

[Transcript] Lex Fridman Podcast / #395 - Walter Isaacson: Elon Musk, Steve Jobs, Einstein, Da Vinci & Ben Franklin

The following is a conversation with Walter Isaacson, one of the greatest biography writers ever, having written incredible books on Albert Einstein, Steve Jobs, Leonardo da Vinci, Jennifer Doudna, Benjamin Franklin, Henry Kissinger, and now a new one on Elon Musk. We talked for hours on and off the mic.

I'm sure we'll talk many more times.

Walter is a truly special writer, thinker, observer, and human being.

I highly recommend people read his new book on Elon.

I'm sure there will be short-term controversy, but in the long term, I think it will inspire millions of young people, especially with difficult childhoods, with hardship in their surroundings or in their own minds, to take on the hardest problems in the world and to build solutions to those problems, no matter how impossible the odds.

In this conversation, Walter and I cover all of his books and use personal stories from them to speak to the bigger principles of striving for greatness in science, in tech, engineering, art, politics, and life.

There are many things in the new Elon book that I felt are best saved for when I speak to Elon directly again on this podcast, which will be soon enough.

Perhaps it's also good to mention here that my friendships, like with Elon, nor any other influence like money, access, fame, power, will ever result in me sacrificing my integrity, ever.

I do like to celebrate the good in people, to empathize and to understand, but I also like to call people out on their bullshit, with respect and with compassion.

If I fail, I fail due to a lack of skill, not a lack of integrity.

I work hard to improve.

And now, a quick few second mention of each sponsor.

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Maybe you will too, this show is brought to you by Masterclass.

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There's many ways to learn a thing.

One is by doing.

Another is by reading, or watching other people give tutorials on how to do the thing.

And the other is to observe the people that do the thing at a world class level, or who are the best in the world at doing that thing.

I think, well, while it's not the only thing you should be doing, that is as good as it gets.

That's the advice I've always been given, and I've given one of the best ways to excel in life, and not in some shallow way, but in a deep way, is to find the people in this world who you want to become, and do anything you can to work with them, to be around them, to learn from them, and not because they sit down and give their time to teach, but by just being in their presence and observing how they work, and then giving everything you can to contribute to that effort, to that mission, to sort of the passion that pulls them and that drives them.

In some sense, watching a master class is a way of doing that.

I'm a big fan of watching not just teachers, but the doers in this world.

I can go on, the list is incredible, from Chris Hadfield to Will Wright, man, I should really talk to Will Wright, Carlos Santana, and I should talk to Carlos Santana, and not just talk.

Talking is not enough, friends.

Play guitar.

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Oh, I remember when I was 25.

Some fly as friends when you're having fun, and Netsuite has been having a whole lot of fun helping people run their business as well.

In fact, it's 36,000 companies have upgraded to Netsuite by Oracle.

I love companies.

Companies do stuff.

They get together.

A bunch of people get together.

There's like a boss, and there's employees, and they have lunches and meetings.

Some of them are horribly drowning in bureaucracy.

Some of them resist and fight that bureaucracy, and actually get something done.

That's that little struggle of humanity in these little pockets of dreams, and sweat, and labor, and just reaching for the stars with big goals and small goals.

That's what this podcast is about, with Elon, with Steve Jobs, and all throughout history with Da Vinci, striving all kinds of different ways.

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This episode is also brought to you by BetterHelp, spelled H-E-L-P, help.

In this episode with Walter, we're talking quite a bit about demons.

If demons in Diablo, I think we'll allude to that, and demons inside our own mind.

And those demons are not all bad.

They're, in some sense, reminders of how difficult life can be, how much struggle big and small all of us can experience, and that struggle can break us, or it can strengthen us.

That's the choice all of us make through hardship, and some of the greatest men and women in the world, in the history of the world, have been defined in their early days by the struggle and the overcoming of that struggle.

Talking in general about therapy, which is systematic, rigorous exploration of the human mind through the talking method, I think should be one of the tools for that.

Returning the demons into productive demons versus destructive demons.

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It's like a warm blanket for me of happiness that fights off the monsters that hide in the closet of our childhoods.

That's very poetic.

I never actually had monsters in the closet, because grew up in a tiny place, there was no closets.

No word for the monsters to hide.

That too is poetic.

I'm not sure where I'm getting with that, but there is a sense of happiness that I associate with ExpressVPN because through some of the more difficult moments of my life, that was a piece of software that's running on my computer and it just works.

It's silly how these little pieces of software can just bring a little bit of comfort to you.

For a long time, Emacs as an IDE was that I would open up the Emacs editor with a bunch of windows open, black background, white text, and I would see all that code laid out before me.

It's like an escape from the hardness of life.

In a simpler way, ExpressVPN is kind of like that.

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And boy, do I know how easy they make that now that friends, let me plug myself and say that there's now a official podcast Shopify store.

You can go there by clicking on, I think, lexfriedman.com slash store and it'll take you there.

And it was so incredibly easy to set up.

It just works.

In this case, I'm just selling t-shirts, but it was so easy to go from zero to hero, although I never quite got the hero, but get the store set up.

Super easy.

I love it.

So if you want to get the merch for this podcast, you can go there and get merch for all kinds of podcasts and all kinds of things by going to all the amazing stores that Shopify supports.

I mean, it just really makes it easier to sell stuff.

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And now, dear friends, here's Walter Isaacson.

What is the role of a difficult childhood in the lives of great men and women, great minds?

Is it a requirement?

Is it a catalyst or is it just a simple coincidence of fate?

Well, it's not a requirement.

Some people with happy childhoods do quite well, but it certainly is true that a lot of really driven people are driven because they're harnessing the demons of their childhood. Even Barack Obama's sentence in his memoirs, which is, I think every successful man is either trying to live up to the expectations of his father or live down the sins of his father.

And for Elon, it's especially true because he had both a violent and difficult childhood and a very psychologically problematic father.

He's got those demons dancing around in his head.

And by harnessing them, it's part of the reason that he does riskier, more adventurous, wilder things than maybe I would ever do.

You've written that Elon talked about his father and that at times it felt like mental torture, the interaction with him during his childhood.

Can you describe some of the things you've learned?

Yeah.

Well, Elon and Kimball would tell me that, for example, when Elon got bullied on the playground and one day was pushed down some concrete steps and had his face pummeled so badly that Kimball said, I couldn't really recognize.

I mean, he was in a hospital for almost a week.

But when he came home, Elon had to stand in front of his father and his father berated him for more than an hour and said he was stupid and took the side of the person who had beaten him.

That's probably one of the more traumatic events of Elon's life.

Yes, and there's also Veld School, which is a sort of power military camp that young South African boys got sent to.

And at one point, he was scrawny.

He has very bad at picking up social cues and emotional cues.

He talks about being Asperger's.

And so he gets traumatized at a camp like that.

But the second time he went, he'd gotten bigger.
He had shot up to almost six feet and he'd learned a little bit of judo.
And he realized that if he was getting beaten up, it might hurt him, but he would just punch the person in the nose as hard as possible.
So that sense of always punching back has also been ingrained in Elon.
I spent a lot of time talking to Errol Musk, his father.
Elon didn't talk to Errol Musk anymore, his father, nor does Kimball, it's been years.
And Errol doesn't even have Elon's email.
So a lot of times Errol would be sending me emails.
And Errol had one of those Jekyll and Hyde personalities.
He was a great mind of engineering, and especially material science, knew how to build a wilderness camp in South Africa using mica and how it would not conduct the heat.
But he also would go into these dark periods in which he would just be psychologically abusive.
And of course, Maymosk says to me, his mother, who divorced Errol early on, said, the danger for Elon is that he becomes his father.
And every now and then, you've been with him so much, Lex, and you know him well, he'll even talk to you about the demons, about Diablo dancing in his head.
I mean, he gets it, he's self-aware, but you've probably seen him at times where those demons take over and he goes really dark and really quiet.
And Grimes says, you know, I can tell a minute or two in advance when demon mode's about to happen.
And he'll go a bit dark.
I was here at Austin, wanted dinner with a group.
And you could tell suddenly something had triggered him, and he was going to go dark.
I've watched it in meetings where somebody will say, we can't make that part for less than \$200 or no, that's wrong.
And he'll berate them.
And then he snaps out of it, as you know that too, the huge snap out where suddenly he's showing you a Monty Python sketch on his phone and he's joking about things.
So I think coming out of the childhood, there were just many facets, maybe even many personalities, the engineering mode, the silly mode, the charismatic mode, the visionary mode, but also the demon and dark mode.
A quote you cited about Elon really stood out to me.
I forget who it was from, but inside the man, he's still there as a child, the child standing in front of his dad.
That was Tallulah, his second wife.
And she's great.
He's an English actress.
They've been married twice actually.
And Tallulah said, that's just him from his childhood.
He's a drama addict.
Kimball says that as well.
And I asked why.

And Tallulah said, for him, love and family are kind of associated with those psychological torments.

And in many ways, he'll channel.

I mean, Tallulah would be with him in 2008 when the company was going back or whatever it may have been or later.

And he would be so stressed, he would vomit.

And then he would channel things that his father had said, use phrases his father had said to him.

And so she told me deep inside the man is this man child still standing in front of his father.

To what degree is that true for many of us, do you think?

I think it's true, but in many different ways.

I'll say something personal, which is I was blessed and perhaps it's a bit of a downside too.

But the fact that I had the greatest father you could ever imagine and mother, they were the kindest people you'd ever want to meet.

I grew up in a magical place in New Orleans.

My dad was an engineer, an electrical engineer, and he was always kind.

Perhaps I'm not quite as driven or as crazed.

I don't have to prove things.

So I get to write about Elon Musk.

I get to write about Einstein or Steve Jobs or Leonardo da Vinci, who as you know was totally torn by demons and had different difficult childhood situations, not even legitimized by his father.

So sometimes those of us who are lucky enough to have really gentle, sweet childhood, we grow up with fewer demons, but we grow up with fewer drives and we end up maybe being Boswell and not being Dr. Johnson.

We end up being the observer, not being the doer.

And so I always respect those who are in the arena.

You don't see yourself as a man in the arena.

I've had a gentle, sweet career and I've got to cover really interesting people.

But I've never shot off a rocket that might someday get to Mars.

I've never moved us into the era of electric vehicles.

I've never stayed up all night on the factory floor.

I don't have quite those either the drives or the addiction to risk.

I mean, Elon's addicted to risk.

He's addicted to adventure.

Me, if I see something that's risky, I spend some time calculating upside-downside here.

And that's another reason that people like Elon Musk get stuff done and people like me write about the Elon Musk's.

One other aspect of this, given a difficult childhood, whether it's Elon or Da Vinci,

I wonder if there's some wisdom, some advice almost that you can draw, that you can give to people with difficult childhoods.

I think all of us have demons, even those of us who grew up in a magical part of New Orleans with sweet parents.
And we all have demons.
And rule one in life is harness your demons.
Know that you're ambitious or not ambitious or you're lazy or whatever, Leonardo Da Vinci knew he was a procrastinator.
I think it's useful to know what's eating at you, know how to harness it.
Also know what you're good at.
I'll take Musk as another example.
I'm a little bit more like Kimball Musk than Elon.
I maybe got over-endowed with the empathy gene.
And what does that mean?
Well, it means that I was okay when I ran Time Magazine.
It was a group of about 150 people on the editorial floors and I knew them all and we had a jolly time.
When I went to CNN, I was not very good at being a manager or an executive of an organization. I cared a little bit too much that people didn't get annoyed at me or mad at me.
And Elon said that about John McNeil, for example, who was president of Tesla.
It's in the book.
I talked to John McNeil a long time and he says, you know, Elon just would fire people.
We really rough on people.
He didn't have the empathy for the people in front of him and Elon says, yeah, that's right.
And John McNeil couldn't fire people.
He cared more about pleasing the people in front of him than pleasing the entire enterprise or getting things done.
Being over-endowed with a desire to please people can make you less tough of a manager.
And that doesn't mean there aren't great people who are over-endowed.
Ben Franklin over-endowed with the desire to please people.
The worst criticism of him from John Adams and others was that he was insinuating, which kind of meant he was always trying to get people to like him.
But that turned out to be a good thing.
When they can't figure out the big state, little state issue at the constitutional convention, when they can't figure out the Treaty of Paris, whatever it is, he brings people together and that is his superpower.
So to get back to the lessons you asked, and you know, the first was harness your demons. The second is to know your strengths and your superpower.
My superpower is definitely not being a tough manager.
After running CNN for a while, I said, okay, I think I've proven I don't really enjoy this or know how to do this well.
You know, do I have other talents?
Yeah, I think I have the talent to observe people really closely, to write about it in a straight, but I hope interesting narrative style.

That's a power.

It's totally different from running an organization.

It took me until three years of running CNN that I realized I'm not cut to be an executive in a really high intense situations.

Elon Musk is cut to be an executive in a highly intense situation, so much so that when things get less intense, when they actually are making enough cars and rockets are going up and landing, he thinks of something else, so he can surge and have more intensity.

He's addicted to intensity, and that's his superpower, which is a lot greater than the superpower of being a good observer.

But I think also to build on that, it's not just addiction to risk and drama.

There's always a big mission above it.

So I would say it's an empathy towards people in the big picture.

It's an empathy towards humanity more than the empathy towards the three or four humans who might be sitting in the conference room with you, and that's a big deal.

You see that in a lot of people.

You see it, Bill Gates, Larry Summers, Elon Musk.

They always have empathy for these great goals of humanity, and at times they can be clueless about the emotions of the people in front of them, or callous sometimes.

Musk, as you said, is driven by mission more than any person I've ever seen.

And it's not only mission, it's like cosmic missions, meaning he's got three really big missions.

One is to make humans a space-faring civilization, make us multi-planetary, or get us to Mars.

Number two is to bring us into the era of sustainable energy, to bring us into the era of electric vehicles and solar roofs and battery packs.

And third is to make sure that artificial intelligence is safe and is aligned with human values.

And every now and then I'd talk to him, and we'd be talking about Starlink satellites or whatever, or he would be pushing the people in front of him in SpaceX and saying, if you do this, we'll never get to Mars in our lifetime.

And then he would give the lecture how important it was for human consciousness to get to Mars in our lifetime.

And I'm thinking, okay, this is the pep talk of somebody trying to inspire a team, or maybe it's a type of pontification you're doing a podcast.

But unlike the 20th time I watched him, I realized, okay, I believe it.

He actually is driven by this.

He is frustrated and angry that because of this particular minor engineering decision, the big mission is not going to be accomplished.

It's not a pep talk.

It's a literal frustration.

An impatience, a frustration.

And it's also just probably the most deeply ingrained thing in him is his mission.

He joked at one point to me about how much he loved reading comics as a kid.

And he said, all the people in the comic books, they're trying to save the world, but they're

wearing their underpants on the outside and they look ridiculous.

And then he paused and said, but they are trying to save the world.

And whether it's Starlink in Ukraine or Starship going to Mars or trying to get a global new Tesla, I think he's got this epic sense of the role he's going to play in helping humanity on big things.

And like the characters in the comic books, it's sometimes ridiculous, but it also is sometimes true.

When I was reading this part of the book, I was thinking of all the young people who are struggling in this way.

And I think a lot of people are in different ways, whether they grow up without a father, whether they grow up with physical, emotional, mental abuse, or demons of any kind, as you talked about.

And it's really painful to read, but also really damn inspiring that if you sort of walk side by side with those demons, if you don't let that pain break you or somehow channel it, if you can put it this way, that you can achieve, you can do great things in this world.

Well, that's an epic view of why we write biography, which is more epic than I had even thought of.

So I say thank you, because in some ways what you're trying to do is say, okay, I mean Leonardo, you talk about being a misfit, he's born illegitimate in the village of Venti, and he's gay, and he's left-handed, and he's distracted, and his father won't legitimize him.

And then he wanders off to the town of Florence, and he becomes the greatest artist and engineer of the early Renaissance, of that part of the Renaissance.

I hope this book inspires Jennifer Doudna, the gene editing pioneer who helps discover CRISPR, gene editing tool, which my book, *The Code Breaker*, she grew up feeling like a misfit in Hawaii, in a Polynesian village being the only white person, and also trying to live up to a father who pushed her.

So if people can read the books, and I should have said about Jennifer Doudna, my point was that she was told by her school guidance counselor, no, girls don't do science.

Science is not for girls.

You're not going to do math or science.

And so it pushes her to say, all right, I'm going to do math and science.

It's just a thing to interrupt real quick, but Jennifer Doudna, you've written an amazing book about her, Nobel Prize winner, CRISPR developer, just incredible, one of the great scientists in the 21st century.

Right.

We're talking about when Jennifer Doudna was young, and she felt really, really out of place, like you and me and a lot of people when they fill in that way, they read books. They go into, they curl up with the book.

So her father drops a book on her bed called *The Double Helix*, the book by James Watson on the discovery of the structure of DNA by him and Rosalind Franklin and Francis Crick. And she realizes, oh my God, girls can become scientists.

My school guidance counselor is wrong.

So I think books, like she read this book, and even if it's a comic book, like Elon Musk read, books can sometimes inspire you.

And every one of my books is about people who are totally innovative, who weren't just smart, because none of us are going to be able to match Einstein and mental processing power, but we can be as curious as he was and creative and think out of the box the way he did, or Steve Jobs put it, think different.

And so I hope with my books, I'm saying, this isn't a how-to guide, but this is somebody you can walk alongside.

You can see Einstein growing up Jewish in Germany.

You can see Jennifer Doudna growing up or as an outsider, Leonardo da Vinci or Elon Musk in really violent South Africa with a psychologically difficult father and getting off the train when he goes to anti-apartheid concert with his brother and there's a man with a knife sticking out of his head and they step into the pool of blood and it's sticking on their souls.

This causes scars that last the rest of your life and the question is not how do you avoid getting scarred, it's how do you deal with it?

Einstein, too, it's hard to pick my favorite of your biographies, but Einstein, I mean, you really paint a picture of another, I don't want to call him a misfit, but a person who doesn't necessarily have a standard trajectory through life of success, so that's extremely inspiring.

I don't know exactly what question to ask, there's a million.

Well, I'll talk about the misfit for a second because we talked about Leonardo being that way.

Einstein is Jewish in Germany at a time when it starts getting difficult.

He's slow in learning how to talk and he's a visual thinker, so he's always daydreaming and imagining things.

The first time he applies to the Zurich Polytech, because he runs away from the German education system because it's too much learning by rote, he gets rejected by the Zurich Polytech.

Now, it's the second best school in Zurich and they're rejecting Einstein, I tried to find but couldn't the name of the admissions counselor at the Zurich Polytech, like you rejected Einstein.

And then he doesn't finish in the top half of his class and once he does and he goes to graduate school, they don't accept his dissertation, so he can't get a job.

He's not teaching it, he even tries about 14 different high schools, a gymnasium to get a job and they won't take him.

So he's a third class examiner in the Swiss Patent Office in 1905, third class because they've rejected his doctoral dissertation and so he can't be second class or first class because he doesn't have a doctoral degree and yet he's sitting there in the stool in the Patent Office in 1905 and writes three papers that totally transform science.

And if you're thinking about being misunderstood or unappreciated, in 1906 he stole a third class patent.

1907 he stole it.

It takes until 1909 before people realize that this notion of the theory of relativity

might be correct and it might upend all of Newtonian physics.

How is it possible for three of the greatest papers in the history of science to be written in one year by this one person?

Is there some insights, wisdoms you draw?

Plus he had a day job as a patent examiner and there's really three papers but there's also an addendum because once you figure out quantum theory and then you figure out relativity and you're understanding Maxwell's equations and the speed of light, he does a little addendum. That's the most famous equation in all of physics which is $E = mc^2$.

So it's a pretty good year.

It partly starts because he's a visual thinker and I think it was helpful that he was at the patent office rather than being the acolyte of some professor at the academy where he was supposed to follow the rules.

And so the patent office said doing devices to synchronize clocks because the Swiss have just gone on standard time zones and Swiss people, as you know, tend to be rather Swiss. They care if it strikes the hour in Basel, it should do the same and burn if the exact answer.

So you have to send a light signal between two distant clocks and he's visualizing what's it look like to ride alongside a light beam.

He says, well, if you catch up with that, if you go almost as fast, it'll look stationary but Maxwell's equations don't allow for that.

And he said, he's making my palm sweat that I was so worried.

And so he finally figures out because he's looking at these devices to synchronize clocks that if you're traveling really, really fast, what looks synchronous to you or synchronized to you is different than for somebody traveling really fast in the other direction.

And he makes a mental leap that the speed of light is always constant, but time is relative depending on your state of motion.

So it was that type of out of the box thinking, those leaps that made 1905 his miracle year, likewise with Musk.

I mean, after General Motors and Ford, everybody gives up on electric vehicles to just say, I know how we're going to have a path to change the entire trajectory of the world into the era of electric vehicles.

And then when he comes back from Russia where he tried to buy a little rocket ship so he could send a experimental greenhouse to Mars and they were poking fun of them and actually spit on them at one point in a drunken lunch, this is very fortuitous because on the ride back home on the plane, on the Delta Airlines flight, he's like doing the calculations of how much materials, how much metal, how much fuel, how much wood it really cost.

And so he's visualizing things that other people would just say is impossible.

That's what Steve Jobs' friends called the reality distortion field and it drove people crazy.

It drove them mad, but it also drove them to do things they didn't think they would be able to do.

You said visual thinking.

I wonder if you've seen parallels of the different styles and kinds of thinking that operate

the minds of these people.

Is there parallels you see between Elon, Steve Jobs, Einstein, DaVinci specifically in how they think?

I think they were all visual thinkers, perhaps coming from slight handicaps as children, meaning Leonardo was left-handed and a little bit dyslectic, I think.

And certainly Einstein had Ecolea.

He would repeat things.

He was slow in learning to talk.

So I think visualizing helps a lot.

And with Musk, I see it all the time when I'm walking the factory lines with him or in product development, where he'll look at, say, the heat shield under the Raptor engine of a Starship booster.

And he'll say, why does it have to be this way, couldn't we trim it this way or make it or even get rid of this part of it?

And he can visualize the material science.

There's a small anecdote in my book, but at one point he's on the Tesla line and they're trying to get 5,000 cars a week in 2018.

It's a life or death situation.

And he's looking at the machines that are bolting something to the chassis.

And he insists that Drew Bagnoli...

Not Drew, but Lars Marovi, one of his great lieutenants, come and they have to summon him.

Why are there six bolts here?

And Lars and others explained, well, for the crash test or anything else, the pressure would be in this way, so you have to, and they were blah, blah, blah, blah, blah.

And he said, no, if you visualize it, you'll see if there's a crash, the force would go this way and that way, and it could be done with four bolts.

Now, that sounds risky, and they go test it and they engineer it, but it turns out to be right.

I know that seems minor, but I could give you 500 of those, where in any given day, he's visualizing the physics of an engineering or manufacturing problem.

That sounds pretty mundane.

But for me, if you say what makes him special, there's a mission-driven thing, I'll give you a lot of reasons.

One of the reasons is he cares not just about the design of the product, but visualizing the manufacturing of the product, the machine that makes the machine.

And that's what we failed to do in America for the past 40 years.

We outsourced so much manufacturing.

I don't think you can be a good innovator if you don't know how to make the stuff you're designing.

That's why Musk puts his designer's desk right next to the assembly lines and the factories so that they have to visualize what they drew as it becomes the physical object.

So understanding everything from the physics all the way up to the software, it's like

end to end.

Well, having an end-to-end control is important, certainly with Steve Jobs.

I'm looking at my iPhone here.

It's a big deal.

That hardware only works with Apple software, and for a while, the iTunes Store only works.

So he has an end-to-end that makes it like a Zen garden in Kyoto.

Very carefully curated, but a thing of beauty.

For Musk, when he first was at Tesla and before he was the CEO, when he was just the executive chairman and basically the finance person, person funding it, they were outsourcing everything.

They were making the batteries in Japan, and the battery pack would be at some barbecue shop in Thailand, and that sent to the Lotus factory in England to be put into a Lotus

Elise chassis and then that was a nightmare.

You did not have end-to-end control of the manufacturing process.

So he goes to the other extreme.

He gets a factory in Fremont from Toyota, and he wants to do everything in-house, the software, in-house, the painting, in-house, the battery.

He makes his own batteries.

I think that end-to-end control is part of his personality, but it also would allow Tesla to be innovative.

Yeah, I got to see and understand in detail one example of that, which is the development of the brain of the car in autopilot, going from Mobileye to in-house building the autopilot system to basically getting rid of all sensors that are not rich in data to make it AI-friendly, sort of saying that we can do it all with vision, and like you said, removing some of the bolts.

So sometimes it's small things, but sometimes it's really big things like getting rid of radar.

Well, vision-only, getting rid of radar is huge, and everybody's against it.

Everybody, and still fighting a bit, they're still trying to do in next generation some form of radar, but it gets back to the first principles.

We were talking about visualizing, well, he starts with the first principles, and the first principles of physics involve things like, well, humans drive with only visual input.

They don't have radar, they don't have LiDAR, they don't have Sonar, and so there is no reason in the laws of physics that make it so that vision-only won't be successful in creating self-driving.

Now, that becomes an article of faith to him, and he gets a lot of pushback, but now, and he's, by the way, not been that successful in meeting his deadlines of getting self-driving.

He's way too optimistic, but it was at first principles of get rid of unnecessary things.

Now, you would think LiDAR, why not use it?

Like why not use a crush?

It's like, yeah, we can do things vision-only, but when I look at the stars at night, I'll use a telescope too.

Well, you could use LiDAR, but you can't do millions of cars that way at scale.

At a certain point, you have to make it not only a good product, but a product that goes to scale, and you can't make it based on maps, like Google Maps, because it'll never be able to then drive from New Orleans to Slidell, where I want to go when it's too hot in New Orleans.

Take, for example, full self-drive.

He has been obsessed with what he calls the robo-taxi.

We're going to build the next generation car without a steering wheel, without pedals.

Because it's going to be full self-drive, you just summon it, you won't need to drive it.

Well, over and over again, all these people I've told you about, Lars Maravi and Drew Baglino and others, they're saying, okay, fine, that sounds really good, but it ain't happened yet.

We need to build a \$25,000 mass market global car that's just normal with a steering wheel.

And yeah, he finally turned around a few months ago and said, let's do it.

And then he starts focusing on, how's the assembly line going to work?

How are we going to do it?

And make it the same platform for robo-taxi, so you're going to have the same assembly line.

Likewise, for full self-drive, they were doing it by coding hundreds of thousands of lines of code that would say things like, if you see a red light, stop.

If there's a blinking light, if the two yellow lines do this, if there's a bike lane, do this.

If there's a crosswalk, do that.

Well, that's really hard to do.

Now he's doing it through artificial intelligence and machine learning only.

FSD12 will be based on the billion or so frames from Tesla each week of Tesla drivers and saying, what happened when a human was in this situation?

What did the human do?

And let's only pick the best humans, the five-star drivers, the Uber drivers, as Elon says.

And so that's him changing his mind and going to first principles, but saying, all right, I'm even going to change full self-driving, so there's not rules-based.

It becomes AI-based.

Just like ChatGPT doesn't try to answer your question, who are the five best popes or something by studying?

ChatGPT does it by having ingested billions of pieces of writing that people have done.

This will be AI, but real world done by ingesting video.

Sometimes it feels like he and others, they're building things in this world successfully, are basically confidently exploring a dark room with a very confident, ambitious vision of what that room actually looks like.

They're just walking straight into the darkness.

There's no painful toys or Legos on the ground.

I'm just going to walk.

I know exactly how far the wall is.

And then very quickly willing to adjust as they run into, they step on the Lego and their body is filled with a lot of pain.

What I mean by that is there's this evolution that seems to happen where you discover really good ideas along the way that allow you to pivot.

To me, since a few years ago, when you could see with Andrea Carpathi, the software 2.0 evolution of autopilot, it became obvious to me that this is not about the car.

This is about optimists, the robot.

If we look back 100 years from now, the car will be remembered as a cool car, nice transportation, but the autopilot won't be the thing that controls the car.

It will be the thing that allows embodied AI systems to understand the world broadly.

That kind of approach, and you stumble into it, will Tesla be a car company, will it be an AI company, will it be a robotics company, will it be a home robotics company, will it be an energy company?

You slowly discover this as you confidently push forward with a vision.

It's interesting to watch that kind of evolution as long as it's backed by this confidence.

There are a couple of things that are required for that.

One is being adventurous.

One doesn't enter a dark room without a flashlight and a map unless you're a risk taker, unless you're adventurous.

The second is to have iterative brain cycles where you can process information and do a feedback loop and make it work.

The third, and this is what we fail to do a lot in the United States and perhaps around the world, is when you take risks, you have to realize you're going to blow things up.

First three rockets, the Falcon rockets, that much does, they blow up.

Even Starship, three and a half minutes, but then it blows up the first time.

I think Boeing and NASA and others have become unwilling to enter your dark room without knowing exactly where the exit is and the lighted path to the exit.

The people who created America, whenever they came over, whether the Mayflower is refugees from the Nazis, they took a lot of risks to get here.

Now, I think we have more referees than we have risk takers, more lawyers and regulators and others saying you can't do that, that's too risky than people willing to innovate.

You need both.

I think you're also right on 50-100 years from now, what Musk will be most remembered for besides space travel is real-world AI.

Not just Optimus the Robot, but Optimus the Robot and the self-driving car, they're pretty much the same.

They're using GPU clusters or dojo chips or whatever it may be to process real-world data.

We all got, and you did on your podcast, quite excited about large language model, generative, predictive text AI.

That's fine, especially if you want to chat with your chatbot, but the Holy Grail is artificial general intelligence.

The tough part of that is real-world AI, and that's where Optimus the Robot or Full Self Drive are, I think, far ahead of anybody else.

Well, I like how you said chitchat.

I would say for one of the greatest writers ever, it's funny that you spoke about language and the mastery of languages as merely chitchat.

People have fallen in love over some words.

People have gone to wars over some words.

I think wars have a lot of power.

It's actually an interesting question where the wisdom of the world, the wisdom of humanity, is in the words or is it in the visual, is it in the physical?

I don't really ...

It's in mathematics.

Maybe it all boils down to math, and in the end, this kind of discussion about real-world AI versus language is all the same, maybe.

I've gotten a chance to hang out quite a bit in the metaverse with Mr. Mark Zuckerberg recently, and boy is the realism in there.

The thing that's coming up in the future is incredible.

I got scanned in Pittsburgh for 10 hours into the metaverse, and there's a virtual version of me, and I got to hang out with that virtual version.

Do you like yourself?

Well, I never like myself, but it was easier to like that other guy.

That was interesting.

If you like you?

He didn't seem to care much.

It's actually lack of the empathy dream.

But that was ... It made me start to question even more than before, like, well, how important is this physical reality, because I got to see myself and other people in that metaverse, the details of the face, all the things that you think, maybe if you look yourself in the mirror or imperfections, all this kind of stuff, when I was looking at myself and others, all those things were beautiful, and it was real, and it was intense, and it was scary because you're like, well, are you allowed to murder people in the metaverse?

What are you allowed to do?

Because you can replicate a lot of those things, and you start to question what are the fundamental things that make life worth living here, as we know it, as humans.

Have you talked to Elon about his views of living in a simulation, maybe, and how you would figure out if that's true?

Yes.

Constant, light-hearted, but also a serious sense that this is all a bit of a game.

One of my theories on Elon, a minor theory, is that he read Hitchhiker's Guide to the Galaxy once too often, and as you know, there's a scene in there that says ... There's a theory about the universe that if anybody ever discovers the secrets of meanings of the universe, it will be replaced by an even more complex universe, and then the next line Douglas Adams writes is, and there's another theory that this has already happened, so I'm going to try to get

my head around that, but I know that Elon must try this too.

Well, there's a humor to that.

There's an enormous humor to Hitchhiker's Guide, and I really think that helped Musk out of the darkest of his periods to have sort of a sense of fun of figuring out what life is all about.

I wonder if there's a smaller side we could say, just having gone to knowing Elon very well because the silliness, the willingness to engage in the absurdity of it all and have fun, what is that?

What is that?

Is that just a quirk of personality or is that a fundamental aspect of a human who's running six plus companies?

Well, it's a relief valve, just like video games and Polytopia and Elden Ring, a release valves for him, and he does have an explosive sense of humor, as you know.

The weird thing is when he makes the abrupt transition from dark demon mode, and you're in the conference room, and he has really become upset about something, and not only they're dark vibes, but there's dark words emanating, and he's saying your resignation will be accepted, et cetera, and then something pops, and he pulls out his phone and pulls up a Bonnie Python skit, like the School of Silly Walks or whichever, John Cleese, and he starts laughing again and things break.

So it's almost as if he has different modes, the emulation of human mode, the engineering mode, the dark and demon mode, and certainly there is the silly and giddy mode.

Yeah, you've actually opened the Elon book with quotes from Elon and from Steve Jobs.

So Elon's quote is, to anyone I've offended, I just want to say this on SNL, I just want to say I reinvented electric cars and I'm sending people to Mars on a rocket ship.

Did you also think I was going to be a chill normal dude?

And then the quote from Steve Jobs, of course, is, the people who are crazy enough to think they can change the world are the ones who do.

So what do you think is the role of, the old madness and genius, what do you think is the role of crazy in this?

Well, first of all, let's both stipulate that Musk is crazy at times, I mean, and then let's figure out, and I try to do it through storytelling, not through highfalutin preaching, where that craziness works.

Give me a story.

Tell me an anecdote.

Tell me where he's crazy.

And the almost final example, AI, but him shooting off Starship for the first time in between an aborted countdown in the suit off, he goes to Miami to an air sales conference and meets Linda Yaccarino for the first time, makes her the CEO.

I mean, there's a very impulsiveness to him, then he flies back, they launch Starship, and you realize that there's a drive and there are demons and there's also craziness.

And you sometimes want to pull those out.

You want to take away his phone so he doesn't tweet at 3 a.m.

You want to, say, quit being so crazy.

But then you realize there's a wonderful line of Shakespeare and measure from measure at the very end, he says, even the best are molded out of faults.

And so you take the faults of Musk, for example, which includes a craziness that can be endearing, but also craziness that's just like effing crazy, as well as this drive and demon mode.

I don't know that you can take that strand out of the fabric and the fabric remains whole.

I wonder, sometimes it saddens me that we live in a society that doesn't celebrate even the darker aspects of crazy in acknowledging that it all comes in one package.

It's the man in the arena versus the critic.

And the man in the arena versus the regulator to make it more prosaic.

Well, let me ask about not just the crazy, but the cruelty.

So you've written, when reporting on Steve Jobs, Was told you that the big question to ask was, did he have to be so mean, so rough and cruel, so drama addicted?

What is this answer for Steve Jobs?

Did he have to be so cruel?

For Jobs, I asked Was at the end of my reporting, because that's what he said at the beginning.

We're doing the launch of, I think, the iPad 2, it may have been.

Steve is emaciated because he's been sick.

And so I say to Was, what's the answer to your question?

And he said, well, if I had been running Apple, I would have been nicer to everybody.

Everybody got stock options.

We'd been like a family.

And then, I don't know if you know Was, he was like a teddy bear.

He paused.

He smiled and he said, but if I'd been running Apple, I don't think we would have done the Macintosh or the iPhone.

So yeah, you have to sometimes be rough.

And Jobs said the same thing that Musk said to me, which is he said, people like you love wearing velvet gloves.

Yeah, I don't know that I've worn velvet gloves often.

But you like people to like you.

You like to sweet talk things.

You like to sugarcoat things.

He says, I'm just a working class kid and I don't have that luxury.

If something sucks, I got to tell people it sucks or I got a team of B players.

Well, Musk is that way as well.

And it gets back to what I said earlier, which is, yeah, I probably would wear velvet gloves if I could find them at my hyperdash.

And I do try to sugarcoat things.

But when I was running CNN, it needed to be reshaped.

It needed to be broken.

It needed to have certain things blown up and I didn't do it, you know?

So bad on me, but it made me realize, okay, I'll just write about the people who can do it.

Well, that thing of saying, I think probably both of them, but Elon certainly saying things like that is the stupidest thing I've ever heard.

By the way, I've heard Jeff Bezos say that.

I've heard Bill Gates say that.

I've heard Steve Jobs say it.

I've heard Steve Jobs say it about a smoothie.

They were making it a whole food or something.

They used the word stupid really often.

And you know who else used it?

Errol Musk.

He kept barking Elon stand in front of him and saying, that's the stupidest thing.

You're the stupidest person.

You'll never amount to anything.

I don't know.

Because John McNeil, the president of Tesla said, do you have to be that way?

Probably not.

There are a lot of successful people who are much kinder, but it's sometimes necessary to be much more brutal and honest, brutally honest, I would say, than people like when boss of the year trophies.

Well as you said, this kind of idea did also send a signal.

This idea of Steve Jobs of A players, it did send a signal to everybody.

It was a kind of encouragement to the people that are all in.

Right.

And that happened to Twitter.

When we went to Twitter headquarters the day before the takeover, he was having Andrew and James as to young cousins and other people from the autopilot team.

Looking over lines of code and Musk himself said that there was a laptop on the second floor of the building, looking at the lines of code that had been written by Twitter engineers.

And they decided they were going to fire 85% of them because they had to be all in.

And this notion of psychological safety and mental days off and working remotely, he said either, and then it came up, actually one of his, I think it was one of the cousins or maybe Ross Nordin came up with the idea of, let's not be so rough and just fire all these people, let's ask them, do you really want to be all in because this is going to be hardcore.

It's going to be intense.

You get to choose, but by midnight tonight, we want you to check the box, I'm hardcore all in, I'll be there in person, I'll work, you know, or that's not for me.

I've got a family, I got work balance and you got different type of people that way and different stages of their life.

I was a little bit more hardcore and all in when I was in my 20s and when I was, you know, in my fifties.

And you write about this, it's a really nice idea actually that there's two camps and you find out, I don't, I want to call true this says it rings true.

You can just ask people, which camper you in?

Are you the kind of person that prides themselves and enjoy staying up to two a.m. programming or whatever?

Or do you see the value of quote unquote, you know, life, work, life balance, all this kind of stuff.

And it's interesting.

I mean, you, like you could, people probably divide themselves in different stages of life and you can just ask them and then it makes sense for certain companies at certain stages of their development to be like, uh, we only want teams, it doesn't even have to be a whole company.

And you're right.

It goes back to what I was saying about rule.

The first secret is sort of know thyself obviously comes from Plato and, uh, everything comes from Plato and Socrates, but, um, and decide on this stage in my life, am I, do I want to be a hackathon all in all night and change the world?

Or do I want to bring wisdom and stability, but also have balance?

I think it's good to have different companies with different styles.

The problem was Twitter was at almost one extreme with yoga studios and mental health days off and, uh, enshrining psychological safety as one of the mantras that people should never feel psychologically threatened.

And he, I remember the bitter laugh he unleashed when he kept hearing that word.

He said, no, I like the words hark hardcore.

I like intensity.

I like a intense sense of urgency as our operating principle.

Well, yeah, there are people that way as well.

And so know who you are and know what type of team you want to build.

Versus psychological safety and too many birds everywhere.

Oh yeah.

A lot of times Musk did things and I go, what the hell?

Yeah.

And the modeling was changing the name Twitter and getting rid of the birds.

Oh, hey, man, it's a lot invested in that brand.

But when I watched him, he thought, okay, these sweet little chirpy birds tweeting away in the name Twitter, it's not hardcore.

It's not intense.

And so for better and for worse, I think he's taking acts into the hardcore realm with people who post hardcore things with people with hardcore views.

It's not a polite playpen for the blue checked, anointed elite.

And I thought, okay, this is going to be bad.

The whole thing is going to fall apart.

Well, it has had problems, but the hardcore intensity of it has also meant that there's new things happening there.

So it's very Elon Musk to not like this sweetness of birds chirping and tweeting

and saying, I want something more hardcore.

As you've written in referring to the previous Twitter CEO, Elon said Twitter needs a fire breathing dragon.

I think this is a good opportunity to maybe go through some of the memorable moments of the Twitter saga, as you've written about extensively in your book. From the early days of considering the acquisition to how it went through to the details of, like you mentioned, the engineering teams.

Well, at the beginning of 2022, he was riding high.

But as we say, he's a drama addict.

He doesn't like to coast.

And you know, Tesla had sold a million vehicles, I think 33 boosters.

You know, Falcon 9's have been shot up and landed safely in the past few months.

And he was the richest person on earth and times person of the year.

And yet he'd said, you know, I'm still want to put all my chips back on the table.

I want to keep taking risks.

I don't want to savor things.

He had sold all of his houses.

So he starts secretly buying shares of Twitter, January, February, March, becomes public at a certain point.

He has to declare it.

And we were here in Austin at Gigafactory on the mezzanine.

And he was trying to figure out, well, where do I go from here?

And at that time, this early April, they were going to offer him a board seat.

And he was going to do a standstill agreement and stop at 10% or something.

Now remember, you know, we were standing around.

It was Luke Nozick, whom you know well, Ken Halry, some of his friends on that mezzanine here and all afternoon.

And then late into the evening at dinner is like, should we do this?

And I didn't say anything.

I'm just the observer.

But everybody else is saying, excuse me, why do you want to own Twitter?

And Griffin, his son joined at dinner and May, for some reason, was in town.

And like everybody says, no, we don't use Twitter.

Why would you do that?

And May said, well, I use Twitter.

And it's almost like, OK, the demographics are people my age or May's age.

And so it looked like he wasn't going to pursue it.

They offered him a board seat.

And then he went off to Hawaii, to Larry Ellison's house, which he sometimes uses.

He was meeting a friend, Angela Bassett, an actress.

And instead of enjoying three days of vacation, he just became supercharged and started firing off text messages, including the fire, breathing dragon, Lundy.

I think, you know, he used that phrase a few times, that Parag wasn't the person

who was going to take Twitter to a new level.

And then by the time he gets to Vancouver, where Grimes meets him, they stay up all night playing Elden Ring.

He was doing a TED talk.

And then at 5.30, he finishes playing Elden Ring and sends out that I've made an offer.

Even when he comes back, people are trying to intervene and say, excuse me, why are you doing it?

And so it was a rocky period between late April and October when the deal closed.

And people ask me all the time, well, did he want to get out of the deal?

I said, which Ilana are you talking about at what time of day?

Because there'll be times in the morning when he'd say, oh, the Delaware court's going to force me to do it.

It's horrible.

Talk to his lawyers.

You can win this case.

Get me out of it.

He met here in Austin with three or four investment bankers, Blair Efron at Centerview, Bob Steele, and Pirella Weinberg.

And they offered him options.

Do you want to get out?

Do you want to stay in?

Do you want to reduce the price?

And I think he was mercurial.

There were times he would text me or say to me, this is going to be great.

It's going to be the accelerant to do X.com the way we thought about 20 years ago.

And so it's not until they finally tell them at the beginning of October, right?

When Optimus the Robot is being unveiled in California, actually, that the lawyers say, you're not going to probably win this case, but better go through with the deal.

And by then, he's not only made his peace with it, he's kind of happy with it at time.

Eventually, the deal is going to close on, I think, a Friday morning.

I have it in the book, and we're there on Thursday, and he's wandering around looking at the Stay Woke t-shirts and psychological safety lingo they're all using.

And he and his lawyers and bankers hatched a plan to do a flash close.

And the reason for that was if they closed the deal after the markets had closed for the day, and he could send a letter to Parag and two others firing them, quote, for cause, and this will be something the courts will have to figure out, then he could save 200 million or so.

And it was both the money, but for him a matter, I won't say a principle, but of, hey, they misled me about the numbers.

I got forced into doing it.

So I'm going to try this jiu-jitsu maneuver and be able to get some money out of them.

Then when he takes over, it's kind of a wild scene.

Him trying to decide in three different rounds how to get the staff down to 15% of what it was, him deciding on Christmas Eve after he'd been at a meeting where they told him, we can't get rid of that Sacramento server farm because it's need of a redundancy.

He says, no, it's not.

And he's flying here to Austin and young James says, why don't we just do it ourselves?

He turns the plane around, they land in Sacramento and he pulls them out himself.

So it was a manic period.

We should also say that underneath of that, there was a running desire to, or consideration to perhaps start a new company to build the social media company from scratch.

Well, Kimball wanted to do that.

And Kimball here at a wonderful restaurant in Austin at lunch is like, hey, why are you buying Twitter?

Let's start one from scratch and do it on the blockchain.

Now it took him a while and you can argue it one way or the other

to come to the conclusion that the blockchain was not fast enough and responsive time enough to be able to handle a billion tweets in a day or so.

He gets mad when they keep trying to get him to talk to Sam Bankman Freed, who's trying to say, I'll invest, but we have to do it on the blockchain.

Kimball is still in favor of starting a new one and doing it on blockchain based.

In retrospect, I think starting a new media company would have been better.

He wouldn't have had the baggage or the legacy that he's breaking now in breaking the way Twitter had been.

But it's hard to have millions and million hundreds of millions of true users, not just trolls, and start from scratch as others have found,

as Macedon and Blue Sky and Threads, and Threads even had a base, so it would have been hard.

To do that in the way he did requires another part that you write about with the three musketeers and the whole engineering, the firing and the bringing in the engineers to try to go hardcore.

So there's a lot of interesting questions to ask there, but the high level, can you just comment about that part of the saga, which is bringing in the engineers and seeing what can we do here?

Right. He brought in the engineers and figured that the amount of people doing Tesla, full self-driving autopilot, and all the software there was about one-tenth of what was doing software for Twitter. He said, this can't be the case. He fired 85% in three different rounds.

The first was just firing people because they looked at the coding and they had a team of people from Tesla's autopilot team grading the codes of all that was written in the past year or so. Then he fired people who didn't seem to be totally all in or loyal, and then another round of layoffs. So at each step of the way, almost everybody said, that's enough. It's going to destroy things.

From Alex Spiro, his lawyer to Jared Burchell, he's like, whoa, whoa, whoa.

And even Andrew and James, the young cousins who are tasked with making a list and figuring out who's good or bad, say, we've done enough. We're going to be in real trouble. And they were partly right. I mean, there was degradation of the service sum, but not as much as half the services I use half the time. And I wake up each morning and hit the app and, okay, still there.

What do you think? Was that too much?

I think that he has an algorithm that we mentioned earlier that begins with question every requirement.

What's up to is delete, delete, delete, delete every party. And then a corollary to that is if you don't end up adding back 20% of what you deleted, then you didn't delete enough in the first round because you were too timid. Well, so he asked me, did he overdo it? He probably overdid it by 20%, which is his formula. And they're probably trying to hire people now to keep things going. But it sends a strong signal to people that are hired back or the people that are still there, the A-player idea.

Yeah. And what Steve Jobs and many other great leaders felt and certainly Bezos and certainly in the early days of Microsoft Bill Gates, it was hardcore only A-players.

So how much of Elon's success would you say? Elon's Steve Jobs' success is the hiring and managing of great teams.

When I asked Steve Jobs at one point, what was the best product you ever created?

I thought he'd say maybe the Macintosh or maybe the iPhone.

He said, no, those products are hard. The best thing I ever created was the team that made those products. And that's the hard part is creating a team. And he did, from Johnny Ive to Tim Cook and Eddie Q and Phil Schiller.

Elon has done a good job bringing in people. When Shotwell, obviously, Linda Yagorino, she can navigate through the current crises. Certainly stellar people at SpaceX like Mark Jankosa and then at Tesla like Drew Baglino and Lars Marvy and Tom Zhu and many others. He's not as much of a team collaborator as, say, Benjamin Franklin. Who, by the way, that's the best team ever created, which is the founders. And you had to have really smart people like Jefferson and Madison and really passionate people like John Adams and his cousin Samuel and really a guy of high rectitude like Washington. But you also needed a Ben Franklin who could bring everybody together and forge a team out of them and make them compromise with each other. Musk is a magnet for awesome talent.

Magnet. Interesting. But there's the priorities of hiring based on excellence, trustworthiness and drive. These are things you've described throughout the book.

There's a pretty concrete and rigorous set of ideas based on which the hiring is done.

Yeah. And he has a very good, spidey, intuitive sense just looking at people who could, I mean, not looking at them, but studying them who could be good. One of his ways of operating is what he calls a skip level meeting. And let's take a very specific thing, like the Raptor engine, which is powering the Starship. And it wasn't going well. It looked like a spaghetti bush and it was going to be hard to manufacture. And he got rid of the people who were in charge of that team. And I remember that he spent a couple of months doing what he calls skip level, which means instead of meeting with his direct reports on the Raptor team, he would meet with the people one level below them. And so he would skip a level and meet with them.

And he said, this is, and I just ask them what they're doing and I drill them with questions. And he said, and this is how I figure out who's going to emerge. He said, it was particularly difficult. I was sitting in those meetings because people were wearing masks. It was doing the height of COVID. And he said it made it a little bit harder for him because he has to get the input. But I watched as a young kid, Dreadlocks, named Jacob McKenzie, he's in the book,

is sitting there and he's a bit like you. Engineering mindset speaks in a bit of a monotone. Musk would ask a question and he would give an answer. And the answer would be very straightforward. And he didn't, you know, get rattled. He was like this. And Musk said, one day called him up at three, I won't say three AM, but after midnight said, you're still around. Jake said, yeah, I'm still at work. And he said, okay, I'm going to make you in charge of the team building Raptor. And that was like a big surprise. But Jacob McKenzie has now gotten a version of Raptor and when they're building them at least one a week and they're pretty awesome. And that's where his talent, Musk's talent for finding the right person and promoting them. That's where it is.

And promoting it in a way where it's like, here's the ball, here catch.

And you run with it. I've interacted with quite a few folks from you and just the Model X, the all throughout where people, you know, on paper don't seem like they would be able to run the thing and they run it extremely successfully.

And he does it wrong. Sometimes he's had a horrible track record with the Solar Roof division. Wonderful guy named Brian Dow. I really liked him. And when they were doing the Battery Factory Surge in Nevada, Musk got rid of two or three people and there's Brian Dow, can do, can do, can do. He stays up all night and he gets promoted and runs it.

And so finally, Musk goes through two or three people running the Solar Roof division, finally calls up Brian Dow. I was sitting in Musk's house in Boca Chica, that little tiny two bedroom he has. And he offers Brian Dow the job of running Solar Roof. And Brian there, okay, can do, can do. And two or three times Musk insisted that they install a Solar Roof in one of those houses in Boca Chica. This is this tiny village at the south end of Texas. And late at night, I mean, I'd have to climb up to the top of the roof on these ladders and stand on this peaked roof as Musk is there saying, why do we need four screws to put in this single leg? And Brian was just sweating and doing everything. But then after a couple of months, it wasn't going well and boom, Musk just fired him. So I always try to learn what is it that makes those who stay thrive? What's the lesson that what do you think?

Well, I think it's self-knowledge like an Andy Krebs or others, they say,

I am hardcore. I really want to get a rocket to Mars and that's more important than anything else.

One of the people, I think it's Tim Zaman, I hope when he hears this, I'm getting him the right person, who took time, it was working for Tesla autopilot. And it was just so intense, he took some time off and then went to another company. He said, I was burned out at Tesla, but then I was bored at the next place. So I called, I think it was Ashok at Tesla, said, can I come back? He said, sure. He said, I learned about myself. I'd rather be burned out than bored. That's a good line. Well, can you just linger on one of the three that seemed interesting to you in terms of excellence, trustworthiness and drive? Which one do you think is the most important and the hardest to get at? The trustworthiness is an interesting one.

Are you ride or die kind of thing? Yeah, I think that especially when it came to taking over Twitter, he thought half the people there were disloyal. And he was wrong. About two-thirds were disloyal, not just half. And it was, how do we weed out those? And he did something and made the firing squad, I call it, or the musketeers, I think is my nickname for them, which is the young cousins and two or three other people. He made them look at the slack messages. These people had posted, everybody at Twitter had posted. And they went through

hundreds of slack messages. So if anybody posted on the internal slack, that jerky Elon Musk is going to take over and I'm afraid that he's a maniac or something, they would be on the list because they want all-in loyal. They did not look at private slack messages. And I guess people who are posting on a corporate slack board should be aware that your company can look at them. But that's more than I would have done or most people would have done. And so that was to figure out who's deeply committed and loyal. I think that was mainly the case at Twitter. He doesn't sit around at SpaceX saying who's loyal to me. At other places, it's excellence, but that's pretty well a given. Everybody is like a Mark Jankosa, just whip smart. It's all you hardcore and all-in. Especially if you have to move to this spit of a town in the south tip of Texas called Boca Chica, you got to be all-in. And that's the drive, the last piece. So in terms of collaborating, one of the great teams of all time, Ben Franklin. I like that. I thought it was the Beatles, but Ben Franklin is pretty good. Oh, no, no, no. I'm sorry. I'm sorry to offend you. So read the Constitution and read Abbey Road. Listen to Abbey Road. They're both good, but they're in a different league. Yeah, a different league. So one of the many things that comes to mind with Ben Franklin is incredible time management. Is there something you could say about Ben Franklin and about Steve Jobs? I think interesting with Elon is that he, as you write, runs six companies. Seven companies. It depends how you count Starlink as its own thing. I don't know. What can you say about these people in terms of time management? Well, Musk is an illegal of his own in the way he does it. First of all, Steve Jobs had to run Pixar and Apple for a while. But Musk, every couple of hours, is switching his mindset from how to implant the neural link chip and what will the robot that implants it in the brain look like and how fast can we make it move, and then the heat shield on the raptor or switching to human imitation, machine learning, full self-drive. On the night that the Twitter board agreed to the deal, this is huge around the world. I'm sure you remember, like Musk buys Twitter. It wasn't when the deal closed. It was when the Twitter accepted his offer. I thought, okay, but then he went to Boca Chica to South Texas and spent time fixating, if I remember correctly, a valve in the raptor engine that had a methane leak issue. What were the possible ways to fix it? All the engineers in that room, all that I assume are thinking about, this guy just bought Twitter, should we say something? And then he goes with Kimball to a roadside joint in Brownsville and just sits in the front and listens to music, with nobody noticing really him being there. One of the things that one of his strengths and weaknesses, in a way, is in a given day, he'll focus serially, sequentially, on many different things. He will worry about uploading video onto x.com or the payment system, and then immediately switch over to some issue with the FAA giving a permit for starship or with how to deal with Starlink and the CIA. And when he's focused on any of these things, you cannot distract him. It's not like he's also thinking about dealing with Starlink, but I've got to also worry about the Tesla decision on the new \$25,000 car. Now, he'll, in between these sessions, process information and let off steam. And for better or worse, he lets off steam by either playing a friend in Polytopia or fire off some tweets, which is often not a healthy thing. But it's a release for him. And he doesn't, I once said he was a great multitasker, and that was a mistake. People corrected me. He's a serial tasker, which means focuses intensely on a task for an hour, almost has a, what do they call it at restaurants where they give you a pallet cleanser. He does some pallet cleanser with Polytopia,

and then focuses on the next task. I mean, is there some wisdom about time management that you can draw from that? There's some things that these people do and you say, okay, I can be that way. I can be more curious. I can question every rule and regulation. And I just don't think anybody to try to emulate musk time management style, because it takes a certain set of teams, you know, how to deal with everything else other than the thing he's focusing on, and a certain mind that can shift just like his moods can shift. You and I go through transitions. And also, if I'm thinking about what I'm going to say on this podcast, I'm also thinking about the email my daughter just sent about the house that she's looking at. And I'm multitasking. He doesn't actually do that. He single tasks sequentially with a focus that's hardcore. I don't know. I think there's wisdom to draw from that to like, first of all, he makes me, frankly, makes me feel that way that there's a lot of hours in the day. There's a lot of minutes in the day. Like, there's no excuse not to get a lot done. And that requires just an extreme focus, extreme focus and like an urgency. I think the fierce urgency that drives him is important. And it's sometimes ginned up. Like I say, the fierce urgency of getting to Mars. And on a Friday night at the launch pad in Boca Chica at 10 p.m. There are only a few people working because it's a Friday night. They're not supposed to launch for another eight months. And he orders the surge. He says, I want 200 people here by tomorrow working on this pad. We have to have a fierce sense of urgency or we will never get to Mars. That sense of urgency, you know, is also a vibrancy that's like really taking on life fully. I mean, to me, the lesson is like even the mundane can be full of this just richness. And like you just have to really take it in intensely. So like the switching enables that kind of intensity because most of us can't hold that intensity at any one task for a prolonged period of time. Maybe that's also a lesson. Right. And I guess it goes back to also know who you are, meaning there are people who can focus intensely and there are people who can see patterns across many things. Look, Leonardo da Vinci, he was not all that focused. He was easily distracted. Procrastinate. It's why he has more unfinished paintings and finished paintings in his canon. But his ability to see patterns across nature and to in some ways process, procrastinate, be distracted, that helped him some, but Musk is not that way. And there every few months as a new surge, you don't know where it'll be, but you'll be on solar roofs and all of a sudden we'll have a surge and there has to be, you know, a hundred solar roofs built or this has to be done by tomorrow or make a starship dome by dawn and surge and do it. And there are people who are built that way. It is inspiring, but also let's appreciate, you know, that there are people who can be really good, but also can savor the success, savor the moment, savor the quiet sometimes. Musk's big failing is he can't savor the moment or success. And that's the flip side of hardcore intensity. In Innovators, another book of yours that I love, you write about individuals and about groups. So one of the questions the book addresses is, is it individuals or is it groups that turn the tides of history? When Henry Kissinger was on the shuttle missions for the Middle East piece, this is the first book I ever wrote, he said, when I was a professor at Harvard, I thought that history was determined by great forces and groups of people, but when I see it up close, I see what a difference an individual can make. He's talking

about Sadat and Golda May here, probably talking about himself too, or at least in his mind. And we biographers have this dirty secret that we know we distort history a bit by making the narrative too driven by an individual. But sometimes it is driven by an individual. Musk is a case like that. And sometimes, as I did with the Innovators, there's teams and people who build on each other and Gordon Moore and Bob Noyce, then getting Andy Grove and doing the microchip, which then comes out

and Wozniak and Jobs find it at some electronic store and they decide to build the Apple.

And so sometimes there are flows of forces and groups of people. I guess I air a little bit on the side of looking at what Steve Jobs and Elon Musk and Albert Einstein can do, and also try to figure out if they hadn't been around with the forces of history and the groups of people have done it without them. That's a good historical question as somebody loves history. And you think about special relativity, one of the 1905 papers.

Even after he writes it, it's four years before people truly get what he's saying, which is, it's not just how you observe time is relative, it's time itself is relative. And on the general theory, which he does a decade later, I'm not sure we would have gotten that yet.

What about moving us into the era of an iPhone, in which it's so beautiful that you can't live without a thousand songs in your pocket, email, and the internet in your pocket, and a phone. There are a lot of brain dead people that are from Panasonic to Motorola who didn't get that, and it may have been a while. I certainly think it's true of the era of electric vehicles.

Jim and Ford, all the great people there, they crossed the boat. And I mean that literally, they ended up smashing them because they decided to discontinue it. Likewise, nobody was sending up rockets. Our space shuttle was about to be grounded 12 years ago. And so Musk does things, and there'll be people who say, and read the book, they'll see the full story, but they'll say it wasn't Musk who did Tesla, it was Martin Abba Hart or Mark Tarpett. No, no, no. There were people who had helped create the shells of companies and other things, and they were all deserved to be called co-founders. But the guy who actually gets us to a million electric vehicles a year is Elon Musk and without him, I don't think we... Look, if anybody five years from now buys a car that's gasoline powered, we'll think that's quaint, that's odd. I mean, suddenly we've changed, we're not going to do it. 90% of that is Elon Musk.

We're all mortal. When and how do you think Elon will retire from the insanely productive schedule he's on now? I would think that he would hate to retire. I think that he can't live without the pressure, the drama, the all-in feeling. It's never been anything that seemed to have crossed his mind. He's never said, maybe I love Larry Ellison's house on the beach in Hawaii, maybe I should spend time in doing. Instead, he says things like, I learned early on that vacations will kill you. He gets malaria when he goes on one vacation. I mean, he goes on vacation at one point and they oust him from PayPal. And then he goes to Africa one way. He gets malaria. He says, I've learned, vacations kill you. Lesson learned. Well, it's interesting because the projects are hundred plus year projects. Many of these. One of the weird things is watching him think incredibly long-term. One of the meetings every week early on when I was watching him was Mars colonizer. And we did through a two-hour meeting about what would the governance structure be on Mars? What would people wear? How would the robots work? And would there be democracy or should there be a different form of governance? I'm sitting there saying, what are they doing? What are they talking about?

And they're trying to build rocket ships and everything else. They are worrying about the governance structure of Mars. And likewise, whenever he's in a tense moment, like there's a rocket, it's about to be launched, he'll start asking people something in the way future, like the new lead engine or something. If we're going to build that, do we have enough materials ready to order? Or, I don't know, he'll just ask questions like when he's building robot taxi. The global car, the \$25,000 inexpensive global car, that's not a total passion. He was talked into doing that. His passion is robot taxis. But his passion is, how are we going to make this factory to do a million cars a year? So even the robot taxi is a longer-range vision. I mean, he's been touting it since 2016, but we're not. I don't know, robot taxis, I mean, Waymo may be doing a little experiments, but there's not cars being manufactured without steering wheels that are going to take over the highways. Yeah, so he's always looking way into the future, is my point.

I just hope that there's a lot of Da Vinci's and Steve Jobs' and Einstein's and Elon Musk's that carry the flame forward. That's one of the reasons you write books about these people, is so that if you're a young woman in a school where you're not being told to do science and you read the Code Breaker about Jennifer Doudna, you say, okay, I can be that. And when you say, oh, maybe I'll be a regulator. Or you say, oh, no, maybe I'll be the person who pushes the boundaries, who pushes the lines, who pushes, as Steve Jobs said, the human race.

Well, let me ask you about your mind, your genius, your process.

I'll give you two out of three. All right. Take me through your process of writing a biography. I mean, the full of it. And not just writing a biography, but understanding deeply, which your books have done for the human story and like the bigger ideas underline the human story. So you've written biographies, both of individuals, which are hardly individuals. It's a really big, complex picture. And biographies of ideas that involve individuals.

Well, step one for me is trying to figure out how the mind works. What causes Einstein to make that leap, Elon Musk, to say stainless steel while he's looking at a carbon fiber rocket?

Or how do you make the mental leap? Because I write about smart people, the smart people are a dime a dozen. They don't usually amount to much. You have to be creative, imaginative, to think different, as Jobs would say. And so what makes people creative? What makes them take imaginative leaps? That's the key question you've got to ask. You also ask the questions like you've asked earlier, which is, what demons are jangling in their head and how do they harness them into drives? So you look at all that and you try to observe really carefully the person. One of the more mundane things I do is a lot of writers try to give you a lot of their opinions and preach or whatever. As I said, this mentor said, two people, types come out, preachers, storytellers. Be a storyteller.

I try whenever I'm trying to convey a thought, there's six magic words that I almost should have written on a card penned above my desk, which is, let me tell you a story. So if somebody says, how does Elon Musk figure out good talent as you did? I think, well, let me tell you the story.

I'll tell you the story of Jake McKenzie. Or this is not something I invented. I mean, this is where the good Lord does it in the Bible. I mean, it has the best opening lead sentence ever in the beginning, comma, and then it's stories. And secondly, to pick up on that lead sentence in the beginning, make it chronological. Everybody in the 40th year of their life has grown from the 39th year and the 38th year. And so you want to show how people evolve and grow. I had the greatest of all nonfiction narrative editors, Alice Mayhew at

Simon Schuster, who, among other things, created all the president's men with Woodward and Burnsey.

But she had a note she'd put in the margins of my books that was a tigt. And it meant all things in good time. Keep it chronological. If it's good enough in the Bible, it's good enough for you.

Interesting. To me, that's a small note. But to you, it's extremely important.

Because it's a framework for how you structure things, but also how you understand things, which is if you keep it a chronological narrative, then you're showing how a person has grown from one experience you've talked about to the next one. And that moral growth, creative growth, risk-taking growth, wisdom, that's the essence of creativity. But you can't do it. There's a term, building's Roman, which is a book that carries a narrative and tells how people learn something. I'm a big believer in narrative. If you're an academic, sometimes not today, but in like 20 years ago, 30 years ago, there were two things you thought were bad. One was having a great person theory of history in which you decided to do biography. I had a great professor when I was in college. Her name was Doris Kearns. She later married Dick Goodwin. She, when she was going for tenure at the university, wrote a biography of Lyndon Johnson and the American Dream. They denied her tenure because it was beneath the dignity of the academy to write history through one person. That's great. It opened up the field of biography to us non-academics, starting with David McCullough, Bob Caro, but maybe John Meacham and myself are

in a new generation and certainly there's a generation coming after us. But the second thing besides telling it through people, which is the academy tended to disdain what they called imposing a narrative and what you made it storytelling. Because that meant you were leaving things out and making it into a narrative. Well, that's how we form our views of the world. Well, let me ask you this question. In terms of gathering an understanding, how much of it is one observing and how much of it is interviews?

Yeah, and obviously it depends on the subject. I mean, with a bit in Franklin, it's all based on archives. Of course, we have 40 volumes of letters he wrote. That was a good old days, when every day you'd write 20 letters. The Musk book is based much more on observation than almost any of my books because he opened up in a way that was breathtaking to me. You know, even when he'd be sitting playing

polotopia or seething at other people, he'd have me just sitting there watching.

I mean, I spent a lot of time with Jennifer Dowd on her side. I went to her lab and edited a human gene with a pipette and a test tube. But I would say I spent 30 hours with her. I can't count 100 hours or more just observing Musk. I'm not sure that any biographer, perhaps since Boswell took on Dr. Johnson, has ever had quite as much up close, meaning five feet away at all times, access. Because of that, I'll go back to what I said a moment ago, I try to get out of the way of the story. It's not about me. I try to just say, okay, here's what happened. Here's this story. Here's what happened the night he came in to Twitter for the first time, and let you form your own judgment. What about the interviews? You've had a lot of conversations. You give acknowledgement to the people you've done interviews with. Well, one, I have to ask as an aspiring interviewer myself, how?

People love to talk. People just love, you know that. And I've had 140, maybe 150 people, they're all listed in the back. One of the little things that people won't notice, but I'll say it

now, is all of them are on the record. Getting them to talk is easy. They all want to talk about Musk. But then at a certain point, say, I don't put anonymous quotes in my book. I cite things. I say, if you're tough enough, and you've gone through this, and a lot of times it takes two or three calls back. Somebody will tell me a story, say, oh, no, no, no, I don't enjoy it. But I think it's important to know where everything came from. And with Musk, it's, you know, I had that from the very beginning, because I was a Time Magazine reporter. I'd worked reporter for the Times-Pikion on New Orleans. I, first day on the job, I had to go cover a murder, and I phoned in the story from a pay phone, and my editor, you know, the city editor said, well, did you talk to the family? I went, no, Billy. I mean, the family, you know, the daughter just got, he said, go knock on the door. I knocked on the door. An hour later, they were still talking. They were bringing out her yearbook. Lesson one, I learned. People want to talk if you're willing to just listen. And whether it be Henry Kissinger, you just push the button and say Kissinger, and people tell you the stories all the way through Elon Musk, everybody talked. Everybody in his family, everybody he fired, everybody. I mean, I think it's important to listen to people. And the other thing I learned as a reporter, back when I was covering politics in New Hampshire, in the early campaigns, I learned from two or three great reporters, a guy named David Broder and Tim Russert, the late NBC guy. They do what was called door knocking. You just walk in a neighborhood knock on a door and ask people about the election. But they said, here's the secret. Don't ask any leading questions. Don't have any premise. Just say, hey, I'm trying to figure out this election. What's going on? What do you think? And then stay silent. With Musk, a third secret, you know this well. He'll go silent at times. Sometimes a minute, two minutes, four minutes, don't try to fill the silences. If you're a listener, you got to learn, okay, he's not saying anything for four minutes. I can outlast him. It's tough. As humans, it's very tough. Respecting the silence is really, really difficult. Speaking of demons, when they're silenced, all the demons show up in my head. The fear, I think, is if I don't say anything, it's boring. And if I say something, it's going to be stupid. And that the basic engine that just keeps running, not on the podcast, but also in human interaction. And so I think there's that nervous energy when interacting with people. You can never go wrong by staying silent, if there's nothing you have to say. Not something I've mastered, but I do when I'm a reporter, try to master that, which is don't ask complex questions, don't interject. And when somebody hasn't fully answered the question, don't say, well, let me just stay silent. And then they'll keep talking. Just give them a chance to keep talking, even if they've kind of finished, still. Sometimes they haven't given you enough. Instead of following up, I'll just nod and keep waiting. You're making it sound simple. Is there a secret to getting people to open up more? I'm somewhat lucky because I started off working for a daily newspaper, and people back then, they want to talk to the newspaper reporter. But you also have a way about you. I feel like you have a cowboy and a saloon. You just kind of want to talk. I don't know what it is. Maybe it's, I don't know if it's developer, you're born with it, but it feels like I want to tell you a story of some sort. Good, tell me a story. A couple things. I did learn to be more quiet. I'm sure I know when I was younger or even I'll see videos of me. News, things were, I'm always trying to interject a question. And so you learn to be quieter sometimes. I haven't mastered it. I haven't learned it

enough.

You learn to be naturally curious. Many reporters today, when they ask a question or they're trying to play gotcha or trying to get a news scoop or trying to gig something that can make a lead. And if you actually are curious and you really want to know the answer to a question, then people can tell that you asked it because you want the answer, not because you're playing a game with them. I'm sure some of them off the record, some of them on the record you had maybe, you know, just some incredible conversations. I was going to say some of the greatest conversations ever, but who knows. Some of the best conversations

ever are probably somewhere in South America between two drunk people that we never get to hear.

So I don't know. But is there advice you can give from what you've learned to somebody like me on how to have good conversation, especially once recorded?

Well, to be actually curious. I mean, every question you've asked me is because I think you actually want to know the answer and you've done your homework to be open and not to have an agenda.

I mean, we all suffer from there being too many agendas in the world today.

Yeah, so that's just genuine curiosity. But there's something when you talk about just one-on-one interaction, whether it's Elon or Steve Jobs, or there's something beautiful about that person's mind. And it feels like it's possible to reveal that, to discover that together efficiently.

And that's kind of the goal of a conversation. Well, I mean, look, you're amongst the top podcasters and interviewers in the world today. You have an earnestness to you.

Ben Franklin is the person who taught me, I mean, by reading him, the most about on conversation. He wrote a wonderful essay on that. It includes on silence.

But it includes trying to ask sincere questions rather than get a point across.

I mean, it's somewhat socratic. But whenever he wanted to start a fireman's core in Philadelphia, he would go to his group that he called the Leather Apron Club

and they would pose a question, why don't we have it? What would it take? What would be good?

And then the second part is to make sure that you listen, and if somebody has even just the germ of an idea, give them credit for it. Like, as Joe said, the real problem is this. And

I do think that if I'm in situations, and I just mean even a dinner or something, and I'm with somebody, I'm usually curious and the conversation will proceed with questions.

And I guess it's also because I'm pretty interested in what anybody's doing,

whoever I happen to be with. And that's a talent you have, which is you're pretty

genuine in your interests. There are people like Benjamin Franklin, like the, I'll say Charlie Rose, even though he's in disfavor, who are interested in a huge number of subjects. And I think that helps as well, to be interested in basketball and opera and physics and metaphysics.

That was a Ben Franklin, that was a Leonardo trick, which is they wanted to know everything you could possibly know about every subject knowable. But there's a different aspect of this, which is that I would love to hear how you've solved it, or if you've faced it, that you're certainly disarming. See, I'm like peppering you with compliments here, trying to get you over. That's a very disarming method. Yeah. I recently talked to Benjamin Nanyahu. We'll talk again. We're unfortunate because of scheduling and complexities, only had one hour, which is

very difficult, very difficult with a charismatic politician. I understand this, but he's also a charismatic talker, which is very difficult to break through in one hour. But people have built up walls, whether it's because of demons or because of their politicians. And so they have agendas and narratives and so on. And so to break through those, I wonder if there's some advice, some wisdom you've learned on how to wear down through water or whatever method the walls that we've built up as individuals. I mean, you call it disarming, which I don't know that I am, but disarming basically means you're taking down their shields also. And you know when people have a shield and you try to give them comfort. I had zero of that problem with Elon Musk. I mean, it was like disarming to me, which is, I kept waiting to say, okay, he's not going to always, they've got a shell or he won't do that. But he was almost crazily open and did not seem to want to be spinning or hiding or faking things. And I've been lucky. Doudna was that way. Steve Jobs was that way. But you have to put in time too. In other words, you can't say, okay, there's a one hour interview and I'm going to break down every wall. It's like on your fifth visit. Yes. Well, actually, there's one of the things in my situation, you learn fifth visit is very nice, but sometimes you don't get a fifth visit. Sometimes it's just the first day. And I think what it boils down to, and we said disarming, but there's something about this person that you trust. I think a lot of it just boils down to trust in some deep human way. And I think with many other people I've spoken with, sometimes the trust happens like after the interview, which is really sad because it's like, oh man. I've never been in your situation where I have a show. I usually have minifax at the wheel. Yes. I'm not a first date person. Yeah. Yeah. Well, you know. But then I'm lucky. I mean, I'm, I say lucky, but I'm in print, you know. I understand. Print is a couple thousand year old medium, but they're those of us who love it. Well, the nature of the podcast medium is that I'm a one-night stand kind of girl. Let me ask you about objectivity. You follow Elon and you follow Steve, I mean, I don't even know if you would say you're front. You have to be careful with words like that, but you're, there's an intimacy. And how do you remain objective? Do you want to remain objective while telling a deeply human story? Yeah. I mean, I want to be honest, which I think is akin to being objective. I try to keep in mind who is, who am I writing for? I'm not writing for Elon Musk, as I say. I haven't sent him the book. I don't know if he, I don't think he's read it yet. I've got one person I'm writing for, the open-minded reader. And if I can put in a story and say, well, that will piss off the subject or that will really make the subject happy, that's irrelevant. Or I try to make that a minor consideration. It's, will the reader have a better understanding because I've put this story in the book? I'm a bit of a romantic. So to me, even your Einstein book had lessons on romance and relationships. Oh dear. So how important are romantic relationships to the success of great men, great women, great minds? Well, sometimes people who affect the course of humanity have better relationships with humanity than they do with the humans sitting around them. Einstein had two interesting relationships with wives. As for, you know, Maleva, his first wife was a sounding board and helped with the mathematics of the special relativity paper in particular. But he didn't treat her well. I mean, he made her sign a letter that she wouldn't interrupt him. She wouldn't, you know, and finally, when she wanted a divorce, he couldn't afford it because he was still a patent clerk. And so he offered her a deal, which is, I think, totally amazing. He said, one of these days, one of those papers from 1905

is going to win the Nobel Prize. If we get a divorce, you know, I'll give you the money. There was a lot of money back then, like a million dollars now or something. And she's smart. She's a scientist. She consults with a few other scientists and after a week or so, she takes the bet. Is that until, what, 1919 that he wins his Nobel Prize? And she gets all the money. She buys three apartment buildings in Zurich. With his second life, Elsa, it was more a partnership of convenience. It was not a romantic love, but he knew. And that's sometimes what people need in life. He's just a partner. I mean, somebody who's going to handle the stuff you're not going to handle. So I guess if you look at my books, they're not great inspiring guides to personal relationships. Let me ask you about actually the process of writing itself. When you've observed, when you've listened, when you've collected all the information, what's maybe even just the silly mundane question of what do you eat for breakfast before you start writing? When do you write? First of all, breakfast is not my favorite meal. And those people who tell you that you have to start with a hearty breakfast, I look askance. And morning is not my favorite day part. So I write at night. And because I love narrative, it's easy to structure a book, which I can make a outline that if I printed it out or notes would be 100 pages, but everything's in order. In other words, if there's a burning man and he's coming back from Grimes and then there's a solar roof thing and then there's something, I put it all in order day by day as an outline. And that disciplines me when I'm starting to write to follow the mantra from Alice Mayhew, my first editor, which is all things in good time. Don't get ahead of the story, don't have to flash back. And then after you get it so that it's all chronological, you know, things, then you have to do some clustering. You know, you have to say, okay, we're going to do the decision to do Starship or to build a factory in Texas or to whatever. And then you sometimes have the organizational problem of, yeah, and that gets us all the way up to here. Do I keep that in that chapter or do I wait until later when it's better chronologically? But those are easy. Well, what about the actual process of telling the story? Well, that's the mantra I mentioned earlier, which is whenever I get pause or I don't know how to say something, I just say, let me tell you a story. And then I find the actual anecdote, the story, the tale that encompasses what I'm trying to convey. And then I don't say what I'm trying to convey. I don't have a transition sentence that says, you know, Elon sometimes changes mind so often he couldn't remember whether he had changed his mind. You know, you don't need transition sentences. You just say, all right, here's the point I need to make next. And so you start with a sentence that says, you know, one day in January in the factory in Texas, comma. Well, one of the things that I'd love to ask you is for advice for young people. To me, first advice would be to read biographies in the sense because they help you understand of all the different ways you can live a life well lived. But from having written biographies, having studied so many great men and women, what advice could you give to people of how to live this life? Well, I keep going back to the classics and Plato and Aristotle and Socrates. And I guess it's Plato's maxim, but he may be quoting Socrates, that the unexamined life is not worth living. And it gets back to the know thyself, nothing, which is you don't have to figure out what is the big meaning of it all. But you have to figure out why you're doing what you're doing. And that requires something that I did not have enough of when I was young, which is self-awareness and examining every motive, everything I do. Where does the examination lead you? Is it to shift in life trajectory?

I mean, it's not for me sort of, all right, I've now decided having been a journalist, I'll run a think tank or I'll run a network or I'll write a bio. It is actually something that's more useful on an hourly basis. Like, why am I about to say that to somebody? Or why am I going to do this particular act? What's my true motive here? And also, in the broader sense, to learn, as I did after a couple years at CNN, my examination of my life is that I'm not great at running complex organizations. I'm not great as a manager. Given the choice, I'd rather somebody else have to manage me than me have to manage people. But it took me a while to figure that out. And I was probably too ambitious when I was young and at Time magazine. That was when I was green and, well, that was when I was in my salad days in green and judgment. And it was like chasing the next level at Time and cooperate at whatever it might be. And then one day I caught the brass ring and I became an editor and then the top editor. And after a while, I realized that wasn't really totally what I'm suited to be, especially when I got put in charge of CNN. I mean, all young people are almost by definition in their salad days in green and judgment. But you learn what's motivating you and then you learn to ask, is that really what I want? Should I be careful of what I'm wishing for? One of the big examinations you can do is the fact that you and everybody dies one day. How much do you, Walter Isaacson, think about death? Are you afraid of it? No, and I don't think about it a lot. But I do think about Steve Jobs's, let me tell your story, you know, which is the wonderful Steve Jobs story of, I think after he was diagnosed, but before it was public, and he gave both a Stanford talk, but other things in which he said, the fact that we are going to die gives you focus and gives you meaning. If you're going to live, and Elon Musk has said that to me, which is, a lot of the tech grows out in the Silicon Valley that looking for ways to live forever, I can think, Musk says, of nothing worse. We read the myth of Sisyphus and we know how bad it is to be condemned to eternal life. So there was an ancient Greece, the person who walked behind the king and said, Memento Mori, remember you're going to die. And it kept people from losing it a bit. Do you think about legacy? The lucky thing about being a biographer is that you kind of know what your legacy is. There's going to be a shelf and it'll be of interesting people. And you will have inspired a 17-year-old biology student somewhere to be the next great biochemist or somebody to start a company like Elon Musk. And what I think more about, I won't say giving back, that's such a trite thing. I moved back to New Orleans for a reason. First of all, the hurricane hit. And after Katrina, I was asked to be my share of the recovery authority. And I realized everything I've got going for me, it all comes from this beautiful gem of a troubled city. The wonderful high school I went to, the wonderful streets where I learned to ride a bike, and it's got challenges. I'm never going to solve challenges at the grand global level. But I can go back home and say part of my legacy is going to be, I tried to pay it back to my hometown, even by teaching at Tulane, which I don't do as a favor. I mean, I enjoy the hell out of it. But it's like, all right, I'm part of a community. And I think we lose that in America because people who are lonely are lonely because they're not part of a community. But I've got all my high school kids, their friends, they're all still in New Orleans. I've got my family, but I also have Tulane, institutions in New Orleans that have been there forever. And if I can get involved in helping the school system in New Orleans, of helping the youth empowerment programs, of helping the innovation center at Tulane, I was even on the city planning commission, which worries about

zoning ordinances for short-term rentals. Go figure. But it was like, no, immerse myself in my community because my community was just so awesomely good at allowing me to become who I became and has trouble year by year, hurricane by hurricane, making sure that each new generation can be creative. And it's a city of creativity from jazz to the food to the architecture.

So when I think of, I won't say legacy, but what am I going to do to pay it forward, which is a lower level way of saying legacy? I pay it forward by going back to the place where I began and trying to know it for the first time. That was a ripoff of a TS Eliot line. I don't want you to think I thought of that one. Always cite your sources. I appreciate it. TS Eliot, if you ever need to figure it out, the four quartets, that part at the end, which is we shall not see some exploration. And the end of all of our exploring will be to return to the place where we started and know it for the first time. They're the unknown but half remembered gate. It's just beautiful. And that's been an inspiration of what do you do in, I guess, if it's a Shakespeare play, you'd call it Act Five. Well, you go back to the place where you came and don't sit there worrying about legacy, but you'll sit there saying, how do I make sure that somebody else can have a magical trajectory starting in New Orleans? Well, to me, you're one of the greatest storytellers of all time. I've been a huge fan.

That's definitely not true, but it's so sweet of you. See, you can be...

Broodly interrupting. I think probably Ben Franklin, so for I don't know how many years, 15 years, Einstein, all the way through today has been a huge fan of yours. And you're one of the people that I thought surely would not lower themselves to appear and have a conversation with me. And it's just a giant gift to me. Hey, I flew into Austin for this because I am a big fan and especially a big fan because you take people seriously and you care.

Thank you a thousand times. Thank you for respecting me and for inspiring just millions of people with your stories. Again, an incredible storyteller, incredible human. And thank you for talking today. Thank you, Alex. Thanks for listening to this conversation with Walter Isaacson. To support this podcast, please check out our sponsors in the description. And now, let me leave you with one of my favorite quotes from Carl Jung.

People will do anything, no matter how absurd, in order to avoid facing their own souls. One does not become enlightened by imagining figures of light, but by making the darkness conscious. Thank you for listening and hope to see you next time.