

**The Joe Rogan Experience #1169 - Elon Musk**

Published - September 26, 2018

Transcribed by - [thepodtranscripts.com](https://thepodtranscripts.com)

**Joe Rogan**

Ah, ha, ha, ha. Four, three, two, one, boom. Thank you. Thanks for doing this, man. Really appreciate it.

**Elon Musk**

You're welcome.

**Joe Rogan**

It's very good to meet you.

**Elon Musk**

Nice to meet you too.

**Joe Rogan**

And thanks for not lighting this place on fire.

**Elon Musk**

You're welcome. That's coming later.

**Joe Rogan**

How does one - just in the middle of doing all the things you do - create cars, rockets - all the stuff you're doing - constantly innovating - decide to just make a flamethrower? Where do you have the time for that?

**Elon Musk**

Well, the flame - we didn't put a lot of time into the flamethrower. This was an off-the-cuff thing. And so we have - I have this sort of like - it's sort of a hobby company called "The Boring Company", which started out as a joke, and we decided to make a real, and dig a tunnel under LA. And then dig - then people - other people asked us to dig tunnels. And so, we said "Yes" in a few cases.

**Joe Rogan**

Now, who -

**Elon Musk**

And then, we have a merchandise section that only has one piece of merchandise at a time. And we started off with a cap. And there was only one thing on, which is "boringcompany.com/cap" or hat. That's it. And then, we sold the hats, limited edition. It just said, "The Boring Company". And then, I'm a big fan of "Spaceballs", the movie. And in "Spaceballs", Yogurt goes through the merchandising section, and they have a flamethrower in the merchandising section of "Spaceballs". And, like, the kids love that one. That's the line when he pulls up the flamethrower. It's like, "we should do a flamethrower." So, we -

**Joe Rogan**

Does anybody tell you "No"? Does anybody go, "Elon, maybe for yourself, but selling a flamethrower - the liabilities, all the people you're selling this device to, what kind of unhinged people are going to be buying a flamethrower in the first place? Do we really want to connect ourselves to all these potential arsonists?"

**Elon Musk**

Yeah, it's a terrible idea. It's terrible. Don't buy one. I said, "Don't buy this flamethrower. Don't buy it. Don't buy it." That's what I said, but, still, people bought it.

**Joe Rogan**

Yeah.

**Elon Musk**

There's nothing I can do to stop them.

**Joe Rogan**

It's - you build it, they will come.

**Elon Musk**

I did not stop them. I tried. I said, "Don't buy it. It's a bad idea."

**Joe Rogan**

How many did you make?

**Elon Musk**

"It's dangerous. It's wrong. Don't buy it." And, still, people bought it. I just couldn't stop them.

**Joe Rogan**

How many did you make?

**Elon Musk**

20,000.

**Joe Rogan**

And they're all gone?

**Elon Musk**

In 3 - I think, 4 days. They sold out in 4 days.

**Joe Rogan**

Are you going to do another run?

**Elon Musk**

No.

**Joe Rogan**

No, that's it?

**Elon Musk**

Yes.

**Joe Rogan**

Oh, I see.

**Elon Musk**

I said we're doing 20. We did 50,000. 50,000 hats, and that was a million dollars. I thought, "Okay. Well, we'll sell something for 10 million," and that was 20,000 flamethrowers at \$500 each. They went fast.

**Joe Rogan**

Yeah. How do you have the time? How do you have the time to do that though? I mean, I understand that it's not a big deal in terms of all the other things you do, but how do you have time to do anything? I just - I don't understand your time management skills.

**Elon Musk**

I mean, I didn't spend much time on this flamethrower. I mean, to be totally frank, it's actually just a roofing torch with an air rifle cover. It's not a real flamethrower.

**Joe Rogan**

Which is why it says, "Not a flamethrower."

**Elon Musk**

That's why - we were very clear, this is not actually a flamethrower. And, also, we are told that various countries would ban shipping of it - that they would ban flamethrowers. So, we're very - to solve this problem for all of the customs agencies, we labeled it, "Not a flamethrower."

**Joe Rogan**

Did it work? Was it effective?

**Elon Musk**

I don't know. I think so. Yes.

**Joe Rogan**

So far.

**Elon Musk**

Yes.

**Joe Rogan**

Now, but you do -

**Elon Musk**

Because they said, "You cannot ship a flamethrower."

**Joe Rogan**

But you do so many different things. Forget about the flamethrower. Like, how do you do all that other shit? Like, how does one decide to fix LA traffic by drilling holes in the ground? And who do you even approach with that? Like, when you have this idea, who do you talk to about that?

**Elon Musk**

I mean, I'm not saying it's going to be successful or something, you know. It's not like asserting that it's going to be successful. But so far, I've lived in LA for 16 years, and the traffic has always been terrible. And so, I don't see any other, like, ideas for improving the traffic. So, in desperation, we're going to dig a tunnel. And maybe that tunnel will be successful and maybe it won't.

**Joe Rogan**

I'm listening.

**Elon Musk**

Yeah. I'm not trying to convince you it's going to work.

**Joe Rogan**

And are the people that you

**Elon Musk**

I mean - or anyone.

**Joe Rogan**

But you are starting this though. This is actually a project you're starting to implement, right?

**Elon Musk**

Yeah, yeah, no. We've dug about a mile. It's quite long. It takes a long time to walk it.

**Joe Rogan**

Yeah. Now, when you're doing this, what is the ultimate plan? The ultimate plan is to have these in major cities, and anywhere there's mass congestion, and just try it out in LA first?

**Elon Musk**

Yeah. It's in LA because I mostly live in LA. That's the reason. It's a terrible place to dig tunnels. This is one of the worst places to dig tunnels because the - mostly because of the paperwork. People think it's like, "What about seismic?" It's like, actually, both - tunnels are very safe in earthquakes.

**Joe Rogan**

Why is that?

**Elon Musk**

Earthquakes are essentially a surface phenomenon. It's like waves on the ocean. So, if there's a storm, you want to be in a submarine. So, being in a tunnel is like being in a submarine. Now, the way the tunnel is constructed, it's constructed out of these interlocking segments, kind of like a snake. It's sort of like a snake exoskeleton with double seals. And so, even when the ground moves, the tunnel actually is able to shift along with the ground like an underground snake, and it doesn't crack or break. Or - and it's extremely unlikely that both seals would be broken. And it's capable of taking 5 atmospheres of pressure. It's waterproof, methane-proof, well, gas-proof of any kind, and meets all California seismic requirements.

**Joe Rogan**

So, when you have this idea, who do you bring this to?

**Elon Musk**

I'm not sure what you mean by that.

**Joe Rogan**

Well, you're implementing it. So, you're digging holes in the ground.

**Elon Musk**

Yes.

**Joe Rogan**

Like, you have to bring it to someone that lets you do it.

**Elon Musk**

Yes so - there are some engineers from SpaceX who thought it would be cool to do this. And the guy who runs it, like, day-to-day is Steve Davis. He's a longtime SpaceX engineer. He is great. So, Steve was like, "I'd like to help make this happen." I was like, "Cool." So, we started off with digging a hole in the ground. It's got like a permit for a pit, like pit, and just dug a big pit.

**Joe Rogan**

And you have to tell them what the pit's for, or you just said, "Hey, we just want to dig a hole."

**Elon Musk**

I just filled up this form.

**Joe Rogan**

That's it?

**Elon Musk**

Yeah, it was a pit in our parking lot.

**Joe Rogan**

And - but do you have to give them some sort of a blueprint for your ultimate idea? And do they have to approve it? Like, how does that work?

**Elon Musk**

No, we just started off with a pit.

**Joe Rogan**

Okay.

**Elon Musk**

A big pit. And, you know, it's not really - you know, they don't really care about the existential nature of a pit. You just say like, "I want a pit." You know?

**Joe Rogan**

Right.

**Elon Musk**

Yeah. And it's a hole in the ground. So then, we got the permit for the pit, and we dug the pit, and we dug it in, like, I don't know, 3 days, 2 to 3 days. Actually, I think 2, 48 hours, something like that because Eric Carr said he was coming by for the Hype - to - he was going to attend the Hyperloop Competition, which is like a student competition we have for who can make the fastest pod in the Hyperloop. And he was coming - this was gonna - he finals are going to be on Sunday afternoon. And so, Eric is coming by on Sunday afternoon. So like, "You know, we should dig this pit, and then like show Eric." So we - this was like Friday morning. And then, yeah - so, it's about a little over 48 hours - 48 hours later, we dug the pit. It was like we went 24/7. Oh, 24. 48 straight hours, something like that. And dug this big pit, and we're like, "Show Eric the pit." It's like, obviously, it's just a pit. But, hey, a hole in the ground is better than no hole in the ground.

**Joe Rogan**

And what did you tell him about this pit? I mean, you just said this is the beginning of this idea.

**Elon Musk**

Yes.

**Joe Rogan**

We're going to build tunnels under LA to help funnel traffic better.

**Elon Musk**

Yes.

**Joe Rogan**

And they go - they just go, "Okay." That - but that - we've - we've joked around about this in the podcast before that like what other person can go to the people that run the city and go, "Hey, I want to dig some holes on the ground and put some tunnels in there." And they go "Oh, yeah, okay."

**Elon Musk**

Not the only one with a hole in the ground.

**Joe Rogan**

But it's a -

**Elon Musk**

People dig holes in the ground all time.

**Joe Rogan**

But my question is, like, I know how much time you must be spending on your Tesla factory. I know how much time you must be spending on SpaceX. And yet, you still have time to dig holes under the ground in LA, and come up with these ideas, and then implement them. Like -

**Elon Musk**

I have a million ideas.

**Joe Rogan**

I'm sure you do.

**Elon Musk**

There's no shortage of that. Yeah.

**Joe Rogan**

I just don't know how you manage your time. I don't understand it. It doesn't seem - it doesn't even seem humanly possible.



**Elon Musk**

You know, I do, basically - I think, people, like, don't totally understand what I do with my time. They think, like, I'm a business guy or something like that. Like my Wikipedia page says "business magnate".

**Joe Rogan**

What would you call yourself?

**Elon Musk**

A "business magnet". Can someone please change my Wikipedia page to "magnet"?

**Joe Rogan**

They'll change it right now.

**Elon Musk**

Please change it to -

**Joe Rogan**

It's probably already changed.

**Elon Musk**

It's locked. So, somebody has to be able to unlock it and change it to "magnet".

**Joe Rogan**

Someone will get that.

**Elon Musk**

I want to be a "magnet". No, I do engineering, you know, and manufacturing, and that kind of thing. That's like 80% or more of my time.

**Joe Rogan**

Ideas, and then the implementation of those ideas.

**Elon Musk**

That's like hardcore engineering, like -

**Joe Rogan**

Yeah.

**Elon Musk**

... designing things, you know.

**Joe Rogan**

Right.

**Elon Musk**

It's structural, mechanical, electrical, software, user interface, engineering, aerospace engineering.

**Joe Rogan**

But you must understand there's not a whole lot of human beings like you. You know that, right? You're an oddity -

**Elon Musk**

It seems - yes.

**Joe Rogan**

... to chimps like me.

**Elon Musk**

We're all chimps.

**Joe Rogan**

Yeah, we are.

**Elon Musk**

We're one notch - one notch above a chimp.

**Joe Rogan**

Some of us are a little more confused. When I watch you doing all these things, I'm like, "How does this motherfucker have all this time, and all this energy, and all these ideas, and then people just let him do these things?"

**Elon Musk**

Because I'm an alien.

**Joe Rogan**

That's what I've speculated.

**Elon Musk**

Yes.

**Joe Rogan**

Then, I'm on record saying this in the past. I wonder.

**Elon Musk**

It's true.

**Joe Rogan**

I mean, if there was one? I was like, "If there was, like, maybe an intelligent being that we created, you know, like some AI creature that's superior to people, maybe it's just hanging around with us for a little while like you've been doing, and then fix a bunch of shit." I mean, that's the way.

**Elon Musk**

I might have some mutation or something like that.

**Joe Rogan**

You might. Do you think you do?

**Elon Musk**

Probably.

**Joe Rogan**

Do you wonder? Like, around normal people, you're like, "Hmm." Think, "What's up with these boring dumb motherfuckers?" Ever?

**Elon Musk**

Not bad for a human, but, I think, I will not be able to hold a candle to AI.

**Joe Rogan**

You scared the shit out of me when you talk about AI - between you and Sam Harris.

**Elon Musk**

Oh sure.

**Joe Rogan**

I didn't even consider it until I had a podcast with Sam once.

**Elon Musk**

That was great.

**Joe Rogan**

And he made me shit my pants. Talking about AI, I realized, like, "Oh, this is a genie that once it's out of the bottle, you're never getting it back in."

**Elon Musk**

That's true.

**Joe Rogan**

There was a video that you tweeted about one of those Boston Dynamic robots.

**Elon Musk**

Yeah.

**Joe Rogan**

And you're like, "In the future, it will be moving so fast, you can't see it without a strobe light."

**Elon Musk**

Yeah. You can probably do that right now.

**Joe Rogan**

And no one's really paying attention too much other than people like you, or people that are really obsessed with technology, all these things are happening. And these robots are - did you see the one where PETA put out a statement that you shouldn't kick robots?

**Elon Musk**

It's probably not wise.

**Joe Rogan**

For retribution.

**Elon Musk**

Their memory is very good.

**Joe Rogan**

I bet it's really good.

**Elon Musk**

It's really good.

**Joe Rogan**

I bet it is.

**Elon Musk**

Yes.

**Joe Rogan**

And getting better every day.

**Elon Musk**

It's really good.

**Joe Rogan**

Are you honestly legitimately concerned about this? Are you - is, like, AI one of your main worries in regards to the future?

**Elon Musk**

Yes. It's less of a worry than it used to be, mostly due to taking more of a fatalistic attitude.

**Joe Rogan**

So, you used to have more hope, and you gave up some of it. And, now, you don't worry as much about AI. You're like, "This is just what it is."

**Elon Musk**

Yeah, pretty much.

**Joe Rogan**

Hmm.

**Elon Musk**

Yes, yes, yes. Was that not - yes it's - it's - but no. It's not necessarily bad. It's just it's definitely going to be outside of human control.

**Joe Rogan**

Not necessarily bad, right?

**Elon Musk**

Yes. It's not necessarily bad. It's just outside of human control. Now, the thing that's going to be tricky here is that it's going to be very tempting to use AI as a weapon. It's going to be very tempting. In fact, it will be used as a weapon. So, the on ramp to serious AI - the danger is going to be more humans using it against each other, I think, most likely. That will be the danger. Yeah.

**Joe Rogan**

How far do you think we are from something that can make its own mind up whether or not something's ethically or morally correct? Or whether or not it wants to do something? Or whether or not it wants to improve itself? Or whether or not it wants to protect itself from people or from other AI? How far away are we from something that's really truly sentient?

**Elon Musk**

Well, I mean, you could argue that any group of people - like a - like a company is essentially a cybernetic collective of people and machines. That's what a company is. And then, there are different levels of complexity in the way these companies are formed. And then, there are sort of - there's a sort of like a collective AI in the Google - sort of Search - Google Search - you know, where we're all sort of plugged in as like nodes on the network, like leaves on a big tree. And we're all feeding this network with our questions and answers. We're all collectively programming the AI. And Google plus, all the humans that connect to it, are one giant cybernetic collective. This is also true of Facebook, and Twitter, and Instagram, and all these social networks. They're giant cybernetic collectives.

**Joe Rogan**

Humans and electronics all interfacing - and constantly now, constantly connected.

**Elon Musk**

Yes, constantly.

**Joe Rogan**

One of the things that I've been thinking about a lot over the last few years is that - one of the things that drives a lot of people crazy is how many people are obsessed with materialism and getting the latest greatest thing. And I wonder how much of that is - well, a lot of it is most certainly fueling technology and innovation. And it almost seems like it's built into us. It's like what we like and what we want - that we're fueling this thing that's constantly around us all the time. And it doesn't seem possible that people are going to pump the brakes. It doesn't seem possible at this stage - where we're constantly expecting the newest cellphone, the latest Tesla update, the newest MacBook Pro. Everything has to be newer and better. And that's going to lead to some incredible point. And it seems like it's built into us. It almost seems like it's an instinct that we - we're working towards this, that we like it. That - our job, just like the ants build the anthill - our job is to somehow know how fuel this.

**Elon Musk**

Yes. I mean - I made this comment some - some years ago, but it feels like we are the biological bootloader for AI effectively. We are building it. And then, we're building progressively greater intelligence. And the percentage of intelligence that is not human is increasing. And, eventually, we will represent a very small percentage of intelligence. But the AI is informed strangely by the human limbic system. It is, in large part, our id writ large.

**Joe Rogan**

How so?

**Elon Musk**

We mentioned all those things - the sort of primal drives. There's all of the things that we like, and hate, and fear. They're all there on the Internet. They're a projection of our limbic system. That's true.

**Joe Rogan**

No, it makes sense. And the thinking of it as a - I mean - think of - thinking of corporations, and just thinking of just human beings communicating online through these social media networks as some sort of an organism that's a - it's a cyborg. It's a combination. It's a combination of electronics and biology.

**Elon Musk**

Yeah.

**Joe Rogan**

This is -

**Elon Musk**

In - in some measure, like, it's the success of these online systems is the - is - is sort of a function of how much limbic resonance they're able to achieve with people. The more limbic resonance, the more engagement.

**Joe Rogan**

Whereas, like one of the reasons why probably Instagram is more enticing than Twitter.

**Elon Musk**

Limbic resonance.

**Joe Rogan**

Yeah. You get more images, more video.

**Elon Musk**

Yes.

**Joe Rogan**

It's tweaking your system more.

**Elon Musk**

Yes.

**Joe Rogan**

Do you worry or wonder, in fact, of what the next step is? I mean, a lot of you didn't see Twitter coming. You know, communicate with 140 characters - or 280 now - would be a thing that people would be interested in. Like it's going to excel. It's going to become more connected to us, right?

**Elon Musk**

Yes. Things are getting more and more connected. They're, at this point, constrained by bandwidth. Our input / output is slow, particularly output. Output got worse with thumbs. You know, we used to have input with 10 - 10 fingers. Now, we have thumbs. But images are just - are also - they're a way of communicating at high bandwidth. You take pictures and you send pictures to people. What sends - that communicates far more information than you can communicate with your thumbs.

**Joe Rogan**

So, what happened with you where you decided, or you took on a more fatalistic attitude? Like, was there any specific thing, or was it just the inevitability of our future?

**Elon Musk**

I try to convince people to slow down. Slow down AI - to regulate AI. That's what's futile. I tried for years, and nobody listened.

**Joe Rogan**

This seems like a scene in a movie -

**Elon Musk**

Nobody listened.

**Joe Rogan**

where the the robots are going to fucking takeover. You're freaking me out. Nobody listened?

**Elon Musk**

Nobody listened.

**Joe Rogan**

No one? Are people more inclined to listen today? It seems like an issue that's brought up more often over the last few years than it was maybe 5 - 10 years ago. It seemed like science fiction.

**Elon Musk**

Maybe they will. So far, they haven't. I think, people don't - Like, normally, the way that regulations work is very slow. It's very slow indeed. So, usually, it will be something, some new technology. It will cause damage or death. There will be an outcry. There will be an investigation. Years will pass. There will be some sort of insight committee. There will be rule making. Then, there will be oversight. Eventually regulations. This all takes many years. This is the normal course of things. If



you look at, say, automotive regulations, how long did it take for seatbelts to be implemented? To be required? You know, the auto industry fought seatbelts, I think, for more than a decade. It successfully fought any regulations on seatbelts even though the numbers were extremely obvious. If you had seatbelts on, you would be far less likely to die or be seriously injured. It was unequivocal. And the industry fought this for years successfully. Eventually, after many, many people died, regulators insisted on seatbelts. This is a - this time frame is not relevant to AI. You can't take 10 years from a point of which it's dangerous. It's too late.

**Joe Rogan**

And you feel like this is decades away or years away? From being too late. If you have this fatalistic attitude -

**Elon Musk**

Yeah.

**Joe Rogan**

And you feel like it's going to - we're in an almost like a doomsday countdown.

**Elon Musk**

It's not necessarily a doomsday countdown. It's a -

**Joe Rogan**

Out of control countdown?

**Elon Musk**

Out of control, yeah. People call it the "singularity", and that's probably a good way to think about it. It's a "singularity". It's hard to predict, like a black hole, what happens past the event horizon.

**Joe Rogan**

Right. So, once it's implemented, it's very difficult - because it would be able to -

**Elon Musk**

Once the genie is out of the bottle, what's going to happen?

**Joe Rogan**

Right. And it will be able to improve itself.

**Elon Musk**

Yes.

**Joe Rogan**

That's where it gets spooky, right? The idea that it can do thousands of years of innovation very, very quickly.

**Elon Musk**

Yeah.

**Joe Rogan**

And, then, it will be just ridiculous.

**Elon Musk**

Ridiculous.

**Joe Rogan**

We will be like this ridiculous biological shitting, pissing thing trying to stop the gods. "No, stop. We're like living with a finite lifespan, and watching, you know, Norman Rockwell paintings."

**Elon Musk**

It could be terrible. And it could be great. It's not clear.

**Joe Rogan**

Right.

**Elon Musk**

But one thing is for sure, we will not control it.

**Joe Rogan**

Do you think that it's likely that we will merge somehow or another with this sort of technology, and it'll augment what we are now? Or do you think it will replace us?

**Elon Musk**

Well, that's the scenario. The merge scenario with AI is the one that seems like probably the best. Like if -

**Joe Rogan**

For us?

**Elon Musk**

Yes. Like if you - if you can't beat it, join it. That's -

**Joe Rogan**

Yeah, yeah.

**Elon Musk**

You know? So, from a long-term existential standpoint, that's like the purpose of Neuralink - is to create a high bandwidth interface to the brain such that we can be symbiotic with AI. Because we have a bandwidth problem. You just can't communicate through fingers. It's too slow.

**Joe Rogan**

And where's Neuralink at right now?

**Elon Musk**

I think we'll have something interesting to announce in a few months. That's, at least, an order of magnitude better than anything else. I think better than, probably, anyone thinks is possible.

**Joe Rogan**

How much can you talk about that right now?

**Elon Musk**

I don't want to jump the gun on that.

**Joe Rogan**

But what's like the ultimate - what's the idea behind that? Like, what are you trying to accomplish with it? What would you like best case scenario?

**Elon Musk**

I think, best case scenario, we effectively merge with AI where we - AI serves as a tertiary cognition layer, where we've got the limbic system - kind of the, you know, primitive brain essentially. You got the cortex. So, you're currently in a symbiotic relationship - your cortex and limbic system are in a symbiotic relationship. And, generally, people like their cortex, and they like their limbic system. I haven't met anyone who wants to delete their limbic system or delete their cortex. Everybody seems to like both. And the cortex is mostly in service to the limbic system. People may think that the thinking part of themselves is in charge, but it's mostly their limbic system that's in charge. And the cortex is trying to make the limbic system happy. That's what most of that computing power is. It's launched towards, "How can I make the limbic system happy?" That's what it's trying to do. Now, if we do have a third layer, which is the AI extension of yourself, that is also symbiotic. And there's enough bandwidth between the cortex and the AI extension of yourself, such that the AI doesn't de facto separate. Then, that could be a good outcome. That could be quite a positive outcome for the future.

**Joe Rogan**

So, instead of replacing us, it will radically change our capabilities?

**Elon Musk**

Yes. It will enable anyone who wants to have superhuman cognition - anyone who wants - this is not a matter of earning power because your earning power would be vastly greater after you do it. So, it's just like - anyone who wants can just do it in theory. That's the theory. And if that's the case then - and let's say billions of people do it - then the outcome for humanity will be the sum of human will - the sum of billions of people's desire for the future.

**Joe Rogan**

That billions of people with enhanced cognitive ability?

**Elon Musk**

Yes.

**Joe Rogan**

Radically enhanced?

**Elon Musk**

Yes.

**Joe Rogan**

And which would be - it - but how much different than people today? Like if you had to explain it to a person who didn't really know - understand what you're saying? Like how much different are you talking about? When you say radically improved, like, what do you mean? You mean mind-reading?

**Elon Musk**

It will be difficult - it would be difficult to really appreciate the - the difference. It's kind of like how much smarter are you with a phone or computer than without? You're vastly smarter actually. You know, you can answer any question. If you connect to the Internet, you can answer any question pretty much instantly - any calculation - that your phone's memory is essentially perfect. You can remember flawlessly. Your phone can remember videos, pictures, everything perfectly. That's the - your phone is already an extension of you. You're already a cyborg. You don't even - what most people don't realize, they are already a cyborg. That phone is an extension of yourself. It's just that the data rate, the rate at which - the communication rate between you and the cybernetic extension of yourself, that is your phone and computer, is slow. It's very slow. And - and that - that - it's like a tiny straw of information flow between your biological self and your digital self. And we need to make that tiny straw like a giant river. A huge high band with the interface. It's an interface problem. Data rate problem. You solve the data rate problem then I think we can hang on to human-machine symbiosis through the long term. And then, people may decide that they want to retain their biological self or not. I think they'll probably choose to retain the biological self.

**Joe Rogan**

Versus some sort of Ray Kurzweil scenario where they download themselves into a computer?

**Elon Musk**

You will be essentially snapshotted into a computer at any time. If your biological self dies, you could probably just upload it to a new unit literally.

**Joe Rogan**

Pass that whiskey. We're getting crazy over here. This is getting ridiculous.

**Elon Musk**

Down the rabbit hole.

**Joe Rogan**

Grab that sucker. Give me some of that. This is too freaky. See, if I was just talking -

**Elon Musk**

I've been thinking about this for a long time, by the way.

**Joe Rogan**

I believe you. If I was talking to one of my - cheers, by the way.

**Elon Musk**

Cheers. This is great whiskey.

**Joe Rogan**

Thank you. I don't know where this came. Who brought this to us?

**Elon Musk**

I'm trying to remember. I can't -

**Joe Rogan**

Somebody gave it to us. Old Camp. Whoever it was thanks.

**Elon Musk**

It's good.

**Joe Rogan**

Yeah, it is good. This is just inevitable. Again, going back to your - when you decided to be - have this fatalistic viewpoint. So, you weren't - you tried to warn people. You talked about this pretty extensively. I've read several interviews where you talked about this. And then, you just sort of just said, "Okay, it just is. Let's just- " And, in a way, by communicating the potential fear - I mean, for sure, you're getting the warning out to some people.

**Elon Musk**

Yeah. Yeah. I mean, I was really going on the warning quite a lot. I was warning everyone I could. Yeah, I've met with Obama and just for one reason, like, "Better watch out."

**Joe Rogan**

Just to talk about AI.

**Elon Musk**

Yes.

**Joe Rogan**

And what did he say? "So, what about Hillary? Worry about her first. Shh, everybody, be quiet."

**Elon Musk**

He listened. He certainly listened. I met with Congress. I met with - I was at a meeting of all 50 governors and talked about just the AI danger. And I talked to everyone I could. No one seemed to realize where this was going.

**Joe Rogan**

Is it that, or do they just assume that someone smarter than them is already taking care of it? Because when people hear about something like AI, it's almost abstract. It's almost like it's so hard to wrap your head around it.

**Elon Musk**

It is.

**Joe Rogan**

By the time it happens, it will be too late?

**Elon Musk**

Yeah. I think, they didn't quite understand it, or didn't think it was near-term, or not sure what to do about it. And I said, like, "You know, an obvious thing to do is to just establish a committee, government committee, to gain insight. You know, before you oversight, before you do make regulations, you should like try to understand what's going on. And then, you have an insight committee. Then, once they learn what's going on, you get up to speed. Then, they can make maybe some rules or proposed some rules. And that would be probably a safer way to go about things."

**Joe Rogan**

It seems - I mean, I know that it's probably something that the government's supposed to handle, but it seems like I wouldn't want the - I don't want the government to handle this.

**Elon Musk**

Who do you want to handle this?

**Joe Rogan**

I want you to handle this.

**Elon Musk**

Oh geez.

**Joe Rogan**

Yeah. I feel like you're the one who could ring the bell better because if Mike Pence starts talking about AI, I'm like, "Shut up, bitch. You don't know anything about AI. Come on, man. He doesn't know what he's talking about." He thinks that it's demons

**Elon Musk**

I don't have the power to regulate other companies. What am I supposed to - I - but you know?

**Joe Rogan**

Right, but maybe companies could agree. Maybe there could be some sort of a - I mean there's - we have agreements where you're not supposed to dump toxic waste into the ocean. You're not supposed to do certain things that could be terribly damaging, even though they would be profitable. Maybe this is one of those things. Maybe we should realize that you can't hit the switch on something that's going to be able to think for itself and make up its own mind as to whether or not it wants to survive or not. And whether or not it thinks you're a threat. Or whether or not it thinks you're useless. Like, "Why do I keep this dumb finite life form alive? Why? Why keep this thing around? It's just stupid. It just keeps polluting everything. It's shitting everywhere it goes. Lighting everything on fire, and shooting at each other. Why would I keep this stupid thing alive? Because, sometimes, it makes good music, you know. Sometimes it makes great movies. Sometimes it makes beautiful art, and sometimes - you know - sometimes it's cool to hang out with. Like with my - "

**Elon Musk**

Yes, for all those reasons.

**Joe Rogan**

Yeah. For us, those are great reasons.

**Elon Musk**

Yes, but for anything objective standing outside that go, "This is definitely a flawed system." This is like if you went to the jungle and you watch these chimps engage in warfare and beat each other with wooden sticks.

**Joe Rogan**

Chimps are really mean.

**Elon Musk**

They're fucking real mean.

**Joe Rogan**

They're fucking mean.

**Elon Musk**

They're real mean.

**Joe Rogan**

I saw a movie, "Chimpanzee". I thought it was going to be like some Disney thing. Like, "holy cow".

**Elon Musk**

What movie was that?

**Joe Rogan**

It's called "Chimpanzee".

**Elon Musk**

Is it a documentary?

**Joe Rogan**

Yeah, yeah. It's kind of like a documentary. I was like, "Damn, these chimps are mean."

**Elon Musk**

They're mean.

**Joe Rogan**

Yeah.

**Elon Musk**

Yeah.

**Joe Rogan**

They're cruel.

**Elon Musk**

Yeah. They're - they're calculated. Yeah.



**Joe Rogan**

Yeah.

**Elon Musk**

They sneak up on each other and - like, I didn't realize chimps did calculated cruelty.

**Joe Rogan**

Yeah.

**Elon Musk**

I was pretty - I left that meeting kinda like, "Woah, this is dark."

**Joe Rogan**

Right. Well, we know better because we've advanced. But if we hadn't, we'd be like, "Man, I don't want to fucking live in a house. I like the chimp ways, bro. Chimp ways to go. This is it, man, chimp life. It's the only life -

**Elon Musk**

Haha, chimp life.

**Joe Rogan**

- it's the only life I know. But we, in a way, to the AI, might be like those chimps and like, "These stupid fucks launching missiles out of drones, and shooting each other underwater." Like we're crazy. We got torpedoes, and submarines, and fucking airplanes that drop nuclear bombs indiscriminately on cities. We're assholes.

**Elon Musk**

Yeah.

**Joe Rogan**

They might go, "Why are they doing this?" It might, like, look at our politics, look at what we do in terms of our food system, what kind of food we force down each other's throats. And they might go, "These people are crazy. They don't even look out for themselves."

**Elon Musk**

I don't know. I mean, how much do we think about chimps? Not much.

**Joe Rogan**

Very little.

**Elon Musk**

It's like -

**Joe Rogan**

It's true.

**Elon Musk**

These chimps are at war. This like look - It's like groups of chimps just attack each other, and they kill each other. They torture each other. That's pretty bad. They hunt monkeys. They're - they're - like this is probably the most - but, you know - I mean, when was the last time you talked about chimps?

**Joe Rogan**

Me?

**Elon Musk**

Yeah.

**Joe Rogan**

All the time.

**Elon Musk**

You do?

**Joe Rogan**

You're talking to the wrong guy.

**Elon Musk**

Okay. Well, unfortunately, yeah.

**Joe Rogan**

This fucking podcast. Dude -

**Elon Musk**

It's chimp city?

**Joe Rogan**

I talk about chimps every other episode.

**Elon Musk**

Okay.

**Joe Rogan**

People are laughing right now. Yeah, constantly.

**Elon Musk**

Okay.

**Joe Rogan**

I'm obsessed. I saw that David Attenborough documentary on chimps where they were eating those colobus monkeys and ripping them apart.

**Elon Musk**

Yeah, it's rough.

**Joe Rogan**

I saw that many, many years ago.

**Elon Musk**

It's gruesome.

**Joe Rogan**

It just changed how -

**Elon Musk**

Gruesome.

**Joe Rogan**

I go, "Oh, this is why people are so crazy. We came from that thing."

**Elon Musk**

Yeah, exactly.

**Joe Rogan**

Yeah.

**Elon Musk**

I mean then there's the bonobos.

**Joe Rogan**

Yeah.

**Elon Musk**

They got a, like, better philosophy.

**Joe Rogan**

Yeah, they're like swingers.

**Elon Musk**

Yeah.

**Joe Rogan**

Yeah, they really are. They're - they - they seem to be way more - even than us - way more civilized.

**Elon Musk**

They just seem to resolve everything with sex.

**Joe Rogan**

Yeah. The only rules they have is the mom won't bang the son. That's it.

**Elon Musk**

Okay.

**Joe Rogan**

That's it. Mom won't bang her sons. They're good women.

**Elon Musk**

Yeah.

**Joe Rogan**

Good women in the bonobo community. Everybody else is banging it out.

**Elon Musk**

Yeah. I haven't seen the bonobo movie.

**Joe Rogan**

Well, they're disturbing just at a zoo. You know you have bonobos at the zoo.

**Elon Musk**

They're just constantly going.

**Joe Rogan**

Constantly fucking, yeah. It's all they do.

**Elon Musk**

They just don't stop.

**Joe Rogan**

Yeah. And they don't care. Gay, straight, whatever. Let's just fuck. What's with these labels?

**Elon Musk**

I haven't seen bonobos at a zoo. It's probably like -

**Joe Rogan**

I don't think I have either.

**Elon Musk**

- not in the PG section.

**Joe Rogan**

Yeah, I don't think they have them at many zoos. We've looked at it before too, didn't we?

**Elon Musk**

It's probably pretty awkward.

**Joe Rogan**

Yeah. I think that's the thing. They don't like to keep regular chimps at zoos because bonobos are just always jacking off and -

**Elon Musk**

Yeah.

**Joe Rogan**

Fucking and -

**Elon Musk**

In San Diego.

**Joe Rogan**

What's that? They have them in San Diego?

**Elon Musk**

San Diego's got some.

**Joe Rogan**

Really? Interesting. Probably separate them.

**Elon Musk**

Yeah. I mean, how many are there in a cage, you know? It's like -

**Joe Rogan**

Right.

**Elon Musk**

It's going to be pretty intense.

**Joe Rogan**

Yeah, yeah. Yeah, we're a weird thing, you know. And I've often wondered whether or not we're - you know, our ultimate goal is to give birth to some new thing. And that's why we're so obsessed with technology because it's not like this technology is really - I mean, it's certainly enhancing our lives too in a certain way, but is - I mean, ultimately, is it making people happier right now? Most technology I would say no. In fact, you and I were talking about social media before this about just not having Instagram on your phone, and not dealing, and you feel better.

**Elon Musk**

Yes. I think, one of the issues with social media - it's been pointed out by many people - is that, I think, maybe particularly Instagram, people look like they have a much better life than they really do.

**Joe Rogan**

Right.

**Elon Musk**

So -

**Joe Rogan**

By design.

**Elon Musk**

Yeah. People are posting pictures of when they're really happy. They're modifying those pictures to be better looking. Even if they're not modifying the pictures, they're, at least, selecting the pictures for the best lighting, the best angle. So, people basically seem - they are way better looking than they basically really are.

**Joe Rogan**

Right.

**Elon Musk**

And they're way happier seeming than they really are. So, if you look at everyone on Instagram, you might think, "Man, there are all these happy, beautiful people, and I'm not that good looking, and I am not happy. So, I must suck." You know? And that's going to make you feel sad. So - when, in fact, those people you think are super happy - actually, not that happy. Some of them are really depressed. They're very sad. Some of the happiest-seeming people are actually some of the saddest people in reality. And nobody looks good all the time. It doesn't matter who you are.

**Joe Rogan**

No. It's not even something you should want.

**Elon Musk**

Yeah.

**Joe Rogan**

Why do you want to look great all the time?

**Elon Musk**

Yeah, exactly. So, I think things like that can make people quite sad.

**Joe Rogan**

Well, you basically -

**Elon Musk**

Just by comparison. Because you - you're just sort of - people generally think of themselves relative to - to others. It's like we are constantly re-baselining our expectations. And you can see this - say if you watch some show like "Naked and Afraid", or, you know, if you just go and try living in the woods by yourself for a while, and you're like, "That land - that civilization is quite great." People want to come back to civilization pretty fast on "Naked or Afraid".

**Joe Rogan**

Wasn't that a Thoreau quote? It - "Comparison is the thief of joy."

**Elon Musk**

Yeah. "Happiness is reality minus expectations."

**Joe Rogan**

That's great too, but the "comparison is the thief of joy" really holds true to people. Is it?

**Elon Musk**

Theodore Roosevelt.

**Joe Rogan**

Roosevelt, fascinating. And when you're thinking about Instagram, because what essentially Instagram is for a lot of people is you're giving them the opportunity to be their own PR agent, and they always go towards the glamorous, you know? And when anybody does show - you know #nofilter - they really do do that. "Oh, you're so brave. Look at you, no makeup." You know?

**Elon Musk**

Yeah.

**Joe Rogan**

Which they look good anyway. You look great. What are you doing? "Oh my God, you don't have makeup on?" You still look hot as fuck. You know what you're doing. I know what you're doing too. They're - they're - they're letting you know. And then, they're feeding off that comment section. Sitting there like it's a fresh stream of love. Like you're getting right up to the sources as it comes out of the Earth. And you're sucking that sweet, sweet love water.

**Elon Musk**

A lot of emojis. Just emoji. Emojis.

**Joe Rogan**

Yeah, it's weird.

**Elon Musk**

A lot of emojis.

**Joe Rogan**

My concern is not so much what Instagram is. It's that I didn't think that people had the need for this or the expectation for some sort of technology that allows them to constantly get love and adulation from strangers, and comments, and this ability to project this sort of distorted version of who you really are. But I worry about where it goes. Like what's the next one? What's the next one? Like, where's is it? Is it going to be augmented to some sort of a weird augmented or virtual sort of Instagram type situation where you're not going to want to live in this real world. You're going to want to interface with this sort of world that you've created through your social media page. And some next level thing.

**Elon Musk**

Yeah. Go live in the simulation.

**Joe Rogan**

Yeah, man.

**Elon Musk**

In the simulation.

**Joe Rogan**

Some "Ready Player One" - type shit, that's real. That seems - we have that HTC Vibe here. I've only done it a couple times. Quite honestly because it kind of freaks me out.

**Elon Musk**

Sure.



**Joe Rogan**

My kids fucking love it, man. They love it. They love playing these weirdo games and walking around with that headset on. But part of me watching them do it goes, "Wow, I wonder if this is like the precursor." Just sort of like if you look at that phone that Gordon Gekko had on the beach. And you compare that -

**Elon Musk**

Yes, the big cell phone.

**Joe Rogan**

Yeah, you compare that to like a Galaxy Note 9.

**Elon Musk**

Sure.

**Joe Rogan**

Like how the fuck did that become that, right? And I wonder when I see this HTC Vibe, I'm like, "What is that thing going to be 10 years from now when we're making fun of what it is now?" What is - I mean, how ingrained - and how connected and interconnected is this technology going to be in our life?

**Elon Musk**

It will be, at some point, indistinguishable from reality.

**Joe Rogan**

Where we will lose THIS. We'll lose THIS. Like you and I are just looking at each other through our eyes. I see you. You see me.

**Elon Musk**

Are we?

**Joe Rogan**

I think. I hope.

**Elon Musk**

You think so?

**Joe Rogan**

I think you probably have regular eyes.

**Elon Musk**

This could be some simulation.

**Joe Rogan**

It could. Do you entertain that?

**Elon Musk**

Well, the argument for the simulation, I think, is quite strong because if you assume any improvements at all over time - any improvement - 1%, 0.1% - just extend the time frame - make it a thousand years, a million years. The universe is 13.8 billion years old. Civilization, if you count it - if you're very generous - civilization is maybe 7000 or 8000 years old. If you count it from the first writing. This is nothing. This is nothing. So, if you assume any rate of improvement at all, then games will be indistinguishable from reality. Or civilization will end. One of those two things will occur.

**Joe Rogan**

Also -

**Elon Musk**

Therefore, we are most likely in a simulation.

**Joe Rogan**

Or we're on our way to one, right?

**Elon Musk**

Because we exist.

**Joe Rogan**

Well, just because we exist -

**Elon Musk**

Just because we exist.

**Joe Rogan**

We could most certainly be on the road. We could be on the road to that, right? It doesn't mean that it has to have already happened.

**Elon Musk**

We could be in base reality. We could be in base reality.

**Joe Rogan**

We could be here now on our way to the road or on our way to the destination where this can never happen again, where we are completely ingrained in some sort of an artificial technology or some sort of a symbiotic relationship with the Internet or the next level of sharing information. But, right now, we're not there yet. That's possible too, right? It's possible that a simulation is, one day, going

to be inevitable, that we're going to have something that's indistinguishable from regular reality, but maybe we're not there yet. That's also possible.

**Elon Musk**

Yes, it is.

**Joe Rogan**

That we're not quite there yet. That this is real. You want to touch that wood?

**Elon Musk**

It feels very real.

**Joe Rogan**

Maybe that's why everybody is like into like mason jars and shit.

**Elon Musk**

Mason jars.

**Joe Rogan**

Suede shoes. People are into like craft restaurants. And they want raw wood. Everyone wants the metal people. It seems like people are like longing toward some weird log-cabin-type nostalgia.

**Elon Musk**

Sure, reality.

**Joe Rogan**

Yeah, like holding on. Like clinging.

**Elon Musk**

Sure.

**Joe Rogan**

Dragging their nails through the mud like, "Don't take me yet."

**Elon Musk**

Yes.

**Joe Rogan**

"I want to -"

**Elon Musk**

But then, people go get a mason jar with a wine stem or a handle. That's dark.

**Joe Rogan**

Mason jars -

**Elon Musk**

It makes me lose faith in humanity.

**Joe Rogan**

- with wine stem and a handle, they have those?

**Elon Musk**

Yes.

**Joe Rogan**

Oh, those dirty people.

**Elon Musk**

Ugh, terrible.

**Joe Rogan**

That's just assholes. That's like people make pet rocks.

**Elon Musk**

Rough.

**Joe Rogan**

Right? Some people are just assholes. They take advantage of our generous nature.

**Elon Musk**

It was made with the wine stem. Made with handle.

**Joe Rogan**

They made it that way?

**Elon Musk**

Yes.

**Joe Rogan**

So, they made - it -

**Elon Musk**

It was manufactured like that.

**Joe Rogan**

- wasn't like it they welded it onto the mason - oh, you fucks.

**Elon Musk**

No, that would be fine. If there was - they glued it on or something. But it was made that way.

**Joe Rogan**

Right. That would be like white-trash-chique. Oh, this is disgusting. Look at this. There it is right there.

**Elon Musk**

Yes, it's pretty harsh.

**Joe Rogan**

This is terrible.

**Elon Musk**

Yup.

**Joe Rogan**

Yeah. That's like fake breasts that are designed to be hard. Like fake breasts from the '60s. It's like if you really long for the ones with ripples, here we go. Yeah. That's almost what that is.

**Elon Musk**

Yeah.

**Joe Rogan**

What are you going to do, man? There's nothing, you know - there's nothing you can do to stop certain terrible ideas from propagating.

**Elon Musk**

Yeah. Anyway, I don't want to sound like things are too dark because I think like you kind of have to be optimistic about the future. There's no point in being pessimistic. It's just too negative -

**Joe Rogan**

It doesn't help.

**Elon Musk**

It doesn't help, you know? I think you want to be - I mean, my theory is like you'd rather be optimistic - I think, I'd rather be optimistic and wrong than pessimistic and right.

**Joe Rogan**

Right.

**Elon Musk**

At least, err on that side.

**Joe Rogan**

Right, yeah.

**Elon Musk**

Because if you're pessimistic, it's going to be miserable.

**Joe Rogan**

Yeah. Yeah, nobody wants to be around you anyway if it's the end of the world. You're like, "I fucking told you, bro."

**Elon Musk**

Yeah, exactly.

**Joe Rogan**

The world is ending. Yeah. It is what it is for all -

**Elon Musk**

I did my part.

**Joe Rogan**

I mean -

**Elon Musk**

Enjoy the journey.

**Joe Rogan**

Right. If you really want to get morose - I mean - it is what it is for all of us anyway. We're all going to go - unless something changes.

**Elon Musk**

Yeah. I mean, ultimately, you know, even if we just sort of existed as humans forever, we'd be - we'd still eventually be like the heat death of the universe -

**Joe Rogan**

Right.

**Elon Musk**

A zillion years from now.

**Joe Rogan**

Right, even if we get it past the sun.

**Elon Musk**

Yeah.

**Joe Rogan**

If we figure out a way past the sun running out of juice.

**Elon Musk**

Eventually, it's going to end. It's just a question of when.

**Joe Rogan**

Right.

**Elon Musk**

So, it really is all about the journey.

**Joe Rogan**

Or transcendence. From whatever we are now into something that doesn't worry about death.

**Elon Musk**

The universe, as we know it, will dissipate into a fine mist of cold nothingness eventually.

**Joe Rogan**

And then, someone's going to bottle it and put a fragrance to it, sell it to French people in another dimension.

**Elon Musk**

It's just a very long time.

**Joe Rogan**

Yeah.

**Elon Musk**

So, I think it's really just about, how can we make it last longer?

**Joe Rogan**

Are you a proponent of the multi-universes theory? Do you believe that there are many, many universes? And that even if this one fades out that there's other ones that are starting fresh right now? And there's an infinite number of them? And they're just constantly in a never-ending cycle of birth and death?

**Elon Musk**

I think most likely - this is just about probability - there are many, many simulations. These simulations - we might as well call them reality - or we could call them the multiverse.

**Joe Rogan**

These simulations you believe are created? Like someone has manufactured -

**Elon Musk**

They're running on the substrate.

**Joe Rogan**

So -

**Elon Musk**

That substrate is probably boring.

**Joe Rogan**

Boring?

**Elon Musk**

Mmhmm.

**Joe Rogan**

How so?

**Elon Musk**

Well, when we create a simulation like a game or a movie, it's the distillation of what's interesting about life. You know, it takes - it takes a year to shoot an action movie. And then, that's all distilled down into 2 or 3 hours. So, let me tell you, if you've seen an action movie being filmed - it's freaking - it's boring. It's super boring. It takes - there's like lots of takes. Everything's in a green screen. It looks pretty goofy. It doesn't look cool. But once you add the CGI, and have great editing, it's amazing. So, I think, most likely, if we're a simulation, it's really boring outside the simulation because why would you make simulation as boring? You'd make simulation way more interesting than base reality.



**Joe Rogan**

That is if this right now is a simulation.

**Elon Musk**

Yes.

**Joe Rogan**

And, ultimately, inevitably, if - as long as we don't die or get hit by a meteor - we're going to create some sort of simulation if we continue on the same technological path we're on right now.

**Elon Musk**

Yes.

**Joe Rogan**

But we might not be there yet. So, it might not be a simulation here. But it most likely is you feel other places.

**Elon Musk**

This notion of a "place" or "where" is -

**Joe Rogan**

Flawed?

**Elon Musk**

Yes.

**Joe Rogan**

Flawed perception?

**Elon Musk**

Like where - like that - if you have that sort of, that Vibe you have which - with the - that's made by Valve - and it's - it's really Valve that made it. HTC did the hardware, but it's really a Valve thing.

**Joe Rogan**

Makers of "Half-Life".

**Elon Musk**

Yes, Valve. Great company.

**Joe Rogan**

Great company.

**Elon Musk**

When you're in the - in that - in that virtual reality, which is only going to get better, where are you?  
Where are you really?

**Joe Rogan**

Right.

**Elon Musk**

You aren't anywhere.

**Joe Rogan**

Well, where is -

**Elon Musk**

You're in the computer.

**Joe Rogan**

You know, what defines where you are?

**Elon Musk**

Exactly.

**Joe Rogan**

Right.

**Elon Musk**

It's your perception.

**Joe Rogan**

Is it your perceptions or is it, you know, a scale that we have under your butt? You're right here. I've measured you. You're the same weight as you were when you left. But meanwhile, your experience is probably different -

**Elon Musk**

Why do you think you're where you are right now? You might not be.

**Joe Rogan**

I'll spark up a joint if you keep talking. Your manager is just going to come in here. We might have to lock the door.

**Elon Musk**

Right now, you think you're in a studio in LA.

**Joe Rogan**

That's what I heard.

**Elon Musk**

You might be in a computer.

**Joe Rogan**

Oh, listen man, I think about this all the time. Yeah, I mean - it's unquestionable that one day that will be the case. As long as we keep going. As long as nothing interrupts us. And if we start from scratch, and, you know, we're single-celled organisms all over again. And then, millions and millions of years later, we become the next thing that is us - with creativity and the ability to change this environment. It's going to keep monkeying with things until it figures out a way to change reality. To change - I mean to - almost like punch a hole through what is this thing into what what it wants it to be and create new things. And then, those new things will intersect with other people's new things, and there will be this ultimate pathway of infinite ideas and expression - all through technology.

**Elon Musk**

Yeah.

**Joe Rogan**

And then, we're wondering - we're going to wonder like, "Why are we here? What are we doing?"

**Elon Musk**

Let's find out.

**Joe Rogan**

Well -

**Elon Musk**

I mean, I think we should take the actions, the set of actions that are most likely to make the future better.

**Joe Rogan**

Yes, right.

**Elon Musk**

Yeah.

**Joe Rogan**

Right. Right.

**Elon Musk**

And then, reevaluate those actions to make sure there - there - that it's true.

**Joe Rogan**

Well, I think there's a movement to that. I mean, in terms of like a social movement. I think some of it's misguided. And some of it's exaggerated. And there's a lot of people that are fighting for their side out there. But it seems like the general trend of, like, social awareness seems to be much more heightened now than has ever been in any other time in history because of our ability to express ourselves instantaneously to each other through Facebook, or Twitter, or what have you. And that the trend is to abandon preconceived notions, abandon prejudice, abandon discrimination, and promote kindness and happiness as much as possible. Looking at this knife? Somebody gave it to me. Sorry.

**Elon Musk**

Yeah. What is it?

**Joe Rogan**

Fuck did you do? My friend, Donnie. He brought this with him, and it just stayed here. I have a real samurai sword, if you want to play with that. I know you're into weapons. That's from the 1500's. Samurai sword at the end of the table.

**Elon Musk**

Really?

**Joe Rogan**

Yeah.

**Elon Musk**

Oh, that's cool.

**Joe Rogan**

I'll grab it. Hold on. Yeah, that's a legit samurai sword from an actual samurai from the 1500's. If you pull out that blade, that blade was made the old way where a master craftsman -

**Elon Musk**

Folded metal?

**Joe Rogan**

Folded that metal and hammered it down over and over again over a long period of time, and honed that blade into what it is now. What's crazy is that more than 500 years later, that thing is still pristine. I mean, whoever took care of that and passed it down to the next person who took care of it, and you know until it got to the podcast room - it's pretty fucking crazy.

**Elon Musk**

Yeah.

**Joe Rogan**

One day, someone's going to be looking at a Tesla like that. "Dude, look at these fucking back doors. They pop off sideways like a Lamborghini."

**Elon Musk**

You should see what the Tesla can do. You didn't - You should - I'll show you afterwards.

**Joe Rogan**

Well, I've driven one. I love them.

**Elon Musk**

Yeah, but most people don't know what it can do.

**Joe Rogan**

In terms of like "ludicrous mode"? In terms of like driving super fast and irresponsibly on public road? Is that what you're saying?

**Elon Musk**

Any car can do that.

**Joe Rogan**

Yeah. What can it do that I need to know about?

**Elon Musk**

I mean, the Model X can do this like ballet thing to the "Trans-Siberian Orchestra". It's pretty cool.

**Joe Rogan**

Where it dances?

**Elon Musk**

Yes.

**Joe Rogan**

Legitimate, like it moves around? [Hums ballet music]

**Elon Musk**

Yes.

**Joe Rogan**

Why would you program that into a car?

**Elon Musk**

It seemed like fun.

**Joe Rogan**

That's what I get about you. That's what's weird. Like when you showed up here, you were all smiles, and you pull out a fucking blowtorch and not a blowtorch, but I'm like, "Look at this dude - "

**Elon Musk**

Not a flamethrower.

**Joe Rogan**

Not a flamethrower. I'm like, "He's having fun."

**Elon Musk**

I want to be clear, it's definitely not a flamethrower.

**Joe Rogan**

But you're having fun. Like this is a - like this thing - you know, when you program a car to do a ballet dance, you're having fun.

**Elon Musk**

It's great.

**Joe Rogan**

But how do you have the time to do that? I don't understand while you're digging holes under the earth, and sending rockets into space, and powering people in Australia. Like how the fuck do you have time to make the car dance ballet?

**Elon Musk**

Well, I mean, in that case there were some engineers at Tesla that said, "You know, what if we make this car dance and play music?" I'm like, "That sounds great. Please do it. Let's try to get it done in time for Christmas." We did.

**Joe Rogan**

Did you - is there a concern about someone just losing their mind and making it do that on the highway?

**Elon Musk**

No, it won't do that.

**Joe Rogan**

What if it's in bumper-to-bumper traffic?

**Elon Musk**

Nope.

**Joe Rogan**

No, it won't do it?

**Elon Musk**

No. It's actually - you have to - it's an Easter egg.

**Joe Rogan**

Oh, it's an Easter egg.

**Elon Musk**

Yeah, that's why people don't know about it. Including people who have the car -

**Joe Rogan**

Well -

**Elon Musk**

It's like - it could do lots of things. Lots of things.

**Joe Rogan**

- once Reddit gets a hold of it, everyone's going to know.

**Elon Musk**

Oh, you just have to - everyone - if you search for it on the Internet, you will find out. But people don't know that they should even search for it.

**Joe Rogan**

Well, they do now.

**Elon Musk**

Yes.

**Joe Rogan**

Yes.

**Elon Musk**

There's so many things about the Model X, and the Model S, and the Model 3 that people don't know about. We should probably do a video or something and explain it. Because I have close friends of mine and I say, "Do you know the car can do this?" and they're like, "Nope."

**Joe Rogan**

Do you want to do a video of that? Do you like the fact that some people don't know?

**Elon Musk**

No, I think it's probably not - we should tell people.

**Joe Rogan**

Yeah, probably.

**Elon Musk**

Yes.

**Joe Rogan**

That would help your product. I mean, it's not like you don't sell enough of them. You sell almost too many of them, right?

**Elon Musk**

The - I mean, I think a Tesla is the most fun thing you could possibly buy ever. That's what it's meant to be.

**Joe Rogan**

Well -

**Elon Musk**

Our goal is to make - it's not exactly a car. It's actually a thing to maximize enjoyment - make as maximum fun.

**Joe Rogan**

Okay. Electronic. Like big screen, laptop, ridiculous speed, handling, all that stuff.

**Elon Musk**

Yeah.

**Joe Rogan**

Do you have a -



**Elon Musk**

And we're going to put video games in it.

**Joe Rogan**

You are?

**Elon Musk**

Yeah.

**Joe Rogan**

Is that wise?

**Elon Musk**

Well -

**Joe Rogan**

What kind of video games? Candy Crush?

**Elon Musk**

You won't be able to drive while you're playing the video game. But, we're like - for example, we're just putting the Atari emulator - RAM emulator in it. So, we'll play Missile Command and Lunar Lander, and a bunch of other things.

**Joe Rogan**

Ooh.

**Elon Musk**

Yeah.

**Joe Rogan**

That sounds cool.

**Elon Musk**

It's pretty fun.

**Joe Rogan**

I like that.

**Elon Musk**

Yeah. I mean, we improved the interface for Missile Command because it's too hard with the old trackball. So, this is a touch screen version of Missile Command. So, you have a chance.

**Joe Rogan**

Do you – you have an old car, don't you? Don't you have like an old Jaguar?

**Elon Musk**

Yeah. How did you know that? That's – that's – most people don't know that. That – '61 series 1 E-Type Jaguar.

**Joe Rogan**

I love cars.

**Elon Musk**

It's great.

**Joe Rogan**

Yeah, I love old cars. I – that's one of the things –

**Elon Musk**

The only – yeah, the only two gassing cars I have are that and an old – like a Ford Model T that a friend of mine gave me. Those are my only two gasoline cars.

**Joe Rogan**

Is the Ford Model T all stock? Oh, there's your car. Ooh, look at that.

**Elon Musk**

I have the convertible.

**Joe Rogan**

That is a gorgeous car.

**Elon Musk**

It's a soft top.

**Joe Rogan**

God, that's a good looking car.

**Elon Musk**

Yes.

**Joe Rogan**

Is that yours?

**Elon Musk**

Haha, that is - it's not mine. It's extremely close to mine. But I don't have a front license plate on mine.

**Joe Rogan**

Oh, it's a beautiful car. They nailed it. That E-Type -

**Elon Musk**

That - mine looks like that.

**Joe Rogan**

God, they nailed that.

**Elon Musk**

That's what mine looks like. Maybe that is mine.

**Joe Rogan**

There's certain iconic shapes.

**Elon Musk**

Yes.

**Joe Rogan**

And there's something about those cars too. They're not as capable - not nearly as capable as like a Tesla - but there's something really satisfying about the mechanical aspect of like feeling the steering, and the -

**Elon Musk**

Yeah.

**Joe Rogan**

- grinding of the gears and the shifting. There's something about those that's extremely satisfying even though they're not that confident. Like I have a 1993 Porsche 964. It's like a lightweight. It's not - an RS America. It's not very fast. It's not like - in comparison to a Tesla or anything like that - but the thing about it is like it's mechanical, you feel it. Everything's like -

**Elon Musk**

Sure.

**Joe Rogan**

It's like it gives you this weird thrill, like you're on this clunky ride, and there's all this feedback. There's something to that.

**Elon Musk**

Yeah. Yeah, absolutely. I mean, yeah. My E-Type is like basically no electronics.

**Joe Rogan**

Yeah.

**Elon Musk**

It's -

**Joe Rogan**

So, you like that, but you also like electronics?

**Elon Musk**

Yes.

**Joe Rogan**

Like your Tesla is super - it's like the far end of electronics.

**Elon Musk**

Yeah. Yes.

**Joe Rogan**

It drives itself.

**Elon Musk**

It's driving itself better every day.

**Joe Rogan**

Yeah.

**Elon Musk**

It's - we're about to release the software that will enable you to just turn it on, and it'll drive from highway on ramp, to highway exit, do lane changes, overtake other cars -

**Joe Rogan**

Jesus.

**Elon Musk**

To go from one interchange to the next. If you get on, say, the 405, get off 300 miles later, and go through several highway interchanges, and just overtake other cars, and hook into the nav system, and then -

**Joe Rogan**

And you're just meditating, om.

**Elon Musk**

Yeah.

**Joe Rogan**

While your car is just traveling.

**Elon Musk**

It's kind of eerie. It's kind of eerie.

**Joe Rogan**

What did you think when you saw that video of that dude fallen asleep behind the wheel? I'm sure you've seen it. The one in San Francisco. It's like right outside of San Jose. Dude's out cold, like this. And the cars is in bumper-to-bumper traffic moving along.

**Elon Musk**

Yeah.

**Joe Rogan**

You've seen it, right?

**Elon Musk**

Yeah, yeah. We just changed the software - changed the software. That's, I think, like an old video. We changed software. If you don't touch the wheel, it will gradually slow down.

**Joe Rogan**

Oh.

**Elon Musk**

And put the emergency lights on, and wake you up.

**Joe Rogan**

Oh, that's hilarious.

**Elon Musk**

Yeah.

**Joe Rogan**

That's hilarious.

**Elon Musk**

Yeah.

**Joe Rogan**

Can you choose what voice wakes you up?

**Elon Musk**

Well, it's sort more of a - it sort of honks.

**Joe Rogan**

Oh, it honks.

**Elon Musk**

Yeah.

**Joe Rogan**

It should be like, "Wake up, fuckface. You're endangering your fellow humans."

**Elon Musk**

We could gently wake you up with a sultry voice.

**Joe Rogan**

Ah, that would be good. Like something with a southern accent. "Hey, wake up."

**Elon Musk**

"Wake up, sunshine."

**Joe Rogan**

"Hey, sweetie."

**Elon Musk**

Exactly.

**Joe Rogan**

"Why don't you wake up?"

**Elon Musk**

You could pick your -

**Joe Rogan**

Right, like Siri.

**Elon Musk**

Like whatever you want. Yes.

**Joe Rogan**

Yeah, I choose the Australian girl for Siri.

**Elon Musk**

Yeah.

**Joe Rogan**

I like her voice.

**Elon Musk**

Do you want it seductive?

**Joe Rogan**

It's my favorite. I like Australian.

**Elon Musk**

What flavor? Do what you want it to be angry. It could be anything.

**Joe Rogan**

You want those Australian prison lady genes. Now, when you program something like that in, is this in response to a concern, or is it your own?

**Elon Musk**

Yeah.

**Joe Rogan**

Or do look at it and go, "Hey, they shouldn't just be able to fall asleep. Let's wake them up."

**Elon Musk**

Yeah, yeah. We - it's like - You know, we're like - Yeah, people are falling asleep. We've got to do something about that.

**Joe Rogan**

Right. But when you first released it, you didn't consider it, right? You're just like, "Well, no one's going to just sleep."

**Elon Musk**

People fall asleep in their cars all the time.

**Joe Rogan**

All the time.

**Elon Musk**

They crash.

**Joe Rogan**

Yeah, it's horrible.

**Elon Musk**

At least, our car doesn't crash. That's better.

**Joe Rogan**

Yeah.

**Elon Musk**

It's better not to crash.

**Joe Rogan**

Yeah.

**Elon Musk**

Imagine if that guy had fallen asleep in a gasoline car. They do all the time.

**Joe Rogan**

For sure, yeah.

**Elon Musk**

They would crash into somebody.

**Joe Rogan**

Yeah.

**Elon Musk**

And, in fact, the thing that really, you know, got me to - It's like, "Man, we better get a autopilot going and get it out." A guy was in an early Tesla driving down the highway, and he fell asleep, and he ran over a cyclist, and killed him. I was like, "Man, if we had autopilot, he might have fallen asleep, but, at least, he wouldn't run over that cyclist."

**Joe Rogan**

So, how did you implement it? Like did you just use cameras and -



**Elon Musk**

Yeah.

**Joe Rogan**

- programmed with the system, so that if it sees images, it slows down? And how much time do you get? And like -

**Elon Musk**

Yeah.

**Joe Rogan**

Is the person who's in control of it allow the program to how fast it goes?

**Elon Musk**

Yes. Yeah, you can program it to be more or less, like more conservative or like more aggressive driver. And you can say what speed you want it to - what speed is okay.

**Joe Rogan**

I know you have "ludicrous mode". Do you have "douchebag mode"?

**Elon Musk**

Well, in -

**Joe Rogan**

It just cuts people off.

**Elon Musk**

Well, for lane changes, it's tricky because if you're in like LA - like unless you're pretty aggressive, right? It's hard to change lanes sometimes.

**Joe Rogan**

You can't. It's hard to be Satnam. It's hard to be Namaste here in LA.

**Elon Musk**

Yeah.

**Joe Rogan**

If you want to hit that Santa Monica Boulevard off-ramp.

**Elon Musk**

I mean, you've got to be a little pushy.

**Joe Rogan**

You've got to be a little pushy, yeah.

**Elon Musk**

On the freeway.

**Joe Rogan**

Especially if you were angry.

**Elon Musk**

Yes.

**Joe Rogan**

If they're a little angry, they don't want you, and they speed up.

**Elon Musk**

Sometimes, yeah. I think, people like overall are pretty nice on the highway, even in LA, but sometimes they're not.

**Joe Rogan**

Do you think the Neuralink will help that? Clink.

**Elon Musk**

Probably.

**Joe Rogan**

Everybody will be locked in together - this hive mind.

**Elon Musk**

Tunnels will help it. We wouldn't have traffic.

**Joe Rogan**

That will help a lot.

**Elon Musk**

Yes.

**Joe Rogan**

How many of those can you put in there?

**Elon Musk**

Nice thing about tunnels -

**Joe Rogan**

Are you thinking about for everybody?

**Elon Musk**

Nice thing about tunnels is you can go 3D.

**Joe Rogan**

Oh, right.

**Elon Musk**

So, you can go many levels.

**Joe Rogan**

Right.

**Elon Musk**

So -

**Joe Rogan**

Until you hit hell.

**Elon Musk**

Haha, yeah. But you go - you can have 100 levels of tunnels.

**Joe Rogan**

Jesus Christ. I don't want to be on 99. That would be a negative 99 floors.

**Elon Musk**

This is one of the fundamental things people don't appreciate about tunnels - is that it's not like roads. The fundamental issue with roads is that you have a 2D transport system and a 3D living and workspace environment. So, you've got all these tall buildings or concentrated work environments. And then, you want to go into those like 2D transport system with -

**Joe Rogan**

Hugely inefficient.

**Elon Musk**

- pretty low density because cars are spaced out pretty far. And so, that, obviously, is not going to work. You're going to have traffic guaranteed. But if you can go 3D on your transport system, then you can solve all traffic. And you can either go 3D up with a flying car, or you can go 3D down with tunnels. You can have as many tunnel levels as you want. And you can arbitrarily relieve any amount

of traffic. You can go further down with tunnels than you can go up with buildings. You can go 10,000 feet down if you want. I wouldn't recommended it, but -

**Joe Rogan**

What was that movie with - what's his face? Bradley - not Bradley Cooper, Christian? No. What the fuck is his name? "Batman". Who is "Batman"? Christian Bale - where he - they fought dragons - him and Matthew McConaughey. They went down deep into the Earth. How high - how far - deep can you go?

**Elon Musk**

I don't think that was "Batman".

**Joe Rogan**

Yeah, it was. It was.

**Elon Musk**

"Batman" fought dragons? Underground?

**Joe Rogan**

No, it wasn't "Batman" -

**Elon Musk**

Okay.

**Joe Rogan**

but it's Christian Bale.

**Elon Musk**

"Reign of Fire".

**Joe Rogan**

"Reign of Fire"?

**Elon Musk**

Okay.

**Joe Rogan**

You never saw that?

**Elon Musk**

No.

**Joe Rogan**

Terrible movie.

**Elon Musk**

Hahaha.

**Joe Rogan**

Terrible movie, but good. I would look at it some time.

**Elon Musk**

I wouldn't recommend drilling super far down - like the Earth is a big -

**Joe Rogan**

Yeah, but you can't drill deep. It gets hot, right?

**Elon Musk**

- molten -

**Joe Rogan**

Yeah.

**Elon Musk**

- the Earth is a giant ball of lava with a thin crust on the top, which we think of as like the surface - this thin crust. And it's mostly just a big bowl of lava. That's Earth. But 10,000 feet is not a big deal.

**Joe Rogan**

Have you given any consideration whatsoever to the flat Earth movement?

**Elon Musk**

Haha. I think that's a troll situation.

**Joe Rogan**

Oh, it's not. No, it's not. You would like to think that -

**Elon Musk**

Okay.

**Joe Rogan**

- because you're super genius. But I, as a normal - normal person, I know these people are way dumber than me. And they really, really believe. They watch YouTube videos, which go on uninterrupted, and spew out a bunch of fucking fake facts very eloquently and articulately. And they really believe. These people really believe.

**Elon Musk**

I mean, if it works for them, sure. Fine - fine.

**Joe Rogan**

It's weird though, right? That in this age where, you know, there's "ludicrous mode" in your car - goes 1.9 seconds - 0 to 60.

**Elon Musk**

It's 2.2.

**Joe Rogan**

2.2? Which one's 1.9? The Roadster.

**Elon Musk**

The next generation Roadster -

**Joe Rogan**

Okay.

**Elon Musk**

- standard edition.

**Joe Rogan**

Yeah, I'm on top of this shit.

**Elon Musk**

That's just without -

**Joe Rogan**

Standard edition?

**Elon Musk**

Yeah. So, it's not the performance package.

**Joe Rogan**

What?! Performance package?

**Elon Musk**

Yes.

**Joe Rogan**

What the fuck do you need?!

**Elon Musk**

We're gonna put a rocket thruster on it.

**Joe Rogan**

For real?

**Elon Musk**

Yes.

**Joe Rogan**

What are they going to burn?

**Elon Musk**

Nothing. High - ultra-high-pressure compressed air.

**Joe Rogan**

Whoa. Just air?

**Elon Musk**

Just - called "gas thrusters".

**Joe Rogan**

Now, do you have to have air tanks? Or are they -

**Elon Musk**

Yeah.

**Joe Rogan**

- sucking the air out of the - okay.

**Elon Musk**

Yeah. It has an electric pump.

**Joe Rogan**

Whoa.

**Elon Musk**

Pump it up to like 10,000 PSI.

**Joe Rogan**

And how fast are we talking? 0 to 60?

**Elon Musk**

How fast you want to go?

**Joe Rogan**

I want to go -

**Elon Musk**

We could make this thing fly.

**Joe Rogan**

I want to go back in time.

**Elon Musk**

I can make it fly.

**Joe Rogan**

You make it fly?

**Elon Musk**

Sure.

**Joe Rogan**

Do you anticipate that as being - I mean, you're talking about the tunnels and then flying cars. Do you really think that's going to be real?

**Elon Musk**

Too noisy. And there's too much airflow. So, the final issue with flying cars - I mean, if you get like one of those like toy drones, think of how much - how loud those are and how much air they blow. Now, imagine if that's like a thousand times heavier. This is not going to be - make your neighbors happy. Your neighbors are not going to be happy if you land a flying car in your backyard.

**Joe Rogan**

It will be very helicopter-like.

**Elon Musk**

Not - or on your roof. It's just really going to be like, "What the hell? That was annoying."

**Joe Rogan**

Yeah.

**Elon Musk**

You can't even - like, if you want a flying car, just put some wheels on a helicopter.



**Joe Rogan**

Is there a way around that? Like what if they figure out some sort of magnetic technology? Like all those "Bob Lazar"-type characters who were thinking that was a part of the UFO technology they were doing at Area 51? Remember, didn't they have some thoughts about magnetics?

**Elon Musk**

Nope.

**Joe Rogan**

No? Bullshit?

**Elon Musk**

Yes.

**Joe Rogan**

Really?

**Elon Musk**

Yeah. There's a fundamental momentum exchange with the air. So, you must - you must accelerate - there's like this - there's a sudden - you have a mass, and you have gravitational acceleration. And mass times - your mass times gravity must equal the mass of airflow times acceleration of that airflow to have a neutral force.

**Joe Rogan**

So, it's impossible -

**Elon Musk**

$MG = MA$

**Joe Rogan**

- to get around -

**Elon Musk**

And then you won't move.

**Joe Rogan**

Alright. Okay.

**Elon Musk**

If  $MG$  is greater than  $MA$ , you will go down. And if  $MA$  is greater than  $MG$ , you will go up.

**Joe Rogan**

Hmm.

**Elon Musk**

That's how it works.

**Joe Rogan**

There's just no way around that?

**Elon Musk**

There is definitely no way around it.

**Joe Rogan**

There's no way to create some sort of a magnetic something or another that allows you to float?

**Elon Musk**

Technically, yes. You could have a strong enough magnet. But that magnet would be so strong that you would create a lot of trouble.

**Joe Rogan**

It would just suck cars up into your car? Just pick up axles and shit?

**Elon Musk**

I mean, you would have to repel off of either material on the ground or in a really nutty situation off of Earth's gravitational field, and somehow make that incredibly light. But that magnet would cause so much destruction. You'd be better off with a helicopter.

**Joe Rogan**

So, if there was some sort of magnet road - like you have two magnets and they repel each other - if you had some sort of a magnet road that was below you and you could travel on that magnet road, that would work?

**Elon Musk**

Hahaha. Yes. Yes, you can have a magnet road.

**Joe Rogan**

A magnet road. Is that too ridiculous?

**Elon Musk**

No, it - it will work. So, you could do that.

**Joe Rogan**

Cement's pretty ridiculous too, right?

**Elon Musk**

I would not recommend it.

**Joe Rogan**

There's a lot of things I don't recommend.

**Elon Musk**

I would super not recommend that. Not good. Not wise, I think.

**Joe Rogan**

No?

**Elon Musk**

No.

**Joe Rogan**

Magnet roads?

**Elon Musk**

No. No the - no, definitely not. Definitely not. Yeah, it - it would cause a lot of trouble.

**Joe Rogan**

So, you put some time and consideration into this other than - you know - instead of like my foolishly rendered thoughts. So, you think that tunnels are the way to do it?

**Elon Musk**

Oh, it will work, for sure.

**Joe Rogan**

That'll work?

**Elon Musk**

Yes.

**Joe Rogan**

And your - these tunnels that you're building right now - these are basically just like test versions of this ultimate idea that you have?

**Elon Musk**

You know, it's just a hole in the ground.

**Joe Rogan**

Right. We played videos of it where you -

**Elon Musk**

It's just a hole in the ground.

**Joe Rogan**

- your idea is that you drop that hole in the ground. There's a sled on it, and the sled goes very fast - like a 100 miles an hour plus.

**Elon Musk**

Yeah, it can go real fast - as fast as you want. And then, if you want to go long distances, you can just draw the air out of the tunnel. Make sure it's real straight.

**Joe Rogan**

Draw the air out of the tunnel?

**Elon Musk**

Yeah. Sort of a vacuum tunnel because the - then - and then, depending on how fast you want to go, you can use these wheels, or you could use air bearings - depending upon the ambient pressure in the tunnel, or you could maglev it if you want to go super fast.

**Joe Rogan**

So, magnet road?

**Elon Musk**

Yes. But underground magnet roads.

**Joe Rogan**

Underground magnet roads?

**Elon Musk**

Yeah. Otherwise, you're going to really create a lot of trouble with - because of those metal things.

**Joe Rogan**

Oh. So, magnet road is the way to go. Just underground.

**Elon Musk**

If you want to go really fast underground, you would be in - maglev in a vacuum tunnel.

**Joe Rogan**

Mag in a vacuum tunnel? With -

**Elon Musk**

Magnetic levitation in a vacuum tunnel.

**Joe Rogan**

- with rocket launchers?

**Elon Musk**

Huh?

**Joe Rogan**

With rocket launchers.

**Elon Musk**

No, I would not recommend putting any -

**Joe Rogan**

Ah, come on, bro.

**Elon Musk**

- exhaust gas in the tunnel.

**Joe Rogan**

Oh, okay. I see what you're saying. Because then the air will be gone.

**Elon Musk**

Because, then, you're gonna have to pump it out.

**Joe Rogan**

Right. You have to pump it out. And you probably have limited amount of air in the first place. Like how much can you breathe? Do you have to pump oxygen into these cubicles? These tubes?

**Elon Musk**

No. We have a pressurized pod. It'd be like a little tiny underground spaceship basically.

**Joe Rogan**

Like an airplane? Because you have air in an airplanes. It's not getting new air in.

**Elon Musk**

It is.

**Joe Rogan**

It is?

**Elon Musk**

Yes.

**Joe Rogan**

You have like a little hole?

**Elon Musk**

Yeah, they have a pump.

**Joe Rogan**

Really?

**Elon Musk**

Yeah.

**Joe Rogan**

So, it gets it from the outside?

**Elon Musk**

Yes.

**Joe Rogan**

Wow, I didn't know that.

**Elon Musk**

It's like - it's - the air's - airplanes have it easy because they - essentially, you can - they're pretty leaky, but -

**Joe Rogan**

Jesus.

**Elon Musk**

Yeah, but the - as long as the - as long as the air pump is working at a decent speed. And they have backup pumps.

**Joe Rogan**

Oh.

**Elon Musk**

So they'll have like, you know, 3 pumps, or 4 pumps, or something. And then, there's like - it exhausts through the outflow valve and through whatever seals are not sealing quite right. Usually, the door doesn't seal quite right on the plane. So, there's a bit of leakage around the door. And the - but the pumps exceed the outflow rate. And then, that sets the pressure in the cabin.

**Joe Rogan**

Now, have you ever looked at planes and gone, "I can fix this"?

**Elon Musk**

Yeah.

**Joe Rogan**

"I just don't have the time."

**Elon Musk**

I have a design for a plane.

**Joe Rogan**

You do?

**Elon Musk**

Yes.

**Joe Rogan**

A better design?

**Elon Musk**

I mean, probably. I think it is, yes.

**Joe Rogan**

Who have you talked to about this?

**Elon Musk**

I've talked to friends.

**Joe Rogan**

Friends?

**Elon Musk**

Friends and -

**Joe Rogan**

I'm your friend.

**Elon Musk**

Girlfriends and -

**Joe Rogan**

You can tell me.

**Elon Musk**

Haha.

**Joe Rogan**

Haha, what jave you got? What's going on?

**Elon Musk**

Well, I mean, the exciting thing to do would be some sort of electric vertical takeoff and landing - supersonic jet of some kind.

**Joe Rogan**

Vertical takeoff and landing meaning no need for a runway. Just shoot up straight in the air.

**Elon Musk**

Yeah.

**Joe Rogan**

How would you do that? I mean, they do that in - in some military aircraft, correct?

**Elon Musk**

Yes. The trick is that you have to transition to level flight. And then, the thing that you would use for vertical takeoff and landing is not suitable for high-speed flight.

**Joe Rogan**

So, you have two different systems? Vertical takeoff is one system?

**Elon Musk**

I've thought about this quite a lot.

**Joe Rogan**

Okay.



**Elon Musk**

I've thought about this quite a lot. The interesting thing about an electric plane is that you want to go as high as possible. You need a certain energy density in the battery pack because you have to overcome gravitational potential energy. Once you've overcome gravitational potential energy, and you're at - at - at a high altitude, the energy use in cruise is very low. And then, you can recapture a large part of your gravitational potential energy on the way down. So, you really don't need any kind of reserve fuel, if you will, because you have the energy of height - gravitational potential energy. This is a lot of energy. So - so once you can get high, the - the - like the way to think about a plane is it's a force balance. So, it's the force balance - so, a plane that is not accelerating is a neutral force balance. You have the force of gravity, you have the lift force of the wings. Then, you've got the force of the - whatever thrusting device, so the - the - the propeller, or turbine, or whatever it is. And you've got the resistance force of the air. Now, the higher you go, the lower the air resistance is. Air density drops exponentially, but drag increases with the square, and exponential beats the square. The higher you go, the faster you will go for the same amount of energy. And at a certain altitude, you will - you can go supersonic with less energy per mile - quite a lot less energy per mile than an aircraft at 35,000 feet. Because it's just a force balance.

**Joe Rogan**

I'm too stupid for this conversation.

**Elon Musk**

It makes sense though.

**Joe Rogan**

No, I'm sure it does. Now, when you think about this new idea of - of designing - when you have this idea about improving planes - are you going to bring this to somebody? And check this one out?

**Elon Musk**

Well, I have a lot on my plate.

**Joe Rogan**

Right. That's what I'm saying. I don't know how you do what you do now, but if you keep coming up with these - but it's got to be hard to pawn these off on someone else either - like, "Hey, go do a good job with this vertical takeoff and landing system that I want to implement to regular planes".

**Elon Musk**

The airplane - electric airplane isn't necessarily right now. Electric cars are important. We need -

**Joe Rogan**

We need some sort of -

**Elon Musk**

Solar energy is important. Stationary storage of energy is important. These things are much more important than creating electric supersonic futile... Also, the plane's naturally - you really want that gravitational energy density for an aircraft, and this improving over time. So, you know, it's important that we accelerate the transition to sustainable energy. That's why electric cars. It matters whether electric cars happen sooner or later. You know, we're really playing a crazy game here with the atmosphere or the oceans.

**Joe Rogan**

Yeah.

**Elon Musk**

We're taking vast amounts of carbon from deep underground and putting this - putting this in the atmosphere. It's just crazy. We should not do this. It's very dangerous. So, we should accelerate the transition to sustainable energy. I mean, the bizarre thing is that, obviously, we're going to run out of oil in the long term. You know - we're going to - there's only so much oil we can mine and burn. It's tautological. We must have a sustainable energy transport and energy infrastructure in the long term. So, we know that's the endpoint. We know that. So, why run this crazy experiment where we take trillions of tons of carbon from underground and put it in the atmosphere and oceans? This is an insane experiment. It's the dumbest experiment in human history. Why are we doing this? It's crazy.

**Joe Rogan**

Do you think this is a product of momentum? That we started off doing this when it was just a few engines, a few hundred million gallons of fuel over the whole world, not that big of a deal and then, slowly but surely over a century, it got out of control. And now, it's not just our fuel, but it's also the - I mean, fossil fuels are involved in so many different electronics, so many different items that people buy. It's just this constant desire for fossil fuels. Constant need for oil -

Elon Musk

Yeah.

**Joe Rogan**

- without consideration of the sustainability.

**Elon Musk**

You know, the things is like oil - oil, coal, gas - it's easy money.

**Joe Rogan**

Right.

**Elon Musk**

It's easy money. So -

**Joe Rogan**

Have you heard about "clean coal"? The President's been tweeting about it. It's got to be real. "CLEAN COAL". All caps. Did you see? He used all caps. "CLEAN COAL".

**Elon Musk**

Well, you know, it's very difficult to put that CO2 back in the ground. It doesn't like being in solid form.

**Joe Rogan**

Have you thought about something like that?

**Elon Musk**

It takes a lot of energy.

**Joe Rogan**

Like some sort of a filter, giant building-sized filter? Sucks carbon out in the atmosphere? Is that possible?

**Elon Musk**

No, no, it doesn't - it's not possible.

**Joe Rogan**

No?

**Elon Musk**

No.

**Joe Rogan**

No?

**Elon Musk**

Nope, definitely not.

**Joe Rogan**

So, we're fucked?

**Elon Musk**

No, we're not fucked. I mean, this is quite a complex question.

**Joe Rogan**

Right.

**Elon Musk**

You know, we're really just - when we - the more carbon we take out of the ground and add it to the atmosphere, and a lot of it gets permeated into the oceans, the more dangerous it is. Like I don't think right now - I think we're okay right now. We can probably even add some more. But the momentum towards sustainable energy is too slow. Like there's a vast base of industry, vast transportation system. Like there's two and a half billion cars and trucks in the world. And the new car and truck production, if it was a 100% electric, that's only about 100 million per year. So, it would take - if you could snap your fingers and instantly turn all cars and trucks electric, it would still take 25 years to change the transport base to electric. It makes sense because how long does a truck - car and truck last before it goes into the junkyard and gets crushed? About 20 to 25 years.

**Joe Rogan**

Is there a way to accelerate that process, like some sort of subsidies or some encouragement from the government financially?

**Elon Musk**

Well, the thing that is going on right now is that there is an inherent subsidy in any oil-burning device. Any power plant or car is fundamentally consuming the carbon capacity of the oceans and atmosphere, or just the atmosphere for short. So, like, you can say, okay, there's a certain probability of something bad happening past a certain carbon concentration in the atmosphere. And so, there's some uncertain number where if we put too much carbon into the atmosphere, things overheat, oceans warm up, ice caps melt, ocean real estate becomes a lot less valuable, you know, if something's underwater. But it's not clear what that number is. But, definitely, scientists, it's really quite - the scientific consensus is overwhelming. Overwhelming. I mean, I don't know any serious scientist, actually zero, literally zero who don't think that, you know, that we have quite a serious climate risk that we're facing. And so, there's fundamentally a subsidy occurring with every fossil fuel burning thing. Power plants, aircraft, car, frankly even rockets. I mean, rockets use up - you know, they burn - they burn fuel. But there's just - you know, with rockets, there's just no other way to get to orbit unfortunately. So, it's the only way. But with cars, there's definitely a better way with electric cars. And to generate the energy, do so with photovoltaics because we've got a giant thermonuclear reactor in the sky called the sun. It's great. It sort of shows up every day. Very reliable. So, if you can generate energy from solar panels, store up with batteries, you can have energy 24 hours a day. And then, you know, you can send it to the poles or near - near to the north with, you know, high voltage lines. Most of the northern parts of the world tend to have a lot of hydropower as well. But, anyway, all fossil fuel-powered things have an inherent subsidy, which is their consumption of the carbon capacity of the atmosphere and oceans. So, people tend to think like why should electric vehicles have a subsidy, but they're not taking into account that all fossil fuel-burning vehicles fundamentally are subsidized by the cost, the environmental cost to Earth. But nobody's paying for it. We are going to pay for it, obviously. In the future, we'll pay for it. It's just not paid for now.

**Joe Rogan**

And what is the bottleneck in regards to electric cars, and trucks, and things like that? Is it battery capacity?

**Elon Musk**

Yeah. You got to scale up production. You got to make the car compelling. Make it better than gasoline or diesel cars.

**Joe Rogan**

Make it more efficient in terms of, like, the distance it can travel? You're going to be fueling -

**Elon Musk**

Yeah, you're going to be able to go far enough. Recharge fast.

**Joe Rogan**

And your Roadster, you're anticipating 600 miles? Is that correct?

**Elon Musk**

Yeah, yeah.

**Joe Rogan**

What is it? What is that?

**Elon Musk**

Yeah, 600 miles.

**Joe Rogan**

Is that right now? Like have you driven one 600 miles now?

**Elon Musk**

No. We could totally make one right now that would do 600 miles, but the thing is too expensive. So, like the car's got to -

**Joe Rogan**

How much more so?

**Elon Musk**

Well, you know, just have a 200-kilowatt hour battery pack, and you can go 600 miles as long as you're -

**Joe Rogan**

Right, versus what do you have now?

**Elon Musk**

330-mile range. That's plenty for most people.

**Joe Rogan**

330-mile range? And what is that mean in terms of kilowatts?

**Elon Musk**

Well, that would be for Model S. A 100-kilowatt hour pack will do about 330 miles. Maybe 335. But some people have "hyper-miled" it to 500 miles.

**Joe Rogan**

"Hyper-miled" it? What does that mean?

**Elon Musk**

Yeah, just like go on -

**Joe Rogan**

45 miles an hour or something?

**Elon Musk**

Yeah, like 30 miles an hour or so. It's like on level ground with - you pump the tires up really well, and go on a smooth surface, and you can go for a long time. But, you know, like definitely comfortably do 300 miles.

**Joe Rogan**

Is there any -

**Elon Musk**

This is fine for most people. Usually, 200 or 250 miles is fine. 300 miles is - you don't even think about it really.

**Joe Rogan**

Is there any possibility that you could use solar power? That would solar-powered one day - especially in Los Angeles? I mean, as you said about that giant nuclear reactor, a million times bigger than Earth just floating in the sky. Is it possible that one day, you'll be able to just power all these cars just on solar power? I mean, we don't ever have cloudy days. And if we do, there's 3 of them.

**Elon Musk**

Well, the surface area of a car is - without making the car look really blocky or having some -

**Joe Rogan**

Like a G-Wagon?

**Elon Musk**

Yeah like - and just like a lot of surface area, like maybe like solar panels fold out, or something -

**Joe Rogan**

Like your E-class.

**Elon Musk**

Haha.

**Joe Rogan**

That's what it needed.

**Elon Musk**

That E-type?

**Joe Rogan**

Yeah, the E - the Jaguar E-type with a giant long hood. That could be a giant solar panel.

**Elon Musk**

Well, at the beginning of Tesla, I did want to have this like unfolding solar panel thing. They'd press a button, and it would just like unfold these solar panels, and like charge/recharge your car in the parking lot.

**Joe Rogan**

Mmm.

**Elon Musk**

Yeah, we could do that. But I think it's probably better to just put that on your roof.

**Joe Rogan**

Right, yeah.

**Elon Musk**

And then, it's going to - it should be facing the sun all the time because like -

**Joe Rogan**

What car have that on the roof?

**Elon Musk**

Otherwise, your car could be in the shade. You know, it could be in the shade, it could be in a garage, or something like that.

**Joe Rogan**

Right.

**Elon Musk**

Yeah.

**Joe Rogan**

Didn't the Fisker have that on the roof? The Fisker Karma New Generation for - I believe, it was only for the radio. Is that correct?

**Elon Musk**

Yeah, I mean, but I think it could like recharge like 2 miles a day or something.

**Joe Rogan**

Did you laugh when they started blowing up when they get hit with water? Do you remember what happened?

**Elon Musk**

They got - they what?

**Joe Rogan**

Yeah, they had a dealership or -

**Elon Musk**

Oh yeah.

**Joe Rogan**

The Fisker Karmas were parked -

**Elon Musk**

Is that like that with a flood in Jersey?

**Joe Rogan**

Yes, yes.

**Elon Musk**

Yeah.



**Joe Rogan**

When the hurricane came in, they got overwhelmed with water, and they all started exploding. There's a fucking great video of it. Did you watch the video?

**Elon Musk**

I didn't watch the video, but I did see - it's like some picture of the aftermath.

**Joe Rogan**

If I was you, I'd be naked, lubed up, watch that video, laugh my ass off. They all blow up. They got wet, and they blew up. That's not good.

**Elon Musk**

Yeah, we made our battery waterproof, so that doesn't happen. Actually -

**Joe Rogan**

Smart move.

**Elon Musk**

Yeah, there was a guy in Kazakhstan that - I think it was Kazakhstan that he just boated through a tunnel, an underwater tunnel, like a flooded tunnel, and just turned the wheels to steer, and pressed the accelerator, and it just floated through the tunnel.

**Joe Rogan**

Wow.

**Elon Musk**

And he steered around the other cars. I mean, like -

**Joe Rogan**

That's amazing.

**Elon Musk**

It's on the internet.

**Joe Rogan**

What happens if your car gets a little sideways, like if you're driving in snow? Like what if you're driving - if you're autopilot is on and you're in like Denver and it snows out and your car gets a little sideways - does it correct itself? Does that -

**Elon Musk**

Oh yeah. It's got great traction control.

**Joe Rogan**

But does it know how to like correct? You know how, like, when your ass end kicks out -

**Elon Musk**

Oh yeah, sure.

**Joe Rogan**

- and you know how to counter steer?

**Elon Musk**

Oh, yeah. No, it's really good.

**Joe Rogan**

It knows how to do it?

**Elon Musk**

Yeah.

**Joe Rogan**

Whoa.

**Elon Musk**

It's pretty crazy.

**Joe Rogan**

That's pretty crazy.

**Elon Musk**

Yeah.

**Joe Rogan**

So, like if you're going sideways, it knows how to correct itself?

**Elon Musk**

It generally won't go sideways.

**Joe Rogan**

It won't?

**Elon Musk**

No.

**Joe Rogan**

Why not?

**Elon Musk**

It will correct itself before it goes sideways.

**Joe Rogan**

Even in black ice?

**Elon Musk**

Yeah. There's videos where you could see the car - the traction -

**Joe Rogan**

That alone -

**Elon Musk**

- traction control system is very good. It makes you feel like Superman. It's great. You like feel like you can - like it's - it will make you feel like this incredible driver.

**Joe Rogan**

I believe it.

**Elon Musk**

Yeah.

**Joe Rogan**

Now, how do you program that?

**Elon Musk**

We do have testing on like an ice lake in Sweden.

**Joe Rogan**

Oh really?

**Elon Musk**

Yeah. And like Norway, and Canada, and a few other places.

**Joe Rogan**

Porsche does a lot of that too. They do -

**Elon Musk**

They did it as well?

**Joe Rogan**

They do a lot of their - they do some of their driver training school on these frozen surfaces. So, you're just - the car is going sideways whether you like it or not. And you have to learn how to slide into corners, and how do adjust.

**Elon Musk**

Yeah. Electric cars have really great traction control because the reaction time is so fast.

**Joe Rogan**

Right.

**Elon Musk**

Sort of like with - with a gasoline car, you've got a lot of latency. It takes a while for the engine - the engine to react, but for electric - electric motors, incredibly precise. That's why like - you can imagine like - like - if you had like a printer or something, you wouldn't have a gasoline engine printer. That would be pretty weird. Or like a surgical device. It's going to be an electric motor on the surgical device, on the printer. Gasoline engine's going to be just chugging away. It's not going to have the reaction time. But to an electric motor, it's operating at the millisecond level. So, it can turn on and off traction within, like, inches of getting on the - like, let's say, you're driving on a patch of ice. It will turn traction off, and then turn it on a couple inches right after the ice, like a little patch of ice because in the frame of the electric motor, you're moving incredibly slowly. You're like a - you're a snail. You're just moving so slowly because it can see at a thousand frames a second. And so, it's like, say, "One Mississippi". It just thought about it things a thousand times.

**Joe Rogan**

So, it's to realize that your wheels are not getting traction. It understands there's some slippery surface that you're driving on.

**Elon Musk**

Yes.

**Joe Rogan**

And it makes adjustments in real time.

**Elon Musk**

Yes, in milliseconds.

**Joe Rogan**

That would - that would be so much safer than a regular car.

**Elon Musk**

Yes, it is.

**Joe Rogan**

Just that alone, for loved ones. You'd - you'd - you'd want them to be driving your car.

**Elon Musk**

Yes. The -

**Joe Rogan**

I'm on board. Fuck motors. Dude, fuck regular motors.

**Elon Musk**

The - the S, X, and 3 have the lowest probability of injury of any cars ever tested by the US government.

**Joe Rogan**

Whoa.

**Elon Musk**

So, this - yeah. But it's pretty funny. It's pretty crazy. Like we - you know, people still sue us. Like they'll have like some accident at 60 miles an hour where they'd like twisted an ankle, and they slipped. Like they will be dead in another car. They still sue us.

**Joe Rogan**

But that's to be expected, isn't it?

**Elon Musk**

It is to be expected.

**Joe Rogan**

Do you take that into account with like the same sort of fatalistic, you know, undertones to sort of just go, "You've got to just let it go. This is what people do."

**Elon Musk**

I tell you I've got -

**Joe Rogan**

This is what it is.

**Elon Musk**

- quite a lot of respect for the justice system. Judges are very smart. And they see - they've - as like I haven't. So far, I've found judges to be very good at justice because like - like - like what - like and juries are good too. Like, they're actually quite good. You know, people - you know, you read about like occasional errors in the justice system. Let me tell you, most the time, they're very good. And

like the guy I mentioned that - who fell asleep in the car, and he rode over a cyclist. And that was what encouraged me to get autopilot out as soon as possible. That guy sued us.

**Joe Rogan**

He sued you for falling asleep?

**Elon Musk**

Yes. He - he - I'm - I'm not kidding. He blamed it on the new car smell.

**Joe Rogan**

What?

**Elon Musk**

Yes.

**Joe Rogan**

He blamed him falling asleep on your new car smell? There's someone that's a lawyer -

**Elon Musk**

This is a real thing that happened.

**Joe Rogan**

- someone that's a lawyer that thought that through in front of his laptop before he wrote that up.

**Elon Musk**

Yes, he got a lawyer, and he sued us, and the judge was like, "You - this is crazy. Stop bothering me. No."

**Joe Rogan**

Thank God.

**Elon Musk**

Yes.

**Joe Rogan**

Thank God. Thank God there's a judge out there with a brain.

**Elon Musk**

I tell you, judges are very good.

**Joe Rogan**

Some of them.

**Elon Musk**

I have a lot of -

**Joe Rogan**

What about that judge that sent all these boys up the river in Pennsylvania who was selling those kids out? You know about that story?

**Elon Musk**

Nope.

**Joe Rogan**

Judge was selling young boys to prisons. He was like literally -

**Elon Musk**

What?

**Joe Rogan**

Yeah, literally, under bribes for - he was -

**Elon Musk**

Was this an elected judge or -

**Joe Rogan**

He was -

**Elon Musk**

Because sometimes you have a judge that's like actually a politician.

**Joe Rogan**

No, he was an elected judge. This is a very famous story.

**Elon Musk**

Okay.

**Joe Rogan**

He's in jail right now, I think, for the rest of his life. And he put away - he would take like - a young boy who would do something like steal something from a store. And he would put them in detention for, you know, 5 years. Something ridiculous egregious. And they investigated his history. And they found out that he was literally being paid off. Was it by private prisons? Is that what the deal was? There was some sort of - but, anyway, this judge is -

**Jamie Vernon**

Actually, two judges.

**Joe Rogan**

Two judges?

**Jamie Vernon**

Two judges. "Kids for Cash" scandals, is what it's called.

**Joe Rogan**

Yeah.

**Jamie Vernon**

2008, yeah. Common Pleas judges. So, I think they are elected.

**Joe Rogan**

And who was paying them?

**Elon Musk**

Oh um...

**Joe Rogan**

Someone - it - it was proven to the point where they're in jail now. That someone was paying them to put more asses in the seats in these private prisons.

**Elon Musk**

It's like a million-dollar payment to put them in - from a youth center's builder.

**Joe Rogan**

A million-dollar payment?

**Elon Musk**

I do think these private prisons thing is -

**Joe Rogan**

Some -

**Elon Musk**

- creating a bad incentive.

**Joe Rogan**

It's dark.



**Elon Musk**

Right, yes. But, I mean, that judge is in prison.

**Joe Rogan**

Thank God.

**Elon Musk**

Yes, but for people who think perhaps the justice system consists entirely of judges like that, I want to assure you -

**Joe Rogan**

No.

**Elon Musk**

- this is not the case. The vast majority of judges are very good.

**Joe Rogan**

I agree.

**Elon Musk**

And they care about justice, and they could have made a lot more money if they wanted to be a trial lawyer. And instead, they cared about justice, and they made less money because they care about justice. And that's why they're judges.

**Joe Rogan**

I feel that same way about police officers.

**Elon Musk**

Yes.

**Joe Rogan**

I feel like there's so many interactions with so many different people with police officers that the very few that stand out that are horrific, we tend to look at that like, "This is evidence that police are all corrupt." And I think that's crazy.

**Elon Musk**

No. Most police are very honest.

**Joe Rogan**

Yes.

**Elon Musk**

And like the military -

**Joe Rogan**

Like they have an insanely -

**Elon Musk**

- personnel that I know of -

**Joe Rogan**

Yes.

**Elon Musk**

- are very honorable, ethical people.

**Joe Rogan**

Yes.

**Elon Musk**

And much more honorable and ethical than the average person. That's my impression.

**Joe Rogan**

I agree. That's my impression as well.

**Elon Musk**

And that's not to suggest that we be complacent and assume everyone is honest and ethical. And, obviously, if somebody is given a trusted place in society, such as being a police officer or a judge, and they are corrupt, then we must be extra vigilant against such situations -

**Joe Rogan**

Yes.

**Elon Musk**

- and take action. But we should not think that this is somehow broadly descriptive of people in that profession.

**Joe Rogan**

I couldn't agree more. I think there's also an issue with one of the things that happens with police officers, prosecutors, and anyone that's trying to convict someone or arrest someone is that it becomes a game. And in games, people want to win.

**Elon Musk**

Yeah.

**Joe Rogan**

And sometimes, people cheat.

**Elon Musk**

Yes, yes. I mean, you know, if you're a prosecutor, you should not always want to win. There are times when you should like, "Okay. I just should not want to win this case." And then, you know, like just pass on that case. Sometimes, people want to win too much. That is true. I think, also, it becomes tough. If you're like a district attorney, you know, you tend to sort of see a lot of criminals. And then, your view of the world can get negatively -

**Joe Rogan**

Yes.

**Elon Musk**

You know, have a negative - you know, you can have a negative view of the world because, you know, you're just interacting with a lot of criminals. But, actually, most of society is not to consist of criminals.

**Joe Rogan**

Right.

**Elon Musk**

And I, actually, had this conversation at dinner several years ago with this district attorney. I was like, "Man, it must, sometimes, seem pretty, pretty dark because, you know, man, there's some terrible human beings out there." And he was like, "Yup." And he was like dealing with some case, which consisted of a couple of old ladies that would run people over somehow for insurance money. It was rough. Like, "Wow, that's pretty rough." It's like hard to maintain faith in humanity if you're a district attorney, but, you know, it's only a few percent of society that are actually bad. And then if you go to the worst, say 0.1% of society are the worst, one in a thousand, one in a million, you know. Like how bad is the millionth worst person in the United States? Pretty damn bad. Like damn evil.

**Joe Rogan**

Yeah.

**Elon Musk**

Like the millionth - well - one in a million of evil is so evil, evil cannot even conceive of it. But there's 330 million people in the United States. So, that's 330 people out there somewhere. But by the same token, there's also 330 people who are incredible angels and unbelievably good human beings

-

**Joe Rogan**

Yeah.

**Elon Musk**

- on the other side.

**Joe Rogan**

But because of our fear of danger, we tend to - our thoughts tend to gravitate towards the worst-case scenario.

**Elon Musk**

Yes.

**Joe Rogan**

And we want to frame that. And that's one of the real problems with prejudice. We want - whether it's prejudice towards different minorities, or prejudice towards police officers, or anything - it's like we want to look at the worst-case scenario and say, "This is an example of what this is all about". And you see that even with people, how they frame genders. Some men frame women like that. They get ripped off by a few women, and they said, "All women are evil." Some women get fucked over by a few men, "All men are shit." And this is very toxic.

**Elon Musk**

It is.

**Joe Rogan**

And it's also - it's a very unbalanced way of viewing the world. And it's very emotionally-based, and it's based on your own experience, your own anecdotal experience. And it can - it can be very influential to the people around you. And it's just it's a dangerous way - it's a dangerous thought process and pattern to promote.

**Elon Musk**

It is. It is a very dangerous, but I really think, you know, people should give other people the benefit of the doubt and assume that they are good until proven otherwise. And, I think, really, most people are actually pretty good people. Nobody's perfect.

**Joe Rogan**

They have to be.

**Elon Musk**

Yes.

**Joe Rogan**

If you think of vast numbers of us that are just interacting with each other constantly -

**Elon Musk**

Yeah.

**Joe Rogan**

We have to be better than we think we are.

**Elon Musk**

Yes. I mean, like -

**Joe Rogan**

There's no other way.

**Elon Musk**

I mean, here are these weapons but how many times - like, nobody's presumably try to murder you in your own studio?

**Joe Rogan**

Nobody yet.

**Elon Musk**

Yes, nobody. It's like the sword right there.

**Joe Rogan**

Now there's a flame - fucking fake flamethrower - not a flamethrower -

**Elon Musk**

Exactly.

**Joe Rogan**

Now, we've got a real problem, I'm going to put it on that side to him and leave it for the guests.

**Elon Musk**

Yeah.

**Joe Rogan**

I'm like, "Look, man, if I say something that fucked up, it's right there."

**Elon Musk**

It will liven things up for sure. It's guaranteed to make any party better.

**Joe Rogan**

Yeah. Well, that's - I mean, that's the armed civilization theory, right? That an armed community is a safe and polite community.

**Elon Musk**

Yeah.

**Joe Rogan**

You know, in Texas? It's kind of true.

**Elon Musk**

Yeah. I mean -

**Joe Rogan**

People in Texas are super polite. And everyone's got a gun.

**Elon Musk**

Yes. Don't make somebody angry.

**Joe Rogan**

Yeah.

**Elon Musk**

You don't know what's going to happen.

**Joe Rogan**

Yeah, it's not a good move.

**Elon Musk**

Yeah.

**Joe Rogan**

Piss people off when everybody can have a gun.

**Elon Musk**

Yeah.

**Joe Rogan**

You're better off to just let that guy get in your lane.

**Elon Musk**

Yeah, yeah. You know, we got a big test site in Central Texas near Waco.\

**Joe Rogan**

Oh yeah? Beautiful.

**Elon Musk**

Yes, Space X in McGregor. It's about 15 minutes away from Waco.

**Joe Rogan**

That's close to where Ted Nugent lives.

**Elon Musk**

It is?

**Joe Rogan**

Shout out to Ted Nugent.

**Elon Musk**

Okay, cool.

**Joe Rogan**

Yeah.

**Elon Musk**

Yeah, there's - You know, we have lots of fire, and loud explosions, and things, and people -

**Joe Rogan**

I bet.

**Elon Musk**

- they are cool with it.

**Joe Rogan**

They don't give a fuck out there.

**Elon Musk**

They're very supportive.

**Joe Rogan**

Yeah. You can buy fireworks where, you know, your kids go to school.

**Elon Musk**

Yeah. You know, it's dangerous.

**Joe Rogan**

Yeah, but it's free.

**Elon Musk**

It's free.

**Joe Rogan**

There's something about Texas -

**Elon Musk**

Exactly.

**Joe Rogan**

- that's very enticing because of that. It is dangerous, but it's also free.

**Elon Musk**

Right.

**Joe Rogan**

Yeah.

**Elon Musk**

Yeah. I kind of like Texas actually.

**Joe Rogan**

I prefer it over places that are more restrictive but more liberal because you could always be liberal. Like just because things are free and just because you have a certain amount of, you know, right wing type characters, it doesn't mean you have to be that way, you know.

**Elon Musk**

No.

**Joe Rogan**

And, honestly, there's a lot of those people that are pretty fucking open minded and let you do whatever you want to do.

**Elon Musk**

Right.

**Joe Rogan**

As long as you don't bother them.



**Elon Musk**

Yeah, exactly.

**Joe Rogan**

That's my hope right now with the way we're able to communicate with each other today and how radically different it is than generations past because we all - Just, the dust settles. We all realize, like what you're saying that most people are good.

**Elon Musk**

Most people are good.

**Joe Rogan**

The vast majority?

**Elon Musk**

Yes. I think if you give people the benefit of doubt, for sure.

**Joe Rogan**

I think you're right. You know who could help with that? Mushrooms.

**Elon Musk**

Mushrooms.

**Joe Rogan**

Don't you think?

**Elon Musk**

They're delicious.

**Joe Rogan**

Yeah, right.

**Elon Musk**

Yeah.

**Joe Rogan**

They're good for you too.

**Elon Musk**

Yeah.

**Joe Rogan**

All of them. All kinds of them. What do you see in terms of, like, when you think about the future of your companies, what do you see is like bottlenecks? Want some more of this?

**Elon Musk**

Sure. Thank you.

**Joe Rogan**

What do you see in terms of like bottlenecks of things that are holding back innovation? Is it regulatory commissions and people that don't understand the technology that are influencing policy? Like what could potentially be holding you guys back right now? Is there anything that you would change?

**Elon Musk**

Yeah, that's a good question. You know, I wish politicians were better at science. That would help a lot.

**Joe Rogan**

That's a problem.

**Elon Musk**

Yes.

**Joe Rogan**

There's no incentive for them to be good at science.

**Elon Musk**

There isn't. Actually, you know, they're pretty good at science in China, I have to say.

**Joe Rogan**

Yeah?

**Elon Musk**

Yeah. The mayor of Beijing has, I believe, an environmental engineering degree, and the deputy mayor has a physics degree. I met them, And Mayor says, "Shanghai is really smart and-".

**Joe Rogan**

You're up on technology. What do you think about this government policy of stopping use of Huawei phones? And there's something about the the worry about spying. I mean, from what I understand from real tech people, they think it's horseshit.

**Elon Musk**

Oh I -

**Joe Rogan**

Like phones.

**Elon Musk**

I don't know. I don't know.

**Joe Rogan**

Like the government say, "Don't you buy Huawei phones." Are you up on that at all? No? Should we just abandon this idea?

**Elon Musk**

Well, I think, like, I guess, if you have like top secret stuff, then you want to be pretty careful about what hardware you use. But, you know, like most people do not have top secret stuff.

**Joe Rogan**

Right.

**Elon Musk**

And, like, nobody really cares what porn you watch like, you know.

**Joe Rogan**

Right, yeah.

**Elon Musk**

It's like nobody actually cares, you know. So -

**Joe Rogan**

If they do, that's kind of them.

**Elon Musk**

Yeah.

**Joe Rogan**

It's just like -

**Elon Musk**

National spy agencies do not give a rat's ass which porn you watch. They do not care. So, like, what secrets does a national spy agency have to learn from the average citizen? Nothing.

**Joe Rogan**

Well, that's the argument against the narrative. And the argument by a lot of these tech people is that the real concern is that these companies, like Huawei, are innovating at a radical pace, and they're trying to stop them from integrating into our culture and letting this. Like right now, they're the number two cell phone manufacturer in the world.

**Elon Musk**

Okay.

**Joe Rogan**

Samsung is number one. Huawei is number two. Apple is now number three. They surpassed Apple as number two. And the idea is that this is all taking place without them having any foothold whatsoever in America. There's no carriers that have their phones. You have to buy their phones unlocked through some sort of a third party, and then put-

**Elon Musk**

Okay.

**Joe Rogan**

And the worry is, you know, that these are somehow another controlled by the Chinese government. The Communist Chinese government is going to distribute these phones. And I don't know if the worry's economic influence or they'll have too much power. I don't know what it is. Are you paying attention on any of this?

**Elon Musk**

Not really.

**Joe Rogan**

No?

**Elon Musk**

I don't think we should worry too much about Huawei phones, you know. Maybe, you know, a national security agency shouldn't have Huawei phones. Maybe that's a question mark. But I think for the average citizen, this doesn't matter. Just like no, they're not. I'm pretty sure the Chinese government does not care about the goings of the average American citizen.

**Joe Rogan**

Is there a time where you think that there will be no security, it will be impossible to hold back information that whatever bottleneck we'll let go, we're going to give in? That whatever bottleneck between privacy and ultimate innovation will have to be bridged in order for us to achieve the next level of technological proficiency that we're just going to abandon it, and there'll be no security, no privacy?

**Elon Musk**

Do people want privacy? Because they seem to put everything on the internet. Practically-.

**Joe Rogan**

Well, right now, they are confused, but when you're talking about your Neuralink, and this this idea that one day, we're going to be able to share information, and we're going to be some sort of a thing that's symbiotically connected?

**Elon Musk**

Yeah. I think we really worry about security in that situation

**Joe Rogan**

And when-

**Elon Musk**

For sure. That's like security will be paramount.

**Joe Rogan**

Sure.

**Elon Musk**

Yeah.

**Joe Rogan**

But, also, what we will be. This will be so much different. Our concerns about money, about status, about where all of these things will seemingly go by the wayside if we really become enlightened, if we really become artificially enlightened by some sort of an AI interface where we have this symbiotic relationship with some new internet type connection to information? But, you know, what happens then? What is important? What is not important? Is privacy important when we're all gods?

**Elon Musk**

I mean, I think the things that we think are important to keep private right now -

**Joe Rogan**

Right.

**Elon Musk**

- we probably will not think going forward.

**Joe Rogan**

Shame, right? Information, right? What are hiding? Emotions? What are we hiding?

**Elon Musk**

I mean, I think, like, I don't know. Maybe it's like embarrassing stuff.

**Joe Rogan**

Right, embarrassing stuff.

**Elon Musk**

But there's actually - Like, I think, people, there's like not that much that's kept private that people - that is actually relevant.

**Joe Rogan**

Right.

**Elon Musk**

That other people would actually care about. When you think other people care about it, but they don't really care about it. And, certainly, governments don't.

**Joe Rogan**

Well, some people care about it. But, then, it gets weird when it gets exposed. Like Jennifer Lawrence, when those naked pictures got exposed, like, I think, in some ways, people liked her more.

**Elon Musk**

Yeah.

**Joe Rogan**

They realized like she's just a person. It's just a girl who likes sex, and is just alive, and has a boyfriend, and sends him messages. And, now, you get to look into it, and you probably shouldn't have, but somebody let it go, and they put it online, and all right.

**Elon Musk**

She seems to be doing okay.

**Joe Rogan**

She's a person. She's just you, and me, and it's the same thing. She's just in some weird place where she's on a 35-foot tall screen with music playing every time she talks.

**Elon Musk**

Yeah. I mean, I'm sure like not-

**Joe Rogan**

No, but she's fine.

**Elon Musk**

She's not happy about it, but she's-

**Joe Rogan**

No.

**Elon Musk**

But she's clearly doing fine.

**Joe Rogan**

But once this interface is fully realized where we really do become something far more powerful in terms of our cognitive ability, our ability to understand irrational thoughts, and mitigate them, and that we're all connected in some sort of an insane way. I mean, what are our thoughts on wealth, our thoughts on social status? Like how many of those just evaporate? And our need for privacy, maybe our need for privacy will be the ultimate bottleneck that we'll have to surpass.

**Elon Musk**

I think, the things that we think are important now will probably not be important in the future, but there will be things that are important. It's just, like, different things.

**Joe Rogan**

What will be more important?

**Elon Musk**

I don't know. There might be some more of ideas potentially. I don't think Darwin's going away.

**Joe Rogan**

Right.

**Elon Musk**

Darwin's going to be there.

**Joe Rogan**

That was that, yeah.

**Elon Musk**

Darwin will be there forever.

**Joe Rogan**

Forever, yeah.

**Elon Musk**

It would just be a different arena. Different arena.

**Joe Rogan**

A digital arena.

**Elon Musk**

Different arena. Darwin is not going away.

**Joe Rogan**

What keeps you up at night?

**Elon Musk**

Well, it's quite hard to run companies.

**Joe Rogan**

Yeah.

**Elon Musk**

Especially car companies, I would say. It's quite challenging.

**Joe Rogan**

The car business is the hardest one of all the things you do?

**Elon Musk**

Yes, because it's a consumer-oriented business as opposed to like SpaceX and-

**Joe Rogan**

Not that SpaceX because SpaceX is no walk in the park, but a car company, it's very difficult to keep a car company alive. It's very difficult. You know, there's only two companies in the history of American car companies that haven't gone bankrupt, and that's Ford and Tesla. That's it.

**Elon Musk**

Yeah, Ford rode out that crazy storm, huh? They're the only one.

**Joe Rogan**

By the skin of their teeth.

**Elon Musk**

Shot out to the Mustang.



**Joe Rogan**

Yeah.

**Elon Musk**

Yeah, by the skin of their teeth. That is interesting, right?

**Joe Rogan**

Same with Tesla, we barely survived.

**Elon Musk**

How close did you get to folding?

**Joe Rogan**

Very close. I mean, 2008 is not a good time to be a car company, especially a startup car company, and especially an electric car company. That was like stupidity squared.

**Elon Musk**

And this is when you had those cool Roadsters with the T-top?

**Joe Rogan**

Yeah.

**Elon Musk**

With a target top?

**Joe Rogan**

Yeah. We had like a - It was highly modified Elise chassis. The body was completely different. By the way, that was a super dumb strategy that we actually did because we-

**Elon Musk**

What's dumb?

**Joe Rogan**

It was based on two false premises. One false premise was that we would be able to cheaply convert the Lotus Elise, and use that as a car platform, and that we'll be able to use technology from this little company called AC Propulsion for the electric drive train on the battery. Premise, the AC propulsion technology did not work in production, and we ended up using none of it in long-term. None of it. We had to resign everything.

**Elon Musk**

And then once you add a battery pack and electric motor to the car, it got heavier. It got 30% heavier. It invalidated the entire structure, all the crash structure. Everything had to be redone. Nothing. Like, I think, it had less than 7% of the parts were common with any other device including cars or anything.

**Joe Rogan**

7%?

**Elon Musk**

Yes.

**Joe Rogan**

Everything? Including tires, and wheels, bolts, brakes?

**Elon Musk**

Yeah, even every-

**Joe Rogan**

Steering wheel? Seat?

**Elon Musk**

The steering wheel was - I think, the steering wheel was almost the same. Yes, the windscreen. The windscreen.

**Joe Rogan**

Different?

**Elon Musk**

No. I think, the windscreen is the same.

**Joe Rogan**

Same?

**Elon Musk**

Yes. I think, we were able to keep the windscreen.

**Joe Rogan**

But the last was 7%. So, that's basically-

**Elon Musk**

Every body panel is different. The entire structure was different. We couldn't use the, like, the HVAC system, the air conditioner. It was belt-driven air conditioner. So, now, we needed something that was electrically driven. We need a new AC compressor.

**Joe Rogan**

And all that takes away from the battery life as well, right?

**Elon Musk**

Yeah. We need a small highly efficient air conditioning system that fit in a tiny car and was electrically powered, not belt-driven. It was very difficult.

**Joe Rogan**

How much of those weigh, those cars, the Roadster?

**Elon Musk**

I think it was 2700 pounds.

**Joe Rogan**

That's still very light.

**Elon Musk**

27. Depending on which version, 2650 to 2750 pounds, something like that.

**Joe Rogan**

And what was the weight distribution?

**Elon Musk**

It was about 50 - Well, there were different versions of the car. So, it's about 55 on the rear.

**Joe Rogan**

That's not bad.

**Elon Musk**

It was rear bias.

**Joe Rogan**

Right, but not bad. Considering like a 911, which is like one of the most popular sports cars of all time. Heavy rear end bias.

**Elon Musk**

Well, I mean, yeah. The 911, I'm not going to joke, is like the master despite Newton not being on their side.

**Joe Rogan**

Yeah.

**Elon Musk**

I guess, fighting Newton, it's very difficult.

**Joe Rogan**

Well -

**Elon Musk**

It's like you've got those - The moments of inertia on a 911 don't make any sense.

**Joe Rogan**

They do once you understand them. Once you understand-

**Elon Musk**

You don't want to hang the engine off the ass. This is not a wise move.

**Joe Rogan**

You don't want to let up on the gas when you're in a corner.

**Elon Musk**

The problem with something where the engine is mounted over the rear axle or off the rear axle towards the rear is that your polar moment of inertia is fundamentally screwed. You cannot solve this. It's unsolvable. You're screwed. Polar moment of inertia, you're screwed.

**Joe Rogan**

Right.

**Elon Musk**

Like, essentially, if you spawn the car like a top, that's your polar moment of inertia. You're just - I promise I wouldn't swear on this show, by the way.

**Joe Rogan**

Really?

**Elon Musk**

Yeah.

**Joe Rogan**

Says who?

**Elon Musk**

This was for a friend.

**Joe Rogan**

Tell that friend to go fuck himself. Who told you not to swear?

**Elon Musk**

A friend.

**Joe Rogan**

He's not a good friend.

**Elon Musk**

Yeah.

**Joe Rogan**

That friend need to -

**Elon Musk**

I said I wouldn't swear.

**Joe Rogan**

- realize you're fucking Elon Musk. You can do whatever you want, man. If you ever get confused, call me.

**Elon Musk**

I'll swear in private. Swear up a storm.

**Joe Rogan**

Okay, just say freaking. It's a fun way. It's like old house moms. Wives and shit that have children, "Oh, this freaking thing."

**Elon Musk**

Yeah. But, anyway, like the Portia, it's kind of incredible how well Porsche handles given that it's the physics-.

**Joe Rogan**

Yes.

**Elon Musk**

The moments of inertia are so messed up. To actually still make it work well is incredible.

**Joe Rogan**

Well, if you know how to turn into the corner once you get used to the feeling of it, there's actual benefits to it. You know, there are some benefits.

**Elon Musk**

I enjoy. The car I had before, Tesla was a 911.

**Joe Rogan**

Okay.

**Elon Musk**

That was-

**Joe Rogan**

997 or 6?

**Elon Musk**

Yeah.

**Joe Rogan**

997?

**Elon Musk**

Yeah.

**Joe Rogan**

Yeah. Great car, man.

**Elon Musk**

Yeah. I mean, particularly, the Porsche wouldn't have the variable veins on the turbo, and it didn't have the turbo lag. That was great.

**Joe Rogan**

Yeah.

**Elon Musk**

That was really great. The turbo lag is, like, you know, if you flirt, like phone home, call your mom.

**Joe Rogan**

The older one, right?

**Elon Musk**

It's like about an hour later -

**Joe Rogan**

Yeah.

**Elon Musk**

- the car accelerates.

**Joe Rogan**

And super dangerous too because where it will start spinning and-

**Elon Musk**

Yeah.

**Joe Rogan**

Yeah. There's something fun about it though like feeling that rear weight kicking around, you know.

And again -

**Elon Musk**

No, it's great.

**Joe Rogan**

- it's not efficient.

**Elon Musk**

It had a good feel to it.

**Joe Rogan**

Yeah.

**Elon Musk**

Yeah, I agree.

**Joe Rogan**

But that's what I was talking about earlier about that little car that I have, the '93 911. It's not fast. It's not the best handling car, but it's more satisfying than any other car I have because it's so mechanical. It's like everything about it, like crack holes, and bumps, and it gives you all this feedback. And I take it to the comic store because when I get there, I feel like my brain is just

popping, and it's on fire. It's like a strategy for me now that I really stop driving other cars there. I drive that car there just for the brain juice, just for the -

**Elon Musk**

Yeah.

**Joe Rogan**

- the interaction.

**Elon Musk**

I mean, you should try Model S P100D.

**Joe Rogan**

I'll try it.

**Elon Musk**

It will blow your mind -

**Joe Rogan**

Okay.

**Elon Musk**

- and your skull.

**Joe Rogan**

Okay.

**Elon Musk**

Yeah.

**Joe Rogan**

Tell me what to order, I'll order it.

**Elon Musk**

Model S P100D.

**Joe Rogan**

Okay. Jamie, write it down.

**Elon Musk**

That's the car that I drive.



**Joe Rogan**

Okay. Okay, I'll get the car you drive. Okay.

**Elon Musk**

It will blow your mind -

**Joe Rogan**

How far can I drive?

**Elon Musk**

- out of your skull.

**Joe Rogan**

I believe you.

**Elon Musk**

Yeah.

**Joe Rogan**

How far can I drive? How far can I drive?

**Elon Musk**

About 300 miles.

**Joe Rogan**

That's good. For LA regular days, that's good.

**Elon Musk**

You will never notice the battery.

**Joe Rogan**

Never?

**Elon Musk**

Never.

**Joe Rogan**

How hard is it to get like one of them crazy plugs installed in your house? That difficult?

**Elon Musk**

No, it's super easy. It's like, yeah.

**Joe Rogan**

Do you -

**Elon Musk**

It's like a dryer plug. It's like a dryer outlet.

**Joe Rogan**

Didn't you come up with some crazy tiles for your roof that are solar paneled?

**Elon Musk**

Yeah, yeah. I have it on my roof right now actually. I'm just trying it out. The thing is it takes a while to test roof stuff because roofs have to last a long time.

**Joe Rogan**

Right.

**Elon Musk**

So, like, you want your roof to last like 30 years.

**Joe Rogan**

Could you put it over a regular roof?

**Elon Musk**

No. So, there's two versions. It's like the solar panels you put on a roof. So, like, it depends on whether your roofs new or old. So, if your roofs new, you don't want to replace the roof. You want to put like solar panels on the roof.

**Joe Rogan**

Right.

**Elon Musk**

So, that's like retrofit, you know. And they were trying to make the retrofit panels look real nice. But then, the new product were coming out with it is if you have a roof that's either you're building a house or you're going to replace your roof anyway, then you make the tiles have solar cells embedded in the tiles.

**Joe Rogan**

And then, it's quite a tricky thing because you want to not see the solar cell behind the glass tile. So, you have to really work with the glass, and the various coatings, and the layers, so that you don't see the solar cells behind the glass. Otherwise, it doesn't look right.

**Elon Musk**

Right.

**Joe Rogan**

So, it's really tricky.

**Elon Musk**

There it is. Jaime, put it up there.

**Joe Rogan**

Yeah.

**Elon Musk**

Man, that looks good. Is there a -

**Joe Rogan**

See, like, if you look closely, you can see. If you zoom in, like, you can see the cell. But if you zoom out, you don't see the cell.

**Elon Musk**

Right, but it looks though.

**Joe Rogan**

See?

**Elon Musk**

Yeah.

**Joe Rogan**

Like that's hard.

**Elon Musk**

That's invisible solar cells.

**Joe Rogan**

It's really hard because you have to get the sunlight go through.

**Elon Musk**

Right.

**Joe Rogan**

But when it gets reflected back out, it doesn't - it hides the fact that there's a cell there.

**Elon Musk**

Now, are those available to the consumer right now?

**Joe Rogan**

Well, we have - I think, that's -

**Elon Musk**

Those on that roof right there?

**Joe Rogan**

Yes.

**Elon Musk**

That's amazing. Oh, that looks good.

**Joe Rogan**

Yeah.

**Elon Musk**

Ooh, I like that.

**Joe Rogan**

That one is hard.

**Elon Musk**

Oh. So, you get that kind of fake Spanish looking thing. I like that.

**Joe Rogan**

That's French slate.

**Elon Musk**

That's why people in Connecticut are smoking pipes. Look at that one.

**Joe Rogan**

Yeah.

**Elon Musk**

That's badass, dude. So, now -

**Joe Rogan**

This will actually work.

**Elon Musk**

I believe you. So, the solar panels that are on that house that we just looked at, is that sufficient to power the entire home?

**Joe Rogan**

It depends on your energy on how efficient -

**Elon Musk**

Expenditure?

**Joe Rogan**

Yeah, yeah.

**Elon Musk**

Right.

**Joe Rogan**

So, generally, yes. I would say it's probably for most. It's going to vary, but anywhere from more than you need to maybe half. Like call it half to 1.5 of the energy that you need, depending on how much roof you have relative to living space.

**Elon Musk**

And how ridiculous you are with your TV.

**Joe Rogan**

TVs no problem. Air conditioning.

**Elon Musk**

Air conditioning.

**Joe Rogan**

Air conditioning is the problem. If you have an efficient air conditioner, and you don't - and depending on how - like, are you air conditioning rooms when they don't need to be air conditioned, which is very common -

**Elon Musk**

Right.

**Joe Rogan**

- because it's a pain in the neck, you know. It's like programming a VCR. It's like-

**Elon Musk**

Right.

**Joe Rogan**

Now, it's just blinking 12:00. So, people are just like, "The hell with that. I'm just going to make it this temperature all day long."

**Elon Musk**

Right. You know how a smart home where if you're in the room, then it stays cool, right?

**Joe Rogan**

Yeah, it should predict when you're going to be home, and then cool the rooms that you're likely to use with a little bit of intelligence. We're not talking about like genius home here. We're talking like elementary basic stuff.

**Elon Musk**

Right.

**Joe Rogan**

You know, like if you could hook that into the car, like manage you coming home. Like there's no point cooling the home -

**Elon Musk**

Right.

**Joe Rogan**

- keeping the home really cool when you're not there.

**Elon Musk**

Right.

**Joe Rogan**

But it can tell that you're coming home, it's just going to cool it to the right temperature right when you get there.

**Elon Musk**

Do you have an app that works with your solar panels or anything like that?

**Joe Rogan**

Yeah. Yeah, we do.

**Elon Musk**

And -

**Joe Rogan**

But we need to hook it into the air conditioning to really make the air conditioning work.

**Elon Musk**

Have you thought about creating an air conditioning system? I know you have. Trick question.

**Joe Rogan**

Cannot answer questions about the future of potential products.

**Elon Musk**

Okay. Let's just let it go. We'll move on to the next thing.

**Joe Rogan**

That would be an interesting idea.

**Elon Musk**

Yeah, I would say radiant heating and all that, good ideas. Now, when you think about the efficiency of these homes, and you think about implementing solar power and battery power, is there anything else that people are missing? Is there any other - Like, I just saw a smartwatch that is powered by the heat of the human body, and some new technology.

**Joe Rogan**

It's able to fully power that way?

**Elon Musk**

I don't know -

**Joe Rogan**

Okay.

**Elon Musk**

- if it's fully or if it's - Like this watch right here, this is a Casio.

**Joe Rogan**

Okay.

**Elon Musk**

It's called a Pro Trek. And it's like an outdoors watch, and it's solar-powered.

**Joe Rogan**

Okay.

**Elon Musk**

And so, it has the ability to operate for a certain amount of time on solar.

**Joe Rogan**

Yeah.

**Elon Musk**

So, if you have it exposed, it could function for a certain amount of time on solar.

**Joe Rogan**

Yeah. Well, you know, like there's self-weighting watches where -

**Elon Musk**

Yeah.

**Joe Rogan**

- you know, it's just got a weight in the watch. And as you move your wrist, the way it moves from one side to the other, and it winds the watch up. That's a pretty cool thing.

**Elon Musk**

Yeah, yeah.

**Joe Rogan**

Yeah.

**Elon Musk**

Well, it's amazing that like Rolexes that it's all done mechanically.

**Joe Rogan**

Yeah.

**Elon Musk**

There's no batteries in there. There is no nothing.

**Joe Rogan**

Yeah. You could do the same thing. You create a little charger that's based on wrist movement. It really depends on how much energy your watch uses.



**Elon Musk**

You know what's fucked up about that though? We accept a certain amount of like fuckery with those watches. Like I brought my watch. I have a Rolex that my friend, Lorenzo, gave me, and I brought it to the watch store, and I said, "This thing's always fast." I said, "It's always like after a couple of months, it's like five minutes fast." And they go, "Yup." They go, "Yeah."

**Joe Rogan**

Really?

**Elon Musk**

"It's just what it does."

**Joe Rogan**

Okay.

**Elon Musk**

I go, "Hold on." I go, "So, you're telling me that it just is always going to be fast?" They're like, "Yeah. It's just like every few months, you get like reset it."

**Joe Rogan**

It seems like they should recalibrate that thing.

**Elon Musk**

They can't. They tried. They say, every few months, whether it's four months, or five months, or six months, it's going to be a couple of minutes fast.

**Joe Rogan**

Okay. It seems like they should really recalibrate that because -

**Elon Musk**

You should figure that shit out.

**Joe Rogan**

- if it's always fast, you can just -

**Elon Musk**

Right.

**Joe Rogan**

- you know, delete those minutes.

**Elon Musk**

You need to fucking kick down the door at Rolex and go, "You bitches are lazy."

**Joe Rogan**

It's kind of amazing that you can keep time mechanically on a wristwatch with these tiny little gears.

**Elon Musk**

It's amazing.

**Joe Rogan**

Yeah.

**Elon Musk**

I mean, the whole luxury watch market is fascinating. I'm not that involved in terms - like I don't buy them. I've bought them as gifts. I don't buy them for myself. But when I look at them online, there's a million dollar watches out there now that are like they have like a little rotating moons and stars.

**Joe Rogan**

Yeah.

**Elon Musk**

And they live - like look at this thing, how much is that Jamie?

**Joe Rogan**

I don't know. I just picked one.

**Elon Musk**

These are fucking preposterous gears. I like gears. I love them. I love them.

**Joe Rogan**

Yeah. I think that is beautiful.

**Elon Musk**

But there's some of these people that are just taking it right in the ass. They're buying these watches for like \$750,000 . Like, "Yeah, that's a Timex, son." Nobody knows. It's not any better than some Casio that you could just buy on - like, look at that though.

**Joe Rogan**

Well, here's the thing. If you're a person that doesn't just want to know the time, you want craftsmanship, you want some artisan's touch, you want innovation in terms of like a person figuring out how gears and cogs all line up perfectly, to every time it turns over, it's basically a second. I mean, that's just - There's this art to that.

**Elon Musk**

Yeah, I agree.

**Joe Rogan**

Yeah, it's not just telling time. Yeah, I like this watch a lot, but if it got hit by a rock, I wouldn't be sad.

**Elon Musk**

Yeah.

**Joe Rogan**

It's just to watch. It's a mass-produced thing that runs on some quartz battery. But those things, there's art to that.

**Elon Musk**

Yeah. No, I agree. It's beautiful.

**Joe Rogan**

Yeah.

**Elon Musk**

Yeah. Love it.

**Joe Rogan**

Yeah. There's something amazing about it. It's -

**Elon Musk**

Right.

**Joe Rogan**

- because it represents the human creativity. It's not just electronic innovation. There's something. It's a person's work in that.

**Elon Musk**

Yes.

**Joe Rogan**

You don't have a watch on.

**Elon Musk**

No.

**Joe Rogan**

Ever?

**Elon Musk**

I used to have a watch.

**Joe Rogan**

What happened?

**Elon Musk**

My phone tells the time. So -

**Joe Rogan**

That's a good point. Well, if you lose your phone? Do you - wait, hold on.

**Elon Musk**

It's true.

**Joe Rogan**

Let me guess, you are a no-case guy.

**Elon Musk**

That's correct. Living on the edge. Living on the edge without a case.

**Joe Rogan**

Neil deGrasse Tyson. Neil deGrasse Tyson was in here last week. I'm marveled at his ability to get through life without a case.

**Elon Musk**

That's right.

**Joe Rogan**

You know, he takes his phone, and he flips it in between his fingers like a soldier would do with his rifle.

**Elon Musk**

Right.

**Joe Rogan**

He just rolls that shit in between his fingers.

**Elon Musk**

Okay.

**Joe Rogan**

It's marvelous.

**Elon Musk**

Wow.

**Joe Rogan**

He says that's the reason why they do it. He said, "Would you look at someone who has a rifle, why would they do that? Why would they flip it around like that?"

**Elon Musk**

Right.

**Joe Rogan**

It's like, it goes to drop, they have it in their hand. They catch it quickly.

**Elon Musk**

Yeah.

**Joe Rogan**

So, that's what he does with his phone. He's just flipping his phone around all the time. I got that in Mexico. I was hoping it holds joint.

**Elon Musk**

Does it do anything? It tips to open.

**Joe Rogan**

No.

**Elon Musk**

Just a hole?

**Joe Rogan**

It's just a hole.

**Elon Musk**

You could store things in there.

**Joe Rogan**

Yeah. But like try it. Put a joint in there. Close it. You put like one blunt. One, that seems pretentious. You know, that's the idea behind it. I bought it when I was in Mexico because I figured it would be a good size to hold joints, or it's not.

**Elon Musk**

So, is that a joint or is it a cigar?

**Joe Rogan**

No.

**Elon Musk**

Okay.

**Joe Rogan**

It's marijuana inside of a tobacco.

**Elon Musk**

Okay. So, it's like posh, part tobacco a pot.

**Joe Rogan**

Yeah. You never had that?

**Elon Musk**

Yeah. I think I tried one once.

**Joe Rogan**

Come on, man. You probably can't because of stockholders, right?

**Elon Musk**

I mean, it's legal, right?

**Joe Rogan**

Totally legal.

**Elon Musk**

Okay.

**Joe Rogan**

How does that work? Do people get upset at you if you do certain things? It's just tobacco and marijuana in there. That's all it is. The combination of tobacco and marijuana is wonderful. First turned on to it by Charlie Murphy, and then reignited by Dave Chappelle. There you go.

**Elon Musk**

Plus whiskey.

**Joe Rogan**

Exactly.

**Elon Musk**

Perfect. It balances it out.

**Joe Rogan**

Alcohol is a drug that's been grandfathered in.

**Elon Musk**

Well, it's not just a drug. It's a drug that gets a bad rep because you just have a little, it's great.

**Joe Rogan**

Fine.

**Elon Musk**

Yeah, little sip here and there, and your inhibitions are relaxed, and it shows your true self. And, hopefully, you're more joyous, and friendly, and happy, and everything. The real worry is the people that can't handle it. Like the real worry about people who can't handle cars and go 016 in 1.9 seconds or anything.

**Joe Rogan**

Have you ever considered something that - Like, imagine if one day, everyone has a car that's on the same, at least, technological standard as one of your cars, and everyone agrees that the smart thing to do is not just to have bumpers but to perhaps have some sort of a magnetic repellent device, something, some electromagnetic field around the cars that as cars come close to each other, they automatically radically decelerate because of magnets or something.

**Elon Musk**

Well, I mean, our cars brake automatically.

**Joe Rogan**

Brake?

**Elon Musk**

Yeah.

**Joe Rogan**

Yeah. When they see things?

**Elon Musk**

Yes.

**Joe Rogan**

But like a physical barrier, like -

**Elon Musk**

Well, the wheels work pretty well.

**Joe Rogan**

The wheels do.

**Elon Musk**

Yeah, yeah. They work pretty well. Decelerated at, you know, 1.1 to 1.2 Gs, that kind of thing.

**Joe Rogan**

Is your concern that one day all your cars will be on the road, and then, there'll still be regular people with regular cars 20-30 years from now that will get in the mix and be the main problem?

**Elon Musk**

Yeah. I think, it'd be sort of like, you know, there was a time of transition where there were horses and gasoline cars on the road at the same time. It's been pretty weird.

**Joe Rogan**

That would be the weirdest.

**Elon Musk**

Yeah. I mean, horses were tricky. You know, back when Manhattan had like 300,000 horses, then figure out like if a horse lives 15 years, you got 20,000 horses dropping dead every day or every year, I should say. Every year, it's 20,000 horses. If there's 300,000 horses in a 15-year lifespan.

**Joe Rogan**

Back in the Gangs of New York days, that movie.



**Elon Musk**

Yeah.

**Joe Rogan**

Yeah.

**Elon Musk**

It's a lot of dead horses. You needed a horse to move the horse.

**Joe Rogan**

Right.

**Elon Musk**

They'll probably get pretty freaked out if they have to move our dead horse.

**Joe Rogan**

Do you think they know what's going on?

**Elon Musk**

Yeah.

**Joe Rogan**

Do you think it's as hard?

**Elon Musk**

I mean, it's got to be like pretty weird.

**Joe Rogan**

No, I would imagine.

**Elon Musk**

Like, in my mind, dragging this dead, you know, horse around, and I'm a horse.

**Joe Rogan**

Do you-

**Elon Musk**

They might not like it.

**Joe Rogan**

Do you ever stop and think about your role in civilization? Do you ever stop and think about your role in the culture? Because me, as a person, who never met you until today, when I think of you, you know, I've always thought of you as being this weirdo super inventor dude who just somehow or another keeps coming up with new shit, but there's not a lot of you out there. Like everybody else seems to be - I mean, obviously, you make a lot of money, and there's a lot of people that make a lot of money. You like that clock?

**Elon Musk**

Yeah.

**Joe Rogan**

Pretty dope, right?

**Elon Musk**

This is a great clock.

**Joe Rogan**

You want one? I'll get you one.

**Elon Musk**

Sure.

**Joe Rogan**

Okay, done.

**Elon Musk**

I like weird things like this.

**Joe Rogan**

Oh, this is the coolest. It's TGT Promotion. What is this? TGT Studios? TGT Studios.

**Elon Musk**

Yeah.

**Joe Rogan**

Yeah. So, a gentleman who makes all this by hand. Yeah, it's really cool.

**Elon Musk**

My study is filled with weird devices.

**Joe Rogan**

Well, get ready for another one.

**Elon Musk**

All right.

**Joe Rogan**

I'm sending it your way.

**Elon Musk**

Cool.

**Joe Rogan**

You want a werewolf too? I'll hook you up.

**Elon Musk**

All right. I'll take one.

**Joe Rogan**

Okay. You want a werewolf and one clock coming up. Do you think about your role in the culture? Because me, as a person, who never met you until today, I've always looked at you and like, "Wow." Like, "How does this guy just keep inventing shit?" Like, how do you how do you keep coming up with all these new devices? And do you ever consider how unusual - Like I had a dream once that there was a million Teslas. Instead of like one Tesla, there was a million Teslas.

**Elon Musk**

Okay.

**Joe Rogan**

Not just the car but Nikola.

**Elon Musk**

Oh, yeah, sure.

**Joe Rogan**

And that in his day, there was a million people like him who were radically innovative.

**Elon Musk**

Wow.

**Joe Rogan**

It was a weird dream, man. It was so strange. And I've had it more than once.

**Elon Musk**

That would result in a very rapid technology innovation. That's for sure.

**Joe Rogan**

It's one of the only dreams of my life I've had more than one time.

**Elon Musk**

Okay, wow.

**Joe Rogan**

Like where I've woken up, and it's in the same dream. I'm in the same dream. And in this dream, it's 1940s, 1950s, but everyone is severely advanced. There's flying blimps with like LCD screens in the side of them. And everything is bizarre and strange. And it stuck with me for whatever - Obviously, this is just a stupid dream. But for whatever reason, all these years, that stuck with being. Like it takes one man, like Nikola Tesla, to have more than a hundred inventions that were patents, right. I mean, he had some -

**Elon Musk**

He's pretty great.

**Joe Rogan**

- pretty fucking amazing ideas.

**Elon Musk**

Yes.

**Joe Rogan**

But there was -

**Elon Musk**

Definitely.

**Joe Rogan**

In his day, there was very few people like him.

**Elon Musk**

Yeah, that was true.

**Joe Rogan**

What if there was a million? Like what in the experience -

**Elon Musk**

Things would advance very quickly.

**Joe Rogan**

Right, but there's not a million Elon Musks. There's one motherfucker. Do you think about that or you just try to not?

**Elon Musk**

I don't think. I don't think you'd necessarily want to be me. That'd be good.

**Joe Rogan**

Well, what's the worst part about you?

**Elon Musk**

I should. I never thought people would like it that much.

**Joe Rogan**

Well, most people would, but they can't be. So, that's like some superhero type shit. You know, we wouldn't want to be Spiderman. I'd rather just sleep tight in Gotham City and hope he's out there doing his job.

**Elon Musk**

It's very hard to turn it off.

**Joe Rogan**

Yeah. What's the hardest part?

**Elon Musk**

It might sound great if it's turned on, but what if it doesn't turn off?

**Joe Rogan**

Now, I showed you the isolation tank, and you've never experienced that before.

**Elon Musk**

No.

**Joe Rogan**

I think that could help you turn it off a little bit just for the night.

**Elon Musk**

Okay.

**Joe Rogan**

Yeah. Just give you a little bit of sleep, a little bit of perspective. It's magnesium that you get from the water as well that makes you sleep easier because the water has Epsom salts in it. But may be some sort of strategy for sacrificing your – or not sacrificing but enhancing your biological recovery time by figuring out a way whether it's through meditation or some other ways to shut off that thing at night. Like you must have like a constant stream of ideas that's running through your head all the time. You're getting text messages from chicks.

**Elon Musk**

No. I'm getting text messages from a friend saying, "What the hell are you doing smoking weed?".

**Joe Rogan**

Is that bad for you? It's legal.

**Elon Musk**

Yeah.

**Joe Rogan**

I mean –

**Elon Musk**

It's government approved.

**Joe Rogan**

It's not – You know, I'm not a regular smoker of weed.

**Elon Musk**

How often do you smoke it?

**Joe Rogan**

Almost never. I mean, it's –

**Elon Musk**

How does it feel?

**Joe Rogan**

I don't actually notice any effect.

**Elon Musk**

Well, there you go. There was a time where I think it was Ramadan for someone gave some Buddhist monk a bunch of acid.

**Joe Rogan**

Okay.

**Elon Musk**

And he ate it, and it had no effect on him.

**Joe Rogan**

I doubt that.

**Elon Musk**

I would say that too, but I've never meditated to the level that some of these people have where they're constantly meditating all day. They don't have any material possessions. And all of their energy is spent trying to achieve a certain mindset. I would like to cynically deny that. I'd like to cynically say, "Hey, just fuck and think the same way I do." They're just hanging out with flip flops on and make weird noises, but maybe no.

**Joe Rogan**

You know, I know a lot of people like weed, and that's fine, but I don't find that it is very good for productivity.

**Elon Musk**

For you.

**Joe Rogan**

Not for me.

**Elon Musk**

Yeah. I mean, I would imagine that for someone like you, it's not. For someone like you, it would be more like a cup of coffee, right. You want to have a latte.

**Joe Rogan**

Yeah. It's more like the opposite of a cup of coffee.

**Elon Musk**

What is that?

**Joe Rogan**

It's like a cup of coffee in reverse.

**Elon Musk**

Weed is?

**Joe Rogan**

Yeah.

**Elon Musk**

No, I'm saying you would like more. More like will be beneficial to you. It would be like coffee.

**Joe Rogan**

I like to get things done. I like to be useful. That is one of the hardest things to do is to be useful.

**Elon Musk**

When you say you like to get things done -

**Joe Rogan**

Yes.

**Elon Musk**

- like, in terms of like what -

**Joe Rogan**

I should get things done.

**Elon Musk**

- gives you satisfaction? When you complete a project, when something that you invent comes to fruition, and you see people enjoying it, that feeling.

**Joe Rogan**

Yes, doing something useful for other people that I like doing.

**Elon Musk**

That's interesting for other people.

**Joe Rogan**

Yes.

**Elon Musk**

So, that, do you think that that is maybe the way you recognize that you have this unusual position in the culture where you can uniquely influence certain things because of this? I mean, you essentially have a gift, right.

**Joe Rogan**

Sure.



**Elon Musk**

I mean, you would think it was a curse, but I'm sure it's been fueled by many, many years of discipline and learning. But you, essentially, have a gift and that you have this radical sort of creativity engine when it comes to innovation and technology. It's like you're just you're going at very high RPMs.

**Joe Rogan**

All the time. That doesn't stop.

**Elon Musk**

What is that like?

**Joe Rogan**

I don't know what would happen if I got into a sensory deprivation tank.

**Elon Musk**

Let's try it.

**Joe Rogan**

It sounds a little concerning.

**Elon Musk**

But why?

**Joe Rogan**

It's like running the engine with no resistance. That is -

**Elon Musk**

Is that what it is though? Maybe it's not.

**Joe Rogan**

Maybe it's fine. I don't know.

**Elon Musk**

How much-

**Joe Rogan**

I'll try it. I'll try it.

**Elon Musk**

Have you ever -

**Joe Rogan**

It's fine.

**Elon Musk**

- experimented with meditation or anything?

**Joe Rogan**

Yes.

**Elon Musk**

What do you do, or what have you done rather?

**Joe Rogan**

I mean, just sort of sit there, and be quiet, and then repeat some mantra, which acts as a focal point. It does still the mind. It does still the mind, but I don't find myself drawn to it frequently.

**Elon Musk**

Do you think that perhaps productivity is maybe more attractive to you than enlightenment or even the concept of whatever enlightenment means. Like, what are you trying to achieve when you're meditating all the time? With you, it seems like almost like there's a franticness to your creativity that comes out of this burning furnace. And in order for you to like calm that thing down, you might have to throw too much water on it.

**Joe Rogan**

It's like a never-ending explosion.

**Elon Musk**

Like what is it like? Try to explain it to a dumb person like me. What's going on?

**Joe Rogan**

Never-ending explosion.

**Elon Musk**

It's just constant ideas just bouncing around.

**Joe Rogan**

Yes.

**Elon Musk**

Damn.

**Joe Rogan**

Yeah.

**Elon Musk**

So, when everybody leaves, it's just Elon sitting at home brushing his teeth, just bunch ideas bouncing around your head.

**Joe Rogan**

Yeah, all the time.

**Elon Musk**

When did you realize that that's not the case with most people?

**Joe Rogan**

I think, when I was, I don't know, five or six or something. I thought I was insane.

**Elon Musk**

Why did you think you were insane?

**Joe Rogan**

Because it is clear that other people do not. Their mind wasn't exploding with ideas all the time.

**Elon Musk**

So, they weren't expressing it. They weren't talking about it all day. And you realized by the time you were five or six like, "Oh, they're probably not even getting this thing that I'm getting."

**Joe Rogan**

No. It was just strange. It was like, "Hmm, kind of strange." That was my conclusion, kind of strange.

**Elon Musk**

But did you feel diminished by it in any way? Like knowing that this is a weird thing that you really probably couldn't commiserate with other people, they wouldn't understand you.

**Joe Rogan**

I hope they wouldn't find out because they might like put me away or something.

**Elon Musk**

You thought that?

**Joe Rogan**

For a second, yes.

**Elon Musk**

When you were little?

**Joe Rogan**

Yeah. They put people away. What if they put me away?

**Elon Musk**

Like when you were little, you thought this?

**Joe Rogan**

Yes.

**Elon Musk**

Wow. Well, you thought, "This is so radically different than the people that are around me if they find out I got this stream coming in."

**Joe Rogan**

Yeah.

**Elon Musk**

Whoa.

**Joe Rogan**

But, you know, I was only like five or six probably.

**Elon Musk**

Do you think this is like - I mean, there's outliers biologically. You mean, there's people that are 7 foot 9, there's people that have giant hands, there's people that have eyes that are 20/15 vision. There's always the outliers. Do you feel like you like caught this, like you have got some - you're like on some weird innovation creativity sort of wave that's very unusual? Like you tapped into - I mean, just think of the various things you may have accomplished in a very short amount of time, and you're constantly doing this. That's a weird - You're a weird person, right.

**Joe Rogan**

Right, I agree.

**Elon Musk**

Yeah. Like what if there's a million Elon Musks?

**Joe Rogan**

Well, that would be very, very weird.

**Elon Musk**

Whoa.

**Joe Rogan**

Yeah, it would be pretty weird. I agree.

**Elon Musk**

Real weird.

**Joe Rogan**

Definitely.

**Elon Musk**

Yeah.

**Joe Rogan**

What if there were a million Joe Rogans?

**Elon Musk**

There probably is. There's probably two million. I mean, I think that's the case with a lot of folks.

**Joe Rogan**

Yeah. I mean, but, like, you know, my goal is like try to do useful things, try to maximize the probability for the future's good, make the future exciting, something you look forward to, you know. You know, with Tesla, I want to try to make things that people love. Like, how do you think you could buy that you really love, that really give you joy? So rare, so rare. I wish there were more things. That's what we try to do. Just make things that somebody loves.

**Elon Musk**

When you-

**Joe Rogan**

That's so difficult.

**Elon Musk**

When you think about things that someone loves, like, do you specifically think about like what things would improve people's experience, like what would change the way people interface with life that would make them more relaxed or more happy? You really think, like, when you're thinking about things like that, is that like one of your considerations? Like what could I do that would help people -

**Joe Rogan**

Yeah.

**Elon Musk**

- that maybe they wouldn't be able to figure out?

**Joe Rogan**

Yeah. Like what are the set of things that can be done to make the future better? Like, you know, like so, I think, a future where we are a space-faring civilization and out there among the stars. This is very exciting. This makes me look forward to a future. This makes me want that future. You know, the things, there need to be things that make you look forward to waking up in the morning.

**Elon Musk**

You wake up in the morning, you look forward to the day, you look forward to the future. And a future where we are a space-faring civilization and out there among the stars, I think, that's very exciting. That is a thing we want; whereas, if we knew we would not be a space-faring civilization but forever confined to Earth, this would not be a good future. That would be very sad, I think.

**Joe Rogan**

It would be so sad in terms -

**Elon Musk**

Like I don't want a sad future.

**Joe Rogan**

- just the finite lifespan of the Earth itself -

**Elon Musk**

Yes.

**Joe Rogan**

- and the solar system itself. But even though it's possibly - You know, I mean, how long do they feel like the sun and the solar system is going to exist? How many hundreds of millions of years?

**Elon Musk**

Well, it's probably, if you're saying when does the sun boil the oceans -

**Joe Rogan**

Right.

**Elon Musk**

About 500 million years.

**Joe Rogan**

So, is it sad that we never leave because in 500 million years, that happens? Is that what you're saying?

**Elon Musk**

No. I just think like if there are two futures, and one future us we're out there among the stars, and the things we read about and see in science fiction movies, the good ones are true, and we have these starships, and we're going see what other planets are like, and we're a multi-planet species, and the scope and scale of consciousness is expanded across many civilizations, and many planets, and many star systems, this is a great future. This is a wonderful thing to me. And that's what we should strive for.

**Joe Rogan**

But that's biological travel. That's cells traveling physically to another location.

**Elon Musk**

Yes.

**Joe Rogan**

Do you think that's definitely where we're going?

**Elon Musk**

No.

**Joe Rogan**

Yeah, I don't think so either. I used to think so. And, now, I'm thinking more likely less than ever. Like almost every day less likely.

**Elon Musk**

We can definitely go to the moon and Mars.

**Joe Rogan**

Yeah. Do you think we will colonize?

**Elon Musk**

I think we will go to the asteroid belt. And we can go to the moons of Jupiter, Saturn, even get to Pluto.

**Joe Rogan**

That'd be the craziest place ever if we colonize Mars, and reform it, and turn it into like a big Jamaica. Just oceans and -

**Elon Musk**

I think, we should. I think that would be great.

**Joe Rogan**

I mean, imagine that there is -

**Elon Musk**

That would be great. Amazing.

**Joe Rogan**

It's possible, right?

**Elon Musk**

Yes.

**Joe Rogan**

We can turn the whole thing into Cancún.

**Elon Musk**

Well -

**Joe Rogan**

I mean, over time.

**Elon Musk**

It wouldn't be easy but yes.

**Joe Rogan**

Right.

**Elon Musk**

You could just warm - You could warm it up.

**Joe Rogan**

Yeah, you can warm it up. You could add air. You get some water there. I mean, over time, hundreds of millions of years or whatever it takes.

**Elon Musk**

We'll be a multi-planet species.

**Joe Rogan**

Yeah, that would be amazing.



**Elon Musk**

We're a multi-planet species.

**Joe Rogan**

If we could-

**Elon Musk**

That's what we want to be -

**Joe Rogan**

- legitimately like air-condition -

**Elon Musk**

Great.

**Joe Rogan**

- Saturn.

**Elon Musk**

I'm pro-human.

**Joe Rogan**

Me too. Yeah, me too.

**Elon Musk**

I love humanity. I think it's great.

**Joe Rogan**

We're glad as a robot that you love humans because we love you too, and we don't want you to kill us and eat us. And -

**Elon Musk**

I mean, you know, strangely, I think a lot of people don't like humanity and see it as a blight, but I do not.

**Joe Rogan**

Well, I think one of those - I think, part of that is just they've been - you know, they've been struggling. When people struggle, they associate their struggle with other people. They never internalize their problems. They look to other people as holding them back, and people suck, and fuck people, and it's just - you know, it's a never ending cycle. But not always. Again, most people are really good. Most people, the vast majority.

**Elon Musk**

This may sound corny.

**Joe Rogan**

It does sound corny.

**Elon Musk**

But love is the answer.

**Joe Rogan**

It is you answer.

**Elon Musk**

Yup.

**Joe Rogan**

Yeah, it is. It sounds corny because we're all scared. You know, we're all scared of trying to love people, being rejected, or someone taking advantage of you because you're trying to be loving.

**Elon Musk**

Sure.

**Joe Rogan**

What if we all could just relax and love each other?

**Elon Musk**

It wouldn't hurt to have more love in the world.

**Joe Rogan**

It definitely wouldn't hurt.

**Elon Musk**

Yeah.

**Joe Rogan**

It would be great.

**Elon Musk**

Yeah, we should do that.

**Joe Rogan**

Yeah, I agree, man.

**Elon Musk**

Like really.

**Joe Rogan**

How are you going to fix that? Do you have a love machine you're working on?

**Elon Musk**

No, but probably spend more time with your friends and less time on social media.

**Joe Rogan**

Now, deleting social media from your applications, from your phones, will that give you a 10% boost to happiness? What do you think the percentage is?

**Elon Musk**

I think probably something like that, yeah.

**Joe Rogan**

Yeah, a good 10%.

**Elon Musk**

Yeah, I mean, the only thing I've kept is Twitter because I kind of like meet some means of getting a message out, you know.

**Joe Rogan**

Right.

**Elon Musk**

Well, that's about it. So far so good.

**Joe Rogan**

Well, what's interesting with you, you actually occasionally engage with people on Twitter.

**Elon Musk**

Yeah, that's -

**Joe Rogan**

What percentage of that is a good idea?

**Elon Musk**

Good question.

**Joe Rogan**

Probably 10%, right? It's hard.

**Elon Musk**

It's mostly - I think, it's on balance, more good than bad, but there's definitely some bad. So -

**Joe Rogan**

Do you ever -

**Elon Musk**

Hopefully, the good outweighs the bad.

**Joe Rogan**

Do you ever think about how odd it is, the weird feeling that you get when someone says something shitty to you on Twitter, and you read it? That weird feeling. This weird little negative jolt. It's like a subjective negative jolt of energy that you don't really need to absorb, but you do anyway. Like, "I want to fuck this guy. Fuck him."

**Elon Musk**

I mean, there's a lot of negativity on Twitter.

**Joe Rogan**

It is, but it's a weird in it's form. Like the way, if you ingest it as if you're like - you try to be like a little scientist as you're ingesting it, you're like, "How weird is this?" And I'm even getting upset at some strange person saying something mean to me. It's not even accurate.

**Elon Musk**

I mean, the vast number of negative comments, for the vast majority, I just ignore them, the vast majority.

**Joe Rogan**

Yeah.

**Elon Musk**

Every now and again, you have draw in, something not good.

**Joe Rogan**

It's not good.

**Elon Musk**

You make mistakes.

**Joe Rogan**

Yes, you can make mistakes.

**Elon Musk**

We can make some mistakes.

**Joe Rogan**

We're all human. We can make mistakes. Yeah, it's hard. And people love it when you say something, and you take it back, and they're like, "Fuck you. We saved it forever. I'll fucking screenshot that shit, bitch. You had that thought. You had that thought." I'm like, "Well, I deleted it." "Not good enough. You had the thought. I'm better than you. I never had that thought. You had that thought, you piece of shit. Look, I saved it. I put it on my blog. Bad thought."

**Elon Musk**

Yeah. I'm not sure why people think that anyone would think that deleting a tweet makes them go away. It's like, "Hello, been on the internet for a while."

**Joe Rogan**

Yeah. Well it's even like -

**Elon Musk**

Anything is forever.

**Joe Rogan**

And the thing is they don't want you to be able to delete it because the problem is if you don't delete it, and you don't believe it anymore, it's really hard to say, "Hey, that thing above, I don't really believe that anymore. I changed the way I view things."

**Elon Musk**

Yes.

**Joe Rogan**

Because people would go, "Well, fuck you. I have that over there. I'm going to just take that. I'm not going to pay attention to that shit you wrote underneath it."

**Elon Musk**

It's on your permanent record.

**Joe Rogan**

Yeah. It's forever like a tattoo.

**Elon Musk**

Like high school, "We'll put this on your permanent record."

**Joe Rogan**

Yeah. It's like a tattoo. You keep it.

**Elon Musk**

Yeah.

**Joe Rogan**

Yeah. Well, it's this thing where there's a lack of compassion. It's a lack of compassion issue. People are just like intentionally shitty to each other all the time online, and trying to catch -

**Elon Musk**

Yeah.

**Joe Rogan**

They're more trying to catch people doing something that's arrestable, like a cop trying to, like, get, you know, arrests on his record. It's like they're trying to catch you for something, more than they're logically looking at it thinking it's a bad thing that you've done, or that it's an idea they don't agree with so much, they needed to insult you. They're trying to catch you.

**Elon Musk**

Yeah, yeah. I mean, it's way easier to be mean on social media than it is to be mean in person.

**Joe Rogan**

Yes.

**Elon Musk**

Way easier.

**Joe Rogan**

Yeah.

**Elon Musk**

Yeah.

**Joe Rogan**

It's weird. It's not a normal way of human interacting. It's cheating.

**Elon Musk**

True.

**Joe Rogan**

You're not supposed to be able to interact so easily when the people are not looking at.

**Elon Musk**

Yes.

**Joe Rogan**

You would never do that. Don't be so mean when somebody looking in their eyes. If you did, you'd feel like shit.

**Elon Musk**

Most people.

**Joe Rogan**

Yeah, unless you're a sociopath, you'd feel terrible.

**Elon Musk**

Yes.

**Joe Rogan**

Elon Musk, this has been a pleasure.

**Elon Musk**

Yeah, likewise.

**Joe Rogan**

It really has been.

**Elon Musk**

It's been an honor. Thank you for having me.

**Joe Rogan**

Thanks for doing this because I know you don't do a lot of long form stuff like this. I hope I didn't weird you out, and I hope you don't get mad that you smoked weed.

**Elon Musk**

I mean-

**Joe Rogan**

It's not bad. It's legal. We're in California. This is just as legal as this whiskey we've been drinking.

**Elon Musk**

Exactly.

**Joe Rogan**

This is all good, right?

**Elon Musk**

Cheers.

**Joe Rogan**

Cheers. Thank you. Is there any message you would like to put out other than love is the answer, because I think you really nailed it with that.

**Elon Musk**

No. I think, you know, I think people should be nicer to each other, and give more credit to others, and don't assume that they're mean until you know they're actually mean. You know, just, it's easy to demonize people. You're usually wrong about it. People are nicer than you think. Give people more credit.

**Joe Rogan**

I couldn't agree more. And I want to thank you not just for all the crazy innovations you've come up with and your constant flow of ideas but that you choose to spread that idea, which is very vulnerable, but it's very honest, and it resonates with me.

**Elon Musk**

It's true.

**Joe Rogan**

And I believe it.

**Elon Musk**

It's true.

**Joe Rogan**

I believe it's true too. So, thank you.

**Elon Musk**

You're welcome.

**Joe Rogan**

All you assholes out there, be nice. Be nice, bitch. All right. Thank you, everybody. Thank you, Elon.



**Elon Musk**

All right, thank you.

**Joe Rogan**

Good night, everybody.