Fixing Healthcare Podcast Transcript
John Sculley

Jeremy Corr:

Hello and welcome to season four of the Fixing Healthcare podcast. I am one of your hosts Jeremy Corr. I'm also the host of the popular New Books in Medicine podcast and CEO of Executive Podcast Solutions. With me is Dr. Robert Pearl. For 18 years, Robert was the CEO of the Permanente Medical Group, the nation's largest physician group. He is currently a Forbes contributor, a professor at both the Stanford University School of Medicine and Business and author of the bestselling book Mistreated: Why We Think We're Getting Good Healthcare--and Why We're Usually Wrong.

Robert Pearl:

Hello, everyone, and welcome to the second episode of the current season. In this our fourth season of Fixing Healthcare, we focus on big ideas and the people behind them. This episode was recorded before the current coronavirus pandemic, and it was delayed in airing due to listener interest in COVID-19. However, as we transition into this the second phase of the pandemic, and begin to look at the future, we wanted to play it to remind listeners of the powerful role technology will need to play going forward. Listeners who want to know more about the current coronavirus pandemic can access every Monday night our podcast "Coronavirus: The Truth." It's available through Apple and Spotify. Last week on the show, we provided the most recent information on the various coronavirus treatments that are now available and the varying results of governmental interventions across the globe. This week we answer the questions most concerning to people by easing social distancing. You also can find additional information on the coronavirus pandemic on the website, robertpearlmd.com.

Jeremy Corr:

Our guest today is John Sculley. After serving as president of Pepsi, he became the CEO of Apple. He served in that position for a decade, increasing sales from $800 million to $8 billion. He is an expert in marketing and disruptive innovation. He is currently involved in a variety of healthcare technology startups.

Robert Pearl:

This is the fourth season of Fixing Healthcare. Its focus will be on big ideas and major success. You have a tremendous history of leadership. Let's start with your first career. The 15 years you spread the Pepsi. Can you tell the listeners why or how you were chosen to be the president of Pepsi, and what you were able to accomplish as the youngest president in Pepsi history?

John Sculley:

Well, thank you for inviting me on this podcast. Going back a lot of decades when I started out at Pepsi, I was the first MBA that Pepsi ever hired. So they weren't sure what to do with me. So I was 27 years old and they put me out on a Pepsi route truck in Pittsburgh, Pennsylvania. I worked in bottling plants. I was here on returnable bottles. I was sent out to Phoenix where I did, I put up signs on buildings in 120-degree heat, daytime, to get a Pepsi sign on the outside of the building, you have fixed the roofs of these old buildings out in Phoenix. This is now back in the 1960s. And I was then sent to Las Vegas where I did fountain syrup sales, and then I went on to Milwaukee, which was a union town so I had to join the union.

John Sculley:

So I really got my hands dirty learning the kind of basics of the soft drink industry. The best thing that ever happened to me because you don't learn these kinds of things on a spreadsheet. And it was through a series of lucky opportunities that I got a chance to join the marketing department of Pepsi when I came back from my training, I was put in market research. They let me work on all kinds of consumer analysis. And I did the first quantitative study that Pepsi had ever done on soft drinks, which later led to the development of the two liter plastic bottle. As we discovered, when we delivered Pepsi to people's homes every week, along with other soft drinks that they could choose from, that no matter how much we delivered, the week before the household inventory was always empty.

John Sculley:

So our conclusion was, wow, it's about getting more product into the inventory of the household. And the way to do that might be to create a plastic bottle that's lighter than a glass bottle and make it really big. And we developed the first two liter plastic bottle and got it out there two years ahead of Coca-Cola. So, you always have to have an insatiable curiosity. And you have to be willing to work hard. You have to be constantly observing and learning and realizing that every challenge is an opportunity to learn, and that's sort of how I've approached everything I've done in life. And it's something that just keeps reoccurring even today in at a time where I'm much older and we're into the era of exponential growth of new technologies. But it's still the same kind of approach I had back in those early days at Pepsi.

John Sculley:

I became the marketing VP of Pepsi when I was just turning 30 years old, I was 29, actually. And that was a pretty good run. We were outsold by Coca-Cola in the U.S. 10 to 1 in 50 percent of the country. And by the time I left as CEO of Pepsi, we had passed Coca-Cola to become the largest-selling consumer packaged good in America. So you'd have to set goals that seem outrageous sometimes. It was outrageous to think that Pepsi could ever pass Coke back in those early days, and yet, if you change the ground rules of an industry, anything's possible.

Robert Pearl:

It's said, John, that you were recruited to Apple by Steve Jobs over the pitch, "Do you want to sell sugared water for the rest of your life or do you want to come with me and change the world?" Is that a true story? And how did you actually get from being the president of Pepsi, to being a senior leader and ultimately the CEO at Apple?

John Sculley:

Well, the true story, that's a part of it, but to put it into context, Steve Jobs was at that point 27 years old. He had wanted to be the CEO of Apple, the board, didn't think he was ready for it. So they gave him as the largest shareholder and the chairman of the board, the veto rights on anyone they interviewed to be the CEO. So they went through over 20 more logical candidates than me out of the industry, and Steve turned every one of them down. And then David Rockefeller, who was one of the earliest investors in Apple said, "Why don't we try another part of the country in a different industry, and see if we can find somebody that Steve will find acceptable."

John Sculley:

What Steve Jobs really wanted, he didn't want another high-tech guy. He believed that the future of computing, because of the Moore's Law, that power of computers would double every 18 to 24 months, he believed that the future of computing was not just cheaper, faster computers, for engineers and professional people. He believed the future was to be able to make a product that would be a consumer device that would be so easy to use. And it would enable non-technical people to do amazing things that it would completely change the world. And that was considered a completely ridiculous idea by people in Silicon Valley back in 1982. So, Steve wanted to learn particularly about industrial design and consumer marketing. And so his appeal to get me to come to Apple had nothing to do with anything I knew about computers, I really didn't know much about computers. He was interested in that I had studied to be an industrial designer and studied architecture that I was deep into design of everything, and that I was a consumer marketer.

John Sculley:

And he said, "You got to come to Apple and teach me about design and consumer marketing." And so that's how I was recruited by Steve to come to Apple. The board of directors was less interested in that. The board of directors was concerned because Apple had introduced the Apple III after the Apple II, and it was a failure. They'd introduced Lisa, which was the first graphics based computer, but much more expensive than the Mac and that failed. And they were running out of cash because the Apple II was getting near end of life. So when I came to Apple as CEO, I actually moved over to run the Apple II division as the operating head, in addition to being CEO of a corporation. And my job was to help rejuvenate the Apple II, help turn it around. We repackaged it to make it feel more contemporary.

John Sculley:

And Steve was developing the Macintosh. And it was still going to be three years before the Mac would be on the market and make money. So we had to get the Apple II turn around and flow in cash if we were going to survive as a company, and that's how I started out at Apple.

Robert Pearl:

I've heard that the original price tag for the Macintosh was aimed to be $1,800 and you said, "No, let's charge $2,300. It's both worth it and we need the cash to invest and build the company." Is that story true?

John Sculley:

Well, it's almost true. The original price that Steve had wanted and his team and wanted was $1,995. But we needed money to advertise the product. Because there at that time, IBM was selling personal computers, Atari outsold Apple. We had Commodore that outsold Apple. IBM was outselling Apple. And so we had to have marketing dollars. So Steve said, "Yeah, we should have marketing dollars." And so if we do that, and we're not making any money anywhere else, we've got to raise the price from what you wanted originally of $1,995 to $2,495. And when we introduced the Macintosh Office, this was the year after the first Mac, and we added the laser printer to it called the LaserWriter. And the reality was that the microprocessors were just not very powerful back in 1983, 1984, 1985. And so it took forever to just be able to paint any kind of graphics on the screen of a Macintosh.

John Sculley:

And it would take minutes to be able to print even a single page with a laser printer. So, when Steve introduced the Macintosh Office in 1985, it was supposed to revolutionize the way we publish documents, desktop publishing, which Apple really helped invent with Adobe. But the reality was people didn't take it very seriously. They said, this is just not realistic that people will sit around and wait that long to print a document or to paint a screen. So the Macintosh Office was a failure. And Steve blamed me and he said, "Well, it's your fault. You may be price it at night $2,495." And I said, "Steve, I don't think price has much to do with it. The reality is that it just didn't deliver the things you wanted it to. And we're probably a year or two too early." That Moore's Law doubles, remember the performance of a processor every 18 months to two years.

John Sculley:

So that became an area of dispute between Steve and me. We went to the board, we discussed it with the board. And the result of that was the board asked Steve to step down from running the Macintosh division. We put someone else in charge of it. Steve did not get fired, that's a myth. But Steve went off on a sabbatical for several months and then he came back and and he decided to resign from the company. Started a new company called NeXT.

Robert Pearl:

So as CEO, you increased Apple's revenue from something like $800 million to $8 billion. How did you do it?

John Sculley:

Well, we had the advantage of Steve Jobs had created a brilliant product with the Macintosh even though when he was there, it was too early in the capability of a microprocessor, as I was saying a moment ago, to be able to do things fast enough. But Moore's Law in a couple of years later enabled the Macintosh to get better and better, the screens got bigger, we were able to add color. We came out with the first really successful notebook computer and by 1992, Apple was the largest-selling personal computer in the world. So we did it just by having terrific products and having a great vision that all came from Steve Jobs. And the focus in my era was how do we add these other capabilities to it? And how do we deploy it and market it? So that was what we did. But I never was the creator of computers, per se the way Steve was, I did work on handheld technology, handheld products, that eventually became the foundational technologies for iPads and iPhones and things like that much later.

John Sculley:

But no question that Steve Jobs laid the foundations for Apple's culture, Apple's vision, and so many of the things that went on to make Apple the great corporation it is today.

Robert Pearl:

As you look at the current Apple, how's it different from what you and Steve built?

John Sculley:

Well, I think because I was there in the early days, when I showed up at Apple, the entire Macintosh division that reported to Steve, the average age was 22. And Steve was like 26 going on 27. And the headquarters of the executive team was in a converted house. So it was a very different Apple, physically. But at the same time, Steve was such a visionary, that he saw that Apple was going to need a culture that would attract the talent that cared about doing things that had never been done before, to really make a difference. And he laid down the foundational first principles of Apple that are highly recognizable today. I'll give you an example. Make design, the center of everything we do. Focus on pleasing customers through an amazing user experience. No compromises. All of these foundational ideas came really from Steve Jobs. These were things that he had already put into place by the time I got to Apple. But together, we continued to scale those out to be the really the foundations for what's recognizable in Apple today.

Robert Pearl:

When I look back at the past decade, and now I want to shift really into healthcare technology per se, I can't identify any product application that has come along in the past decade that has lowered costs in healthcare, unlike almost every industry, where the same technology has not only raised quality, improved consumer satisfaction, but driven down the price. What's your perspective on healthcare technology per se, and the role that it will play going forward into the future?

John Sculley:

The healthcare industry is about $3.6 trillion in the U.S., so it's a really big industry. It's an industry that really doesn't look a lot different today than it did 10 years ago. That the incumbent companies are pretty much the same. But they're much bigger. And the industry has been focused on sick care. So chronic care patients is the heart of what the healthcare system does well. And just 7 percent of the population in the United States accounts for 50 percent of that $3.6 billion sick-care spend. So, everything that we see today in the healthcare industry is really a continuation in some form, though the industry is getting bigger and bigger and spending more money, of what the industry was a decade or even longer. Other industries, telecommunications, financial services, entertainment, retail, eCommerce, all of these things, have industries that have radically changed their focus and their structure. I can remember, when I was a young MBA, when every company was organized around institutions.

John Sculley:

It was focused on: How do you build things and evolve things to continue to grow size and profits? When cloud computing came in, when mobile devices came into the industry, when new kinds of applications and services became possible, that empowered consumers where customers were in control, we saw other industries change radically with huge success. Online banking was a curiosity in the 1990s. Today, we take online banking, better known as Fintech, as the foundational vision for the banking system. And you can go through industry after industry and see amazing success of the adoption of exponentially growing technologies, except the healthcare industry. And so what is happening now, I believe, is that the big tech companies, and I'm thinking of Apple and Google and Amazon and Microsoft and a few others, are saying we want to be in this $3.6 trillion dollar industry. But we want to look at it a different way.

John Sculley:

And the way that these big companies are all looking at it, is saying, we can take cloud computing, we can take wearable devices, handheld devices, service platforms, we can take those same foundational technologies that have worked so well in other industries, and we can pivot a significant part of the healthcare industry to empowering consumers, just like every other industry has empowered consumers or customers. And the way it's happening now in the healthcare industry, is focusing not on sick care, but focusing on preventative care. Focusing on wellness, focusing on early detection of serious diseases, focusing on giving people a way to impact on their own, to monitor their own improvement in health and wellness using wireless devices. It may be an Apple Watch, it may be a smartphone, it may be some application that is running that monitors your sleep or monitors your heart.

John Sculley:

We're now starting to see that these technologies are being implemented in very large products like the iPhone, like the Galaxy Android phone. So I believe that what's going to be significant, let's say between now and 2025, is that we're going to see not just one big winner take all as we've seen in social media, say with Facebook, or we've seen with search advertising with Google, but we'll see several potentially really big winners of recognizable consumer high-tech companies like Apple and Google and Amazon, Microsoft. So I think that what motivates me when I think about the healthcare industry is yes, 5 to 7 percent of the population accounts for about 50 percent of the healthspan and this is largely the chronically ill people. But there is about 75 percent of the chronic care diseases that are out there are actually reversible. If you have Type 1 diabetes that's not reversible, you have that for life. But if you have Type 2 diabetes, which is as a market sector is 10 times bigger than Type 1, that is completely reversible by eating better, nutrition, by exercising, by monitoring your habits, by taking proper medication, all of these things.

John Sculley:

And you can go through health area after health area and find ways that preventive care, wellness can be impacted with the use of smart sensors, the use of cloud platform services, all these things starting to empower patients who are really consumers. And I think we're going to start to see in the decade of the 2020s that the kind of revolutions that have gone on in other large industries will actually start to happen in healthcare, too.

Jeremy Corr:

What made the culture at UnitedHealth and Pepsi during your time there, and in Apple during your time there, and some of the other organizations you work, what stands out within those cultures and makes them special? Like how can your average everyday employee who's maybe only worked at one or two or three places really know whether they're... What are the things to look for if you're hunting down that long term career or whatever to know that you're in one of these special cultures in an organization that's going to thrive and grow?

John Sculley:

Well, I can just tell you the things that I've personally experienced. When UnitedHealthcare acquired Rally Health, they didn't try to fold it into their large Optum business, they let it run as a separate entity. And it actually reported directly up to Dave Wichmann, who at that time as president of the corporation, and now is the CEO. And so it had a chance to live and breathe without having to conform to the pretty established rigorous culture that existed before. And there's a long history of companies like 3M and like UnitedHealthcare that when they, at United, buy a company, a lot of their growth comes through acquisition, or 3M when they invent a new product, they let it have space, they let it sort of run on its own. So many of the businesses inside of Optum are integrated financially into their financial reporting, but they still run as sort of independent portfolio companies.

John Sculley:

And I think that's a smart thing to do. It really is challenging to take a small company and force it into the culture of the large acquiring company. And often those small companies end up becoming the growth engines that redefine what the large company will look like a decade later.

Jeremy Corr:

I love that answer actually. If you were talking to the average healthcare consumer on the street, and they said, "John Sculley, what is the single piece of technology you are most excited about, that will come about in healthcare within the next 5, 10 years?"

John Sculley:

Remember, the healthcare industry is an industry that you can't impact unless you do it at scale because it's so huge. So, the thing that I think is most interesting to me, is the impact that smart process automation can have on the healthcare industry. And the reason I say that is because one of my companies RxAdvance, we built the first cloud platform PBM, pharmacy benefit management company. And it's all based on smart automation. So that, technically it's called robotic process automation. And we use a lot of machine learning. And we can do with intelligence, using smart systems, that are horizontal, because if you're going to revolutionize an industry like healthcare, an industry that has been organized into silos, and the silos have moats around them. So it's difficult to challenge them, it's difficult to integrate them, it's even difficult to move data across from silo to silo.

John Sculley:

And so the healthcare industry technology has always been organized around empowering the silos, empowering the institution. So it's always been designed to work in a hierarchical structure, where the institutions are at the top of priority and where the functions are in silos. But we know from experience that every industry that has been totally transformed through technology is not built that way. It's built today, horizontally, it's got platforms and platforms go horizontally. They go from one end of the system to the other end of the system. The enablement of consumers in these industries, take financial services, with Fintech. Take any of the telecommunication services we have today, including now the ability to stream media, which is rapidly replacing live television over cable. These are all horizontal platform models, and the role of automation in healthcare, because so much of healthcare is about transactions.

John Sculley:

So on the one hand, we can enable consumers with new kinds of tools, with better information, with things that makes the experience less painful to go through, you don't have to fill out forms all the time. On the other hand, you've got to be able to get real productivity and economies. And the only way you can do that, is you've got to take the data horizontally across the entire continuum of care. So when we created RxAdvance, the traditional role of a PBM, pharmacy benefit management, was one purpose: to adjudicate the reimbursements between the pharmaceutical companies who want to get their prescription drugs listed on what are called formularies. And so it's very, very valuable to the pharmaceutical companies to be on these formulary lists. So that process is managed by the PBMs. It's required by the regulators that every time a script is written by a physician, that the regulations insist that you document, the clinical, the claims data, and the related lab data for every prescription.

John Sculley:

Think about how much valuable data comes out of that. Every prescription that's written in the United States must legally be documented with clinical claims related lab data. But because the industry is organized into vertical silos, that data is only used today, to adjudicate the reimbursements between the pharmaceutical companies, the payers, who the insurance companies or the providers who are the hospitals and the clinics, and then the delivery pharmacies. So if you take that same data, clinical claims and related lab data, across the entire continuum of care, particularly for those very expensive patients, those chronic care patients, who have maybe nine different, high comorbidity diseases, they're often getting conflicting information. They're often because they're dealing with different physicians who don't know what the other physicians are prescribing. So they may be getting duplication, they may be getting prescriptions that have side effects in combination with another prescription that another doctor is prescribing.

John Sculley:

You don't know if the patient is actually taking the medication. If they are taking the medication, are they taking it on time? What are the effects of that? So if you can take that clinical claims and related lab data across the entire continuum of care all the way out to patients in their home or to the pharmacist in the pharmacy that now becomes a health hub with lots of different services on premise, you can radically change with a platform, the prescription drug experience, the industry, the economics and drive cost out of it. There's no reason why prescription drugs are as expensive as they are and then that's just one example. So I think platform automation is going to be foundational to everything that goes on in the healthcare system. And the reason I'm so confident of that, is that we can already say that platform automation is foundational to everything in the banking system today.

John Sculley:

Every bank not just in the US, but in other countries, too. It's foundational into everything in eCommerce, and in omnichannel. It's foundational to now everything that's happening in entertainment. So it's just logical that eventually these same foundational process automation platforms are going to find their way into healthcare. And healthcare is a transaction industry, just like financial services or entertainment or eCommerce. So it's going to happen. It's not will it happen? It's when it happens, where will it happen? Who will be the leaders in it? But there's no question in my mind that's going to happen. That we're going to be, the healthcare industry of the future will be a platform based industry and will be organized around the consumer experience, the patient's experience, and will discover all kinds of ways of building valuable new companies, valuable ways in which healthcare can be delivered more effectively at a lower cost.

John Sculley:

But until you deal with that foundational question of getting the foundational architecture correct in the platforms, you're not going to get the big productivity gains, and it's one of the reasons why people say maybe healthcare can't be reformed. Maybe it's just too complex. I don't buy that.

Robert Pearl:

One of the big differences is the third-party intermediary, the fact that insurance pays for the healthcare costs sitting in play. You may have seen this week that the obesity rate in the United States, which is the direct correlation with the diabetes rates, is now at the highest level, over 30 percent of people are at tremendous risk, now for either having or developing diabetes. What's going to motivate them? If we're not seeing it yet, what's going to motivate them to use these tools to achieve the outcomes that you're predicting?

John Sculley:

Well, I'll give you an example from another company that I was part of the founding team of, which is called Rally Health and we sold out to the UnitedHealthcare back in 2014. Rally Health had a really cool idea, came from our founder, who started out with the idea that you could empower consumers to change their behavior if you could get them engaged. And his name was Grant Verstandig. And Grant was the founder and CEO of Rally Health. And the way Rally Health works is that, when we sold it to UnitedHealthcare that owns Optum, Optum had about 10 million wellness lives, and it had about 10 million preventative care lives and it was losing money on both of those groups. By moving them over to our platform at Rally Health, where we had figured out how to get significant engagement with consumers, and we did that by asking people to look at 40 pictures on a screen. This is when people were still getting most of their internet experience from large screens, notebook computers and things like that, as opposed to iPhones and smartphones. And so we said look at these 40 pictures, and they're actually 40 screens with A side of the screen and a B side of the screen, two different pictures on each screen. And you'd say, "Are you more like A or are you more like B?" And we'd asked this 40 times, 40 different screenshots. And at the end of that, we were able to build a very detailed profile. No one had to write anything down. They just had to vote on looking at 40 different screens that were divided into an A picture or B picture. Are you more like A, are you more like B? And we used that to particularly zero in on women, because women were the care deciders for everyone in their own personal ecosystem. Their spouse, their children, their grandchildren, their parents, their in-laws.

John Sculley:

And so the way we got women involved, because we found out that women were actually the largest online gamers, it wasn't teenage boys playing video games, it was actually women doing Candy Crush and Angry Birds and puzzles and things of this sort. And so we got women engaged, and we gave them incentives to join different groups of interest that they had. And we gave them awards and we gave them rewards. And the rewards became discounts in co-pays and deductibles for their health insurance. Because UnitedHealthcare and Optum were part of the same company. And so that business now that it's owned by UnitedHealthcare has scaled into a very, very large, successful business. They spend well over $1.5 billion a year just on marketing expense. And the discounts on co-pays and deductibles is kind of equivalent to what we're used to in other industries, like frequent flyer miles. And it's, except in this case, it's put into the context of healthcare.

John Sculley:

Well, it turns out that if you can get people to show evidence that they're changing their behavior, in order to win discounts and co pays and deductibles, that it actually drops right to the bottom line of a healthcare company, and it's known as the medical loss ratio, the MLR. It's one of the most important metrics that you measure, in an insurance company. So, Rally Health became very successful. And it's a great example how you can attach engagement with a consumer, get them involved with things they like, get them involved with other people they enjoy to be associated with, focus in on rewards and focus in on awards, as opposed to just rewards. And you can build a very successful, entirely different way of approaching the insurance industry than anyone I've done for prior to that.

Robert Pearl:

As you know, John, I teach at the Stanford Graduate School of Business, and disruption is a major focus. What do you believe will happen with programs like Haven, the healthcare startup that combines Amazon, Berkshire Hathaway and JPMorgan Chase?

John Sculley:

Well, no one really knows exactly where Haven's going to end up. I know, I told Gawande who's heading that program up because we started a healthcare company in the Boston area called RxAdvance, a pharmacy benefit management, cloud platform company. And Haven is very familiar with what we're doing and there's some very smart people in Haven, but I think Haven is trying to solve the problem of how can an employer in this case Berkshire Hathaway, JPMorgan, and Amazon, those three employers together have well over, like 1.5 billion employees, how can those employers deliver a better healthcare experience at a better economic value to their employees? They have not said that this is something they will necessarily take beyond their employees, but it's very important to them because of the large number of employees between those three companies.

John Sculley:

And I think it's a terrific initiative, because at the very least, it's got everybody thinking, wow, if they figure something out that the rest of us don't know, they could take that out into the market, and we could suddenly have a major new competitor. So, it's very healthy for the industry to see that kind of potential disruptive innovation with smart people backed by three of the most successful companies in the world, given their branding behind it. So I'm excited to see what Haven comes up with, but it's still early days.

Robert Pearl:

You're one of the leading thinkers around marketing. As you say, you started the consumer research studies, you think of the people who use healthcare as consumers, doctors still think of them as patients. What is your strategy to change the way doctors view the people they take care of?

John Sculley:

Well, I have huge respect for what doctors do. But I also believe that doctors are as interested as patients are in finding a better experience for patients in the healthcare system. For example, why is it necessary every time you go to a doctor, they give you a clipboard, and you fill out a form that looks exactly like the form you filled out the last time you there, and looks exactly like the form that you fill out with any other doctor that you're seeing? I mean, that's more like 1955, not like 2020. So I think that every part of the, let's call it the consumer experience is being thought about and challenged and doctors, many of them are turning into entrepreneurs. They're saying, "Wow I get to see things through my everyday practice that are helping me understand health, from a different perspective. Why can't I be an entrepreneur and go start a business?"

John Sculley:

So I think one of the things that will make the healthcare industry radically different from what it has been up until now, that it will not be defined just by the incumbent institutions, but it's going to be like every other industry has gone through in the past 20 or 30, 40 years. It's going to be completely disrupted with new entrants, doing new types of products and services that are going to take advantage of amazing technologies that are growing at an exponential rate of change. Just to give you an example of that, most people in my generation grew up with linear time. Now we have a pretty good instinctive idea of how long a week is, what you can get done in a month, what gets accomplished in a year. But in exponential time, because we live in an exponential math world, where it's not just Moore's Law that's growing at an exponential rate of change. It's so many new technologies, everything from sensors to data science to types of services based on wireless technology that enables us to take services that were only available before, over a fixed landline in at home. Looking at a big screen now you can carry everything around in a mobile device, people can be tracked and followed and the value of a service is the data that it generates and what that data can enable, both in terms of services for the users, but also incredible business models for the company. So it's a world that's completely different everywhere except healthcare. Healthcare is still, because it's highly regulated, and has powerful special interests, no company, no industry, let's say, spends more money on lobbyists than the U.S. healthcare industry. Pharmaceutical industry spends $240 million a year on lobbyists. It's far more than any other industry. Number two largest industry a lobbying expense is the healthcare industry about $150 million a year on lobbying expense. So when industries are putting so much money into lobbyists to give the current system a thumb on the scale advantage over a new company coming in, that's not good for disruption.

John Sculley:

The reason why disruption is going to win in the end is that, when you empower the customer to be able to be the decider, to know what choices are where you give them transparency to compare services, quality, pricing with other alternatives, then you start to see industries go through disruption.

Robert Pearl:

I give about 40 keynote addresses a year, half of which to technology companies, half of which to healthcare organizations. When I go to these two sets of meetings, it's two different realities. The healthcare companies are all telling me about the great products they have, artificial intelligence, data analytics, wearables, and the physician, the medical culture is saying to me, these devices don't seem to make my life any better, don't seem to work for me. For listeners, how do you recommend separating the hype from the reality of new technology?

John Sculley:

You have to hit a certain threshold level for a technology to be able to live up to the vision. And I saw that up close in the early days of Apple, because Steve Jobs had the vision, his vision never changed. But he wasn't an engineer, he didn't have the experience of translating a vision into a disruptive solution that was going to deliver exactly what he believed the vision should be able to deliver to consumers. You can sometimes just be too early. I was too early when I was working on handheld devices like the Newton and General Magic. We were probably 15 years too early, but we didn't at the time realize that. And same thing was true with Steve on the early Macs. He didn't realize that he was probably 15 years too early for some of the visions he had for personal computing.

John Sculley:

So the reality is in healthcare, that there's been a lot of hype of devices that really were just too early to make the kind of difference that those same technologies were making in other industries. Give you a good example, let's take telehealth. Telehealth has been around about a dozen years in the United States. And I sort of think of it the way people looked at online banking back in the mid-1990s, when the World Wide Web first began to be commercialized. And when people started to see it was possible to do online banking tasks or pay bills online over the web, the majority of people said, "Well, I don't know, it's sort of sounds like a cool idea. But why would anybody really want to do that? And could you trust it?" And that's exactly what telehealth has gone through.

John Sculley:

It's taken a long time for telehealth to move beyond what's called low-acuity care. Low acuity care would be "Gee, I woke up with an earache today, I need a doctor to write me a prescription. What do I do? So you try one of the telehealth services and you may be happy with the experience, but you may only use that once a year. So there's no recurring revenue of any importance. And yet the services are very expensive to acquire customers. Any B2C consumer based service is expensive in terms of customer acquisition, so you've got to have a recurring revenue model to pay for it. Consequently, we're now at the stage with telehealth where we're moving from low acuity care to higher acuity care.

John Sculley:

We're moving into remote patient monitoring. We're moving into different types of health services that can be delivered. We're moving into senior care, as hospitals closed down about 40 percent of their beds. And the aging population is more likely to be treated in their own home with sensors monitoring their entire world in their home and the ability to connect back with health professionals through telehealth and that's just one example. So, everything has its time. And we're at a point now where disruption is starting to have its time in many, many places. And it's one of the reasons why I'm still very active in healthcare.

Robert Pearl:

Like you I'm very bullish on video, telehealth, people don't want to call it that. I think 30 percent at least of what we do in the medical office today is going to be done with telehealth. They'll be more convenient, higher quality and far less cost. I'm less bullish on some of the monitoring devices, not because they're not brilliant technology, but because what they really need to have is built into an artificial intelligence to tell the user whether he or she is fine or not. Because the idea of just sending data to someone at a distance doesn't really do much to lower the cost and as an example, most doctors don't want to get 100 cardiac EKGs. What do you see as being the way that these companies to me are going to overcome what I think is a medical legal or a legal restriction? Are they just afraid to give out the advice that people need? Because I think that would really be the game changer. I just don't see it happening, you see Apple doing it soon?

John Sculley:

Well, I can't speak for Apple because I'm not inside of Apple, but I can tell you things that I am involved with working on in private companies. So for example, we have a company called Zedsen, Z-E-D-S-E-N, over in London, that has developed the first completely accurate, consistently accurate way of monitoring blood glucose on a non-invasive basis. So that you could build it into a digital watch, you could build it into a smartphone. We've actually built it into a cover of a smartphone, so that it could go on, say an Android phone, and it could enable you to put your finger on a sensor and without a pinprick be able to measure your accurate blood glucose as many times during the day as you want to. For a Type 2 diabetic, that's an incredible advantage over a finger prick on your blood testing.

John Sculley:

There are already devices for type one diabetics to be able to do something that uses a minimally invasive patch. But it's really expensive, it's like 1300 dollars a year to keep replacing these patches every couple of weeks. So if you were to take the stake, we're doing with Zedsen and put it into a smartphone cover, and you made it that simple to be able to monitor your blood glucose. Now tie that back if you had that integrated into a service that is helping those people improve their behavior, just their basic lifestyle. Remember, the majority of people who are obese are reversible. They could lose weight, they could exercise, they could follow better coaching, and things of this sort. And they've been a number of successful companies. Vongo was one that went public last summer, a relatively small company, around 100 million revenue, $4 billion IPO.

John Sculley:

So, I think that we are going to see disruptive innovation, using sensor technology. Most of its going to be non-invasive. Some of it will be sensors that you wear, some will be sensors that are able to sense the environment. Imagine if you're a senior citizen, living at home by yourself, and you have ambient sensors that are able to sense smell, temperature, motion, all of these different things that are keeping track of a lonely person who is in their senior years, who may have a series of medical issues and keeping them in touch with health professionals. And imagine if you have the next-generation of an Alexa or Siri, is not just a request and respond technology, but is a conversational technology. Where you can actually have a conversation with these devices and the devices incorporated in with sensors that are saying, "Hey, you didn't take your prescription at 11 o'clock. And by the way, you haven't gotten out of bed in the last four hours, is everything okay?"

John Sculley:

So I think that I'm not making up things that are kind of like science fiction. I'm telling you about stuff where the technology already exists and there are already companies that are starting to put these technologies together and deploy them. Not everything will work, not everything will work perfectly. But I'm totally convinced that in the next five years, that we will see a shift in the growth of care from point of care in institutions like hospitals and doctor clinics to a point of care in the home for particularly senior citizens and point of care at retail for many, many people we're going to see, Walmart and CVS and Walgreens and BestBuy and others are completely reformatting what their retail stores are looking like and more and more it's going to be organized around the consumer and the experience of different types of preventative care services and products. And we're going to see that the role of innovation, I think, will become every bit as important in the health industry by the end of this decade, as it has become in telecommunications, financial services, retail, entertainment, things of that sort.

Jeremy Corr:

If you had one piece of advice for your average everyday healthcare consumer, what would it be?

John Sculley:

To have higher expectations of what you believe that you as a patient in the system should expect from providers. And we have plenty of very smart, competent people in the healthcare system. It's not like this is an industry that didn't attract talented people. It absolutely did. I mean, I have met over the last 15 years, so many talented people in the healthcare industry, so many highly principled people who will say, "I want to see a noble cause of a better way to deliver healthcare. And more people ought to be covered by insurance." When you hear about things like Medicare For All, it's a catchy phrase that has no substance behind it, that can possibly be implemented. Because it's being spoken by politicians who basically don't know what they're talking about. On the other hand, if you say, "Why shouldn't everybody have healthcare? Why shouldn't everyone have health insurance?" And start there, and say, "So what would it take?" In terms of, if you're going to build the system from the ground up? How would it look different? Look at our telephone system today.

John Sculley:

One time, there were operators sitting at a central office, at a switchboard, connecting phone calls. And there was a time when back in the 1930s people said, well, the telephone will never be a pervasive technology because there aren't enough women around to train to be operators to work at the switchboards. Well, that sounds ridiculous a statement today. You say, how can anyone have possibly said something like that. But there were intelligent people who actually thought that way back in the 1930s and the 1940s. We're going to see a lot of things we do today, which we'll seem completely ridiculous 10 or 20 years from now, that will be replaced by very simple technologies that will be at the same time very sophisticated and well deployed and incredibly inexpensive, that we'll just take for granted, just like we take those types of technologies for granted every time we pick up a smartphone and use it.

Robert Pearl:

John, thank you for joining us. This has been most informative for our listening audience.

Jeremy Corr:

Robbie, what are your thoughts on what Mr. Sculley presented?

Robert Pearl:

Jeremy, it's fascinating to listen to this podcast that we recorded before the outbreak of the coronavirus pandemic, and how much of the material still applies to today's reality. In particular, his focus on video was powerful. As he pointed out, this is a technology that can transform American healthcare, raising quality, making care more convenient and lowering cost. In the various keynotes I presented since the publication the book Mistreated: Why We Think We're Getting Good Healthcare--and Why We're Usually Wrong, I've told the audiences that 30 percent of what we do in our medical offices today could be done as well if not better through telehealth. Based on the positive experience of both doctors and patients since the start of COVID-19, I now believe it's closer to 40 percent. As CEO of the Permanente Medical Group, we've placed physicians on the campuses of companies like Google and Apple. We used video to bring specialty expertise into the exam room when the employer's problem required it.

Robert Pearl:

Over half of the time, the medical problem either was solved that day, immediately in the office, where the work could be begun more rapidly than if a consult had simply been sent. The potential for video is far greater than either doctors or patients realize.

Jeremy Corr:

I concur. Living in Iowa and knowing how many people live in rural areas away from the major academic centers, being able to get sub-specialty expertise immediately and conveniently is tremendous. It's hard to put the coronavirus into a positive light, but this could be one example. More on this, on this week's episode of "Coronavirus: The Truth."

Robert Pearl:

Please subscribe to Fixing Healthcare on iTunes or other podcast software. If you like the show, please rate it five stars and leave a review. Visit our website at fixinghealthcarepodcast.com. You can follow us on LinkedIn and Twitter @fixinghcpodcast. We hope you enjoyed this show and will tell your friends and colleagues about it. If you want more information on these topics, you can visit my website robertpearlmd.com. Together, we can make American healthcare once again the best in the world.

Jeremy Corr:

Thank you for listening to Fixing Healthcare with Dr. Robert pearl and Jeremy Corr. Have a great day.