wolves and a lamb voting on what to have for dinner. So, think about that for a second. So, what does that mean? Like, for our democracy to thrive, you need to rise above your own self-interest. But that's really hard to do if you're worrying about how to make ends meet at the end of the month. And to me, the fact that 40% of U.S. citizens have zero savings and almost 60% have less than \$400, they're worried about how do I get by? They're worried about will their children actually be able to grow up in a way that, you know, is better maybe than what they had. And so they tend to be quite anxious and they tend to distrust the system. Whatever the system is, they just want change because they

don't feel that the system is helping them. And for me, this idea of creating some foundation of financial health where, if we can, you know, that 10% is \$146 billion in the U.S., \$146 billion. How about if we can return like 20% of that or 30% of that back to those who most need it and create this foundation of financial health, I think you actually have the chance for actually a functioning democracy to take the place of a very partisan one that existed.

DAVID SOLOMON: So, why isn't it happening, why isn't it happening more quickly? I mean you talk about the friction. You talked about that. You know, you think about, you mentioned it in your article, you know, the same group of people in the ecosystem are spending \$170 billion a year on fees and interest to spend their own money when you think about how the whole credit card system works. When you look at it, there are a bunch of people that are building, trying to build payments platforms and there's a lot of change. And you and I have talked about it, the disruption is going to be enormous, but the change has still been slow. And a lot of, there have been very few people that have really evolved or disrupted, you know, this part of the system. Is it that it's too embedded and, you know, the disruptors aren't big enough? Why has it been so slow? Why haven't there been more people that are more successful at helping to kind of bring that down and take a lot of that friction out of the system?

DAN SCHULMAN: It's a great question. So, I personally believe we're going to see more change in the next, call it five or ten years, in the financial services ecosystem than we've seen in the last 30 to 50. There a couple of things that are driving that. One is you now do have the

explosion of smartphones and mobile phones and everyone talks about it. But you cannot overestimate how impactful that's going to be, not just in our industry, but in industries around the world. And you add artificial intelligence, the explosion of data, you add quantum, the changes are going to be massive, massive in our lifetime. But the reason so many people, like a lot of tech companies have tried to come into this, and others, is payments – as we've discussed – is really hard. It's a hard business. It is not an easy business by any stretch of the imagination. One, you have to have scale, because if you don't have scale, scale is what drives algorithms, right? If algorithms are sort of the weapons, data and scale are the ammunition that power those algorithms. The more data you have, the more powerful those algorithms are. And if you want risk and fraud models that actually work and you're not taking advantage, you need to have that scale. The other thing is, it's a very, very complicated regulatory environment across the world. It's not equal across the world. There are different regulators. Some have different agendas. So you've got all those things in place. So you've got now finally distribution in people's hands and that's only going to grow. So, take time out of the equation. Everyone basically has a smartphone. Cash is digitizing. Now it's slow, 85% of the world's transactions are in cash today. I think only 6% of real commerce is digital today. But that is obviously growing. Now people are writing less checks. I don't know how many people here in the audience, you know, write now checks for all your bills, but most of, like, there's ongoing to digital payments. And so I think, and regulators, they get the fact that their citizens do not have financial health. And so when I speak to regulators around the world, whether it's the People's Bank of China, whether it's the CFPB, whether it's the OCC, whether, it doesn't matter, they all want what's best for

their citizens. And, you know, I always say that financial health is not a red issue or a blue issue, it's a red, white, and blue issue. I mean this is in our national interest, and in various countries around the world, their own national interest, to promote this. I mean you look at India that's now got, I think, one of the most audacious demonetization plans around the world. China, by the way, when you think about developing world and the developed world, the U.S. is the developing world when it comes to digital payments. China is the lead by far. And then India's got, like India would have been one of the last countries I would have expected to move heavily into mobile and digital payments. But they, the whole government has almost created a software stack.

DAVID SOLOMON: Well, there was no infrastructure, there was no embedded infrastructure to compete...

DAN SCHULMAN: That's exactly right. So, I feel like you are going to see massive change going forward. And I also think that we, as businesses, and we as business leaders cannot shirk away from that responsibility anymore. I feel like we have an obligation to address some of the ills of our society. We cannot rely solely on government. We can't rely on just the NGOs to go and do this. We have a ton of resource and focus and great employees who are motivated. It's time for us to step up and address this problem, and we will. No one company can do it alone. No one government can do it alone, but together we can.

DAVID SOLOMON: It'll evolve, and your point about, you know, regulators want it to be better, I totally agree with. I think it's definitely true. What's interesting is, you know, in this industry, in the financial industry broadly, interestingly enough the regulation acts as a very, very deep moat in terms of preventing people to come in and chip away at it. It's one of the reasons why the disruption in financial services has been slower. It's one of the reasons why when you look at, you know, Google, Amazon, you know, etc., they've shied away more because the moat's pretty deep because of the regulatory...

DAN SCHULMAN: And Walmart is another example.

DAVID SOLOMON: Walmart's another example, so it's interesting. You know consumer choice in all of that is important. I know you're very focused on that. You talk a lot about consumer choice. You were talking about your mobile strategy. Venmo is obviously, you know, a very important point, you know, part of that. Talk a little bit about, you know, with everybody on a mobile platform, talk about how something like Venmo creates change and talk a little bit about how your mobile strategy is evolving.

DAN SCHULMAN: I don't know if everyone knows Venmo. Look, I'll be able to tell exactly who uses it and who doesn't. I'm almost 100% right.

DAVID SOLOMON: My kids use it.

DAN SCHULMAN: So Venmo is a service that Paypal owns that basically is a mobile-only service that is peer-to-peer for the most part and expanding. And what's very interesting about Venmo is that it enables millennials to not just manage and move money electronically and digitally, but to do it within their social network. And within that social network publish to their friends what they're spending their money on because I think something like 94% of all Venmo transactions have some sort of comment associated with them, either an emoji or a comment. And then your friends can read, like, oh, Dan spent money on, you know, food and wine with, you know, David, the other at, whatever it is. And it is not just a payment but it's really a social payment-oriented schema, and it's really an experience. And so I think the best mobile phones or payment apps will transcend just payment itself. It will tie into all of your other activities. If you look at China right now, in China right now WeChat Pay and Alipay, those apps have everything in it – theater, the equivalent of...

DAVID SOLOMON: It's amazing. If you go look what they're doing, it's unbelievable.

DAN SCHULMAN: It's incredible. They open those apps, they open those apps 30 to 40 times a day, a day. They do everything on that app. You know the average Paypal customer, it's 30 to 40 times a year, so they do 30 to 40 times a day. So it is, I think, thinking about how mobile and mobile payments kind of move into everyday life is very important. I also think one other thing is very important about mobile. Mobile is going to redefine the retail industry as well,

fundamentally redefine it. Already it's starting to do that. It is blurring the distinction between online and offline. It used to be people used to think about eCommerce and in-store. Mobile erases those boundaries. If you order a Subway sandwich on your mobile phone, you customize it, you pay for it there, and then you go into the store, skip the line, pick it up, maybe tap your phone to pay with rewards points, whatever it may be. Was that an online transaction or an offline transaction? It was both. It was both. And commerce will just become commerce and Omni will be the way that everybody will go, cross-channel. I mean you're already seeing one store after another close locations. We are way over capacitated in terms of physical retail right now. You know, one-third of the malls here in the U.S. are dead or dying already. And I could read you a list of almost a Who's Who that are just closing stores after another. It isn't that retail sales are necessarily going down, it's just shifting.

DAVID SOLOMON: It's going to be different. I was in Seattle, I was in Seattle two weeks ago and I had a chance to go into the Amazon-Go, the one Amazon-Go that exists. For those of you that don't know, Amazon-Go, it's a store with basically no people. You walk in, you grab anything you want off the shelves, you put it in your pocket, you walk out. You can take something off the shelf, put it on the wrong shelf, throw it in the trash, it won't count it. You walk out the door, the receipt shows up on your phone. There's absolutely no human contact. It's just, it's a room that you shop in. And, you know, you think about the implications for how all the retail space is used, you know on these payment platforms it's really...

DAN SCHULMAN: There's no shopping carts when you go into most places in China. No shopping carts, no checkout. No checkout, think, like checkout is like a vestigial organ of yesterday. It's going to disappear.

DAVID SOLOMON: And again, no infrastructure in China. It was easier to jump ahead.

DAN SCHULMAN: By far and away. But those retail stores in China now, it's almost like Hollywood set. There's what's there, and then behind it is the warehousing. It's like bags moving around and they're being shipped. You order it and it's shipped to your house within 30 minutes. So it's, yeah, it's very interesting how mobile is going to change, not just financial services, but retail and everyday consumer behavior.

DAVID SOLOMON: You talked, you talked about a business cyclone earlier. Right? You used the term, it's an interesting term. I haven't heard it before, but I like the term. You know one question I'd have is trademarked. What's the next business cyclone?

DAN SCHULMAN: Well, I think there are probably three things that are going to hit in the next ten years. So you've got the movement from specific AI to general AI. So specific AI right now is like language translation or just the specific task. More general AI is thinking like you and I think, but in a much faster, able to consume unbelievable amounts of data. So, call that the next ten, maybe fifteen years where we move to general AI. We'll move from typical computing to

quantum over the same time frame. Just to give you an example, like typical computing is, you know, on/off, and it follows Moore's law and, you know, how many transistors can you get on a chip. And, you know, you're at, today the unbelievable number of almost a billion transistors on a chip. And that's been following, you know, more powerful, less cost. But when you go into quantum, even one qubit which is the measure of a quantum computing, is multiple, multiple billions of transistors on a chip, but most quantum today is 16 qubits. When it gets to 50 qubits, which again, probably five, ten years from now, but five or ten years from now, like that's going to be here before we know it, then the amount of computational combined with AI, you'll crack, you'll be able to crack any crypto, any crypto within a second. So, all of our security stuff needs to be rethought because with AI and with quantum, they are no longer secure. So you basically put together AI, quantum, the explosion of data. Like Facebook has the equivalent of 126 digital books of information on every one of us. So, what is that, a digital book is like 150 pages of like a normal book. So think about how much data and information they have. Think about what happens when you can combine AI and quantum in sites that can be created and what could be used for that. I mean there's, we're talking about things that, like whether it be physics, biotech, security, weaponry, I mean there's a whole bunch of things that come as a result of these technological changes that will go on. And I think we underestimate, underestimate, even though there's a lot of attention around it, the impact of those technological changes. The world is moving so fast right now, even I feel that all the time, it's just going to accelerate going forward. And I think we need to be prepared for what does that mean for jobs, for communities, for our families, for data, for privacy, for security. It's worthy of a long conversation.

DAVID SOLOMON: So, you touched on two things I want to come back to. You touched briefly on crypto. I want to come back to that. And you touched on cyber. I want to come back to that. But I, just before leaving where you just were, you know, you talked about, you pointed to Facebook specifically, but you talked about or referenced the amount of data that certain companies have on all of us and how it's being used. Do you think in the next decade society will continue to accept that as a fundamental operating premise for the way, you know, we interact with all this technology? Or will there be a push-back or a change with respect to how that data is used, protected, owned? How is society going to wrestle with that?

DAN SCHULMAN: So, I'll address it from two different vectors, if you don't mind. One, there's a generational vector. Younger generations are much more inclined to share their data and their information.

DAVID SOLOMON: So far.

DAN SCHULMAN: Yes. But remember, like they just have grown up in a different way than you and I have grown up and so the distinguish between public and private is much more blurred in younger generations.

DAVID SOLOMON: That's fair.

DAN SCHULMAN: Right? So, think about it, like I was talking to my daughter last night and she's got, I don't know, 2,700 friends on Facebook or something like that, and I said, like, you know, I have three friends, if I include you.

DAVID SOLOMON: When we leave today, you can go to four. I'll friend you and you can go to four.

DAN SCHULMAN: So, you know, it's like I can count them on one hand really that are my good friends. And I said, so you don't really have like 2,700 friends? She goes, you're right, I only have 600 that I'm really close to. (Laughter) And here's one other fact that's unbelievable is that one-third of all kids have a best friend they've never met, a best friend they've never met. Again, that's inconceivable to me, but it's because they're a great friend of a friend you know and then on social media they just become your friends. You interact all the time. And there's one example after another of that. So, I think generationally we need to, there's a difference that goes on. I think now the public-private debate is going to be one that is just going to be on us for a long time to come because the amount of data and information is exploding but our ability to analyze it and put algorithms around it is also exploding and therefore insights can be like probably Facebook knows you better than, certainly than your friends do, probably better than your family does. It depends on, you know, how many points of contact that they have. And the question really is what do people do with it?

DAVID SOLOMON: What do they do with it?

DAN SCHULMAN: Does it become opt-in? Does it become opt-out? Where are the boundaries?

This should naturally lead you into the crypto question because it really actually is very interesting what's going on with blockchain and crypto along that. But I think we have to be very, very careful about data and information and what hands it can come into because both cyber and, you know, new protocols are going to really affect the way we think about that.

DAVID SOLOMON: Sure. Let's talk about blockchain. Let's talk about, you know, cryptocurrencies. You know, to be provocative, cryptocurrencies as they appear today, the chance of them looking the same, being the same, functioning as currency ten years from now, high, medium, low?

DAN SCHULMAN: Well, right now, right now if you look at crypto as a currency, you'd have to say it's not toxic. I mean I think zero, except for illicit activities where the only thing you'll accept is crypto because it's anonymous. But it just bounces around, like Bitcoin went down by 10%, you know, yesterday.

DAVID SOLOMON: It's a speculative, it's a speculative bet.

DAN SCHULMAN: It's like gold. It's a commodity. It's not a currency, the crypto itself. But

remember...

DAVID SOLOMON: But gold has another use.

DAN SCHULMAN: Well, theoretically.

DAVID SOLOMON: Theoretically.

DAN SCHULMAN: It's good for jewelry, you can fill your teeth or whatever. But I think, and by the way, also regulations need to be sorted out and a whole number of other things. I mean it's an experiment right now that is very unclear which direction it will go. Now my point of view, though, on crypto, is there are two parts of cryptocurrencies. There's the blockchain protocol and there's the cryptocurrency on top of it. Most people think about the blockchain as necessary to crypto. Right? It was put in place to create these cryptocurrencies. I actually think that's opposite. What really, the Utopian point of view from the inventors and those who believe in blockchain is that blockchain is the new protocol that needs to be established for the internet. So the internet runs on something called TCP/IP protocol, not to geek out on everybody. And that protocol basically allows information to travel, it's basically a traffic cop. How does that information get from one place to another, one website to another? So it's routing information basically, TCP/IP. Blockchain, blockchain is a fundamentally different protocol. And what blockchain's ultimate goal is to basically create a protocol that allows for distributed trust which

means that you own your identity. You own the information about you. I own it. You own it.

And therefore, therefore, no central authority – and most people think of that as governments, but think of that as Facebook today, which owns identity. Like why should they be able to capitalize and monetize your identity instead of you doing that. So, the idea of blockchain was to distribute power back to the individual and away from centralized authority.

DAVID SOLOMON: While keeping it secure.

DAN SCHULMAN: While keeping it secure. And what the crypto was really originally designed for, the cryptocurrencies, the bitcoins – Ethereum, Ripple, RMX, you name it – there's now like hundreds, thousands of them, and they were really invented to incent people to be miners and to validate the blockchain. And the only way to do that, like why would you do that as a normal person? Like nobody's going to be interested in the new protocol. It's so hard to go do. The only way you do it is you incent...

DAVID SOLOMON: It was an economic incentive.

DAN SCHULMAN: Economic incentive for being an early adopter of that. And, by the way, it's worked tremendously well.

DAVID SOLOMON: Brilliantly. That part of it has worked brilliantly.

DAN SCHULMAN: And so blockchain is starting to move into the consciousness of everybody because of these crypto. But the real power of blockchain is not these cryptocurrencies, it's one application on top of blockchain. But distributed trust is really, and the applications that can be used through that protocol and what it does can be extremely disruptive and may be powerful in returning power back to the individual as opposed to where this data reside, etc. to the point you were making before. Again, very hard to replace TCP/IP, which is the protocol with blockchain, and maybe the two coexist, etc. but that, a lot of people misunderstand crypto and blockchain. But those were the original Utopian ideas for it, and it's why it can be so disruptive not to you, to me, to everybody in terms of if you intermediate something as the trusted party, are you necessary anymore in a blockchain-enabled protocol world?

DAVID SOLOMON: Let's touch on cyber for a moment because when I think of Goldman Sachs, about the things we worry about, cyber is something we're worrying about every day, every hour. You build the wall, the fort, to protect people from getting in, but you're now, on the inside chopping up and dividing up and building forts inside the fort because no matter how big your fort is or how strong your fort is, you know, people are still getting in. You've talked about data as a tool to, you know, really help fight cyber, you know, help fight cyber risk. Talk a little bit about how the risk is growing, but also, you know, the concept of data really making it easier, because it seems like this is a problem, it's almost like it's Moore's law in cyber. It's just getting harder and harder and more difficult faster, more powerful. You know the amount that you have

to spend to protect is just getting tougher and tougher.

DAN SCHULMAN: Yes, so I know a little bit about this because I'm Chairman of the Board of Symantec which is the world's largest cyber-security company and I've been on that board for almost 13 years. So, in the cyber community they're saying that there are two types of companies – those who have been hacked and those who do not know they've been hacked. So that's the division line. And it's very interesting, like if you look at the vectors of attack in cyber, about 85% of the attack vector are like hacktivists coming at you, me, others in the room. And they're like evangelizing a cause or just to be disruptive, whatever it may be. But hacktivists, even though they're 85% of the attack vector, they're successful under 1% of the time. And really if you're good, they should be almost zero percent successful. So that's a big attack vector. The next one are cyber criminals, and they're about 17, 18% of the attack vector, cyber criminals are very motivated. They have goals and objectives every year they put in front of their management committee.

DAVID SOLOMON: Well incented...

DAN SCHULMAN: And they go at it and they go at it hard, really hard. And they're very sophisticated and their success rate is 15%, which is very high. Right? So you've got, something like 2.3 billion consumer identities have been stolen, sold on the dark web, and this is just, that's why you can't really keep people out because real identities are out there. And so cyber criminals

very, very good, and do a good job at their trade. Then you have state-sponsored, state-sponsored cyber. This is China, Russia, Iran.

DAVID SOLOMON: North Korea.

DAN SCHULMAN: North Korea, and others. It's about 1 to 2% of the attack vector, but they're successful between 98 and 99% of the time.

DAVID SOLOMON: Very successful.

DAN SCHULMAN: So, if you're targeted by state-sponsored, likely they're in and you don't know it. They're very patient. They're there for a long, long time. They never want you to know that they're in there. And so the average, and you know, the average American business gets attacked four million times a year – four million times a year, the average American business. You and I, billions of times a year, billions of times a year we are attacked on this. And you can, as David very accurately pointed out, you can no longer prevent cyber attacks with very high castles, very high turrets, wide moats. That doesn't do the trick anymore because people actually have your identification. It's actually your ID.

DAVID SOLOMON: They're walking through the front door.

DAN SCHULMAN: Right. It's your user name. It's your password. Those are like, those are sort of like Jacks or better in the poker game, but if that's all you're doing with cyber, you're being attacked all the time with real credentials. The reason data is so important is that you have to do what's called DLP, data loss prevention, when somebody is inside the enterprise. And there, I need to know, and I'm not going to say all the things that you do because you don't want others to know, but we look at your IP address. We look at your behaviors in the past. We look at some very sophisticated things you might not realize to ascertain is it you from a digital fingerprint point of view, not is it who you said you were, but is it what you do all the time, and is there anything that would raise suspicion on that. And that is why data is so important because you can't keep people out, but you can keep bad guys from taking money out or doing other things with data and information. But you have to have lots of data and information. You have to do it in a machine-learning AI way because it has to be fast. Like every transaction that comes through Paypal, we look at something like 30 or 40 different variables before we let the transaction go through, sometimes in under a second.

DAVID SOLOMON: So we have a few minutes left and I just want to pivot, and one of the things I've always respected you for as a leader is your focus on diversity, your focus on culture in business. You know, it's International Women's Day so it feels appropriate maybe to finish by just having you talk a little bit about why you've been so focused on both culture and diversity, you know, at Paypal, but just all along in businesses. It's something I know you're very passionate about, and it's a place where you've put yourself out there, you know, pretty

aggressively. And so I thought maybe just talking a little bit about, you know, why you feel it's important as a business imperative and why you feel it's the right way you want to project as a leader.

DAN SCHULMAN: Yes, today is International Women's Day. I don't know how many people realize it was started by the Suffragettes back in the early 1900s. The first International Women's Day was 1911. So, what is that, 107 years ago – 107 years. That's incredible how little progress we've made in 107 years. By the way, the World Economic Forum came out with a study that said at current course and speed, gender parity will be achieved in 200 years, 200 years. It's unbelievable.

DAVID SOLOMON: Mind-boggling.

DAN SCHULMAN: It's mind-boggling. Okay, so we have a vision at Paypal which is our vision as a company is to democratize financial services. And democratizing financial services means that managing and moving money should be a right for every citizen. And when we say every citizen, that transcends everybody. That transcends everybody. And therefore, the core value that we hold as a company is diversity inclusion. It's our core value as a company. And I think that businesses and CEOs can no longer avoid the culture wars that are swirling around right now. We have to make a stand and that stand needs to be consistent with your vision and your value set as a company. Like some will stand up for environment and supply chain, others will stand

up for other things. Our core value is diversity inclusion. And I think that customers expect this and brands need to stand for more than just making money. They have to have a purpose around them. Why? One, customers want to buy from brands that have a purpose, right? Brands are not about the promise – Madison Avenue. They're about the experience. They've moved from Madison Avenue to the actual experience and what that brand stands for. And so, one, customers expect it. Two, employees demand it.

DAVID SOLOMON: Absolutely.

DAN SCHULMAN: Employees demand it. You want to get the best, most passionate employees to come to your company? Have a vision and mission they believe in, that can make a difference and have a set of values that they can rally around. I used to think when I was growing up as a kid that values were like soft and mushy and, you know, visions were, it was all about execution. I now realize, as a CEO of a big company, it's all about your vision and your values. Yes, you've got to execute, but you have to execute against the set of principles that are going on. So, you know, when North Carolina happened, as you know...

DAVID SOLOMON: You were very, very early in stepping up on that.

DAN SCHULMAN: Absolutely. HB2 got passed. We had just announced an op center that we were going to build there, 400 people. And the governor signed HB2 which allowed for the

discrimination against somebody's sexual orientation, sexual identity, and yes, this was a very important center for us. We're running out of capacity. It takes a long time to find those places. And the governor was on TV and I heard him saying a lot of people are talking about things, but nobody's doing anything. And I, like, stomped out of my office and went down to our head of corp comm and said, one week, we're announcing we're out of there. So just get ready, we are out. That is not in keeping with who we are as a company. And we do this time and time again. By the way, that was a defining moment from an employee perspective. It was very lonely. Lots of death threats. Lots of different things. And you just, you've got to go out, and by the way, lots of hate letters that came on there, but it was who we are. You know when the Immigration Act came out, I also came out against that. We had eight employees caught up in that, eight out of like the 20,000-plus we have. And at one of the all-employee meetings that we have somebody raised their hand, very courageous, and said they're eight people, like why are you going out there and saying this and raising attention to it? I said, you know, you probably would not have that question if you were one of the eight. And it's a slippery slope, it's a slippery slope. I just don't feel like there's any room for discrimination of any type in a democracy like ours, and we're going to stand up for that. And I feel like businesses have the moral obligation now to be a force for some change.

DAVID SOLOMON: Well, society is demanding it. Society is putting more weight on business to be more involved, active, especially big business.

DAN SCHULMAN: Yes. And I think we need to step up to it and I think we should shoulder that mantle of obligation in a way that inspires us.

DAVID SOLOMON: Good thought to finish on. Dan, thank you, appreciate it. Always a pleasure. (Applause)

PRESIDENT BARBARA VAN ALLEN: We hope to see many of you next week when we will be hosting Peter Thiel for a luncheon conversation with fellow Club member and Club Board Member Maria Bartiromo. That will be on March 15<sup>th</sup>. And on April 18<sup>th</sup>, we will host Governor Villeroy, the Head of the Bank of France for breakfast. Thank you again for joining us today. Please enjoy your lunch. (Applause)