# Greg Lynn

# episode 7

**The Culture & Technology Podcast**
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Episode 8: Humans & Machines
Greg Lynn

INTRODUCTION

Can technology make us better humans instead of replacing humans?

Greg Lynn has been at the forefront of architecture and design since the early 2000s but his current focus is around technology that encourages us to move and enables people the opportunity to be more active. In this episode, we talk about just that as well as the ethics of technology, sustainability in architecture and the ins and outs of robot etiquette.

GUESTS

**Greg Lynn** is an architect, designer, and professor at the UCLA School of the Arts and Architecture. He is CEO and co-founder of Piaggio Fast Forward, a company changing the face of mobility with their robotic technologies.

HOST

**Severin Matusek** is an editor, producer and strategist who has spent the last decade researching how technology transforms culture, communities and society.

IDEAS AND PEOPLE IN CONTEXT

- **Piaggio Fast Forward** is a robotics company working on solutions to mobility through the use of technology. They design, develop, and manufacture new kinds of vehicles. https://www.piaggiofastforward.com/
- **Gita** is a first-of-its-kind, sensor-enabled following robot. It pairs with a person and tracks their path and movement whilst carrying up to carry 20kg of cargo. https://mygita.com/
- **Robot Etiquette** is an article written by Greg Lynn about designing autonomous machines for pedestrian spaces. https://medium.com/@formgreglynn/robot-etiquette-6509abc92e32
- **Devon Turnbull** creates handcrafted speakers that can be found in shops, hotels, and restaurants around the world. He is also a graphic designer, fashion designer, and DJ among other things. https://www.instagram.com/devonojas
- Scott Galloway is a professor of Business and Marketing at NYU and has written a critical book on how Google, Amazon, Facebook and Apple have infiltrated our lives. https://www.goodreads.com/book/show/34427200-the-four

CREDITS

**The Vienna Business Agency** supports businesses, the economy and the city in developing the Austrian capital's creative industries and shaping its future trajectory. viennabusinessagency.at

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TRANSCRIPT

*We don't believe in replacing human interaction socially with a robot but we do care about how robots interact with people. We also don't want to replace workers, we want to power workers, and we don't want to replace, you know what we really want to replace is cars. I mean, if there's one thing that we want to substitute, it would not be a person, it would be a car.*

Hello and welcome to the Culture and Technology Podcast. I'm your host, Severin Matusek. The Culture and Technology Podcast is a virtual salon initiated by the Vienna Business Agency in which we explore how technology is reshaping the future of culture.

One of the core ideas of technological utopias is that at some point humans do not need to work anymore. Technology will be so advanced that robots will cook our food, clean our houses and even write our emails so that we can focus on leisure activities. To some extent this is already happening. We can order almost anything we need from our couches, robots clean our houses and cars will soon drive themselves.

It makes me wonder though: is this the future that we really want? Does it change our lives for the better or make us more lazy? How autonomous are we really when we rely on technology so much?

To find answers I invited Greg Lynn to our virtual salon. Greg has been at the cutting edge of using technology in architecture and design for more than three decades. He's been named one of the world's most influential architects by Forbes, one of the 100 most innovative people in the world by Time Magazine, he teaches at universities all over the world and his work is in the permanent collections of some of the most important design and architecture museums.

Today, Greg builds robots. That's why I invited him for a discussion about how humans and machines can interact with each other and build a brighter future together.

Greg, welcome to the podcast. From where are you joining us today?

**Greg Lynn**
So right now I'm in Los Angeles.

**Greg Lynn**
I split my time between Vienna, Los Angeles and Boston. I'm in those three places the most.

**Severin Matusek**

Before we jump into the work that you do now, I'm interested in the life of Greg Lynn, and also the young Greg Lynn. Can you tell us a little bit about how you got started and your interest and passion in becoming an architect?

**Greg Lynn**

Sure. So this isn't anything I've ever actually said before but there are benefits to having parents that tell you what you should do in life and I had a mother in particular that wanted me to be an architect, probably from before I was born. It had nothing to do with me. So I did a lot of drawing and technical drawing. When computers came around, like Commodore computer and an Atari computer and the first Apple computers, those were around the house when I was a young teenager. I was always very interested in programming and games and the 3D environments on those devices. I would say a lot of the things I'm interested in now, I was exposed to, but always through this funnel of being an architect.

**Severin Matusek**

Yeah. I'm curious, you said, your mother wanted you to become an architect before you were born. What did your mom do and where does this idea come from that you should become an architect?

**Greg Lynn**

Very funny. So my mother's grandparents were Czech, and very bohemian. They were glassmakers that moved to Ohio and they were all artists. They were not good artists, by the way. They were lovely people but my whole house was full of watercolours and sculptures and actually, there were some that were very good musicians. My whole life was full of this bohemian, Czech, art and craft and music.

**Severin Matusek**

Ok.

**Greg Lynn**

So I was surrounded by that and I was constantly drawing and painting and sketching and, you know, building models and that was from the moment I was a little kid.

**Severin Matusek**

In the early 2000s, I think, something exploded in your career. You became a very famous architect that became very well known for the use of computer and for the introduction of these

organic elements that were generated through the computer into architecture. I think Time Magazine named you one of the 100 most influential designers or architects in the world and things really blew up as far as I saw. How did that happen and how did you perceive it, to suddenly become a superstar in architecture in the early 2000s?

**Greg Lynn**

Ok, well, there's a saying that Beverly Kipnis said, once, 'never have so many been so famous to so few'. Blowing up in the field of architecture is not really blowing up but I think what happened in the 2000s is, there were a lot of people experimenting with the computer, and they were looking for happy accidents. They were really describing their work as if they were artists. An artist doesn't ever tell you systematically how they work. I think I was one of the few people able to say, this is the principle of the tool, this is the consequences of the tool and these are the opportunities for the tool. Most other people would just say, I did this, then I did that, then I did this and then look what I made. I would really just say any success I had in influencing people was just being able to describe things in a somewhat logical manner, which was easily understood.

**Severin Matusek**

Do you think that was because you were exposed to computers at such an early age, since the early 80s, that you already knew the tools so well?

**Greg Lynn**

Yeah, I wouldn't say I knew them well, but I definitely had some intuition into how things work. It was easier maybe to understand but I don't know. There's a term I heard recently by Devon Turnbull, who is a graphic designer, who then became an audio engineer, and then a lifestyle fashion designer. He used this term called the keener, and he said, he gets interested in something then he'll spend a year or two having to learn everything about it. Not that he becomes an expert, but that he has to understand the principles of the thing. I'm the same way whether it's, you know, sailing, robotics, computers, you know, materials, you know. I really like to spend two, three years going very deep into a thing and understand it at a fundamental level. Not at an expert level, but as a fundamentalist.

**Severin Matusek**

I think another element of your work and your career is this interdisciplinary approach that you have. I'm just curious in, in how you think about it, or how you thought about it early on, because looking at your biography, we can see so many different and diverse names. It's not just that you build buildings, that were awarded one of the 30 most influential buildings in New York, but you have your work exhibited at MoMA, you have some of your objects in permanent design collections, you have designs with Alessi and Vitra , you curate exhibitions, and you work not only

with institutions, or museums or corporate clients, but also with someone like Nike, for example, on designing a microclimate chair. I guess that the traditional career of an architect, once they had the success that you had in the early 2000s, coming up with new ideas for new forms of architecture could have said, I'll just do that. That's how I'll make money. That's how I became famous. I'll just do that for next 30 years, but instead, you went into many different directions. So how how did that come about? How did the collaboration, for example, with Nike come about because you're an architect. I guess Nike doesn't work with too many architects on creating chairs. So how did it happen?

**Greg Lynn**

Look, if given the choice between being the smartest person in a room or being in a room full of people smarter than I am, I always want to go to the room with the people smarter than I am. Any notoriety I've ever had, to me the only use, is getting access, to become colleagues and friends and collaborators, with people that have more expertise and knowledge than I do, in other fields. I really love just listening. I like to listen more than I like to talk usually and so I just like having a network of friends and colleagues and mentors, who do something different than I do, to provoke me because I really do get bored very easily. I tend to like to do something once, but not do anything over and over again. So, being successful at something, and then turning that into a successful business, is not always what I've wanted to do.

I've liked to take something that was a success and do something more pioneering, that's more successful on the back of that, rather than just stopping and refining. I'm not a person that refines. I like to think things are refined and elegant but I don't like to spend 50 years refining the same thing over and over again. The thing that bothers me the most in life is having somebody say I have a signature. It's like when I used the term blob, that was the worst moment in my life because it just stuck. It became a stylistic thing and I don't really believe in the currency of style or that kind of thing.

**Severin Matusek**

Has there ever been a moment where you were kind of out of inspiration and tired? Or you were like, 'I just don't want to deal with this computer anymore?' You know, where you were kind of like, out of curiosity? No? It just keeps on going and flowing?

**Greg Lynn**

No, no. It's more I wish I had more time to do other things. I'm constantly, you know, I missed that opportunity, this is something I wanted to do that I didn't execute on? I wish I would have done it because now it's gone. You know, the window for these things is very short.

**Severin Matusek**

Actually, I should have asked it in the beginning but as someone who is so active and so busy in so many places; teaching, working, being a CEO of a company. I guess, for the last decades, you were traveling a lot and that probably stopped a year ago. So how was that year without travel just being in mostly one location?

**Greg Lynn**

I was with my family, with my wife and children most of the time this last year and that's been like a gift. They're adults and so I didn't think I would ever have six months with them, ever again, like six continuous months. I thought that was gone. That was nice, very nice actually. Discovering my local neighborhood and really focusing on Venice Beach and all the things that made us decide to have a family here. It was great to rediscover that again even though there were a lot of things we couldn't do we still benefited from that.

The thing I miss the most is all of my professional and social relationships, because when I'm in Vienna, I'm seeing a group of people consistently for 18 years. In London there's people I see. In Milan there's people I see. In Pontedera, Italy there's people I see. Then there's a lot of people I see in between. I go to Japan every year. All of those relationships, I tried to sustain with Zoom calls and coffees and drinks. It just doesn't work. That whole aspect of my life has been put on hold and I can't wait to travel again to just nurture those relationships. I hate being on planes and I hate travel but I actually like all of the friends and colleagues I have all over the world and seeing what they're all doing. So I missed that a lot.

**Severin Matusek**

These friends and colleagues, can we imagine them as being from a very diverse group of people? I guess it's not just architects and designers. Do you use these relations shapes and his friendships as well as modes for inspiration for moving beyond your own imagination, for discussing, for getting new thoughts?

**Greg Lynn**

Certainly. I'm a big believer in the future is something that we all just make happen. If you're not happy with something, you need to just change the world, so it's the world you want to live in. I don't believe in adapting to things, I believe in people changing it and frankly that network in my little world is the group of people that I see changing stuff. So it definitely just lets me know what's happening in the world. I feel right now like I'm totally disconnected from that kind of foresight about what's happening, because the people that are making things happen, I don't have as much contact with them.

**Severin Matusek**

I want to talk about spaces and future spaces. The focus of this podcast is actually how culture is changing through technology, and also how we perceive what culture is. How we participate in culture and create culture together. Obviously, technology is a huge part of that. I think already throughout the conference today, but also throughout the last episodes of the podcast, we had, a lot of critical conversations about technology, because we're talking more as a society about the negative consequences of technology, or the ethical uses of technology. I think you've also been thinking along that direction when it comes to this concept of civic spaces, that you talk about since a few years, the role of the architect in creating spaces that actually serve society and the way we behave. How do you think about ethics and technology broadly and how your practice as an architect influences that?

**Greg Lynn**

Well, it's a very tricky issue and it's consolidating, I would say, in a way that I've never seen. I guess the railways, those were in the United States private and it was a competition among private companies to connect goods to people through technology, It's not like it hasn't happened before but the railways ended up becoming regulated and managed in a way that was coherent. It's not that there weren't ethical problems. There were a lot, but it worked.

Then when you look at things like communications networks and utilities and electricity, I think of those things as somehow having a public aspect to them. When I see what Scott Galloway, who's a professor of Business and Marketing at NYU, he calls them the four. Amazon, Google, Facebook, Instagram, let's say Snapchat and Apple. Those four companies manage so much technology, and so many services, and Amazon is just chewing into the other three so that they may be the one technology provider when it comes to searching and authority on ideas. Now, everybody, you just go to Google. All my students, they just go to Google and so they're relying on Google, they're maybe soon relying just on Amazon. For information, for cloud computing, for vehicles, for delivery, for purchasing goods, and now for food, so much of this is so linked to technology, and especially with COVID, more than ever linked to technology.

So it is maybe an issue with more the consolidation than anything else and frankly, you can't take it away from people. You can tell somebody, you should shop at your local store rather than have everything delivered by Amazon, but what do they want, they want everything delivered by Amazon. People don't really vote or they don't vote with their pocketbook when it comes to this. The services are so attractive and the companies are so successful, that everybody wants an iPhone, everybody wants their food delivered by Uber and everybody wants their packages delivered by Amazon. It's incredibly concerning.

**Severin Matusek**

How does that influence what do you do? For example, with Piaggio Fast Forward? Do you see yourself in relationship to these big technology companies? Do you see yourself in the responsibility to possibly designing technology and devices and robots that behave differently or build on different values than from these large technology companies?

**Greg Lynn**

Yeah, our challenge is that we're asking people to change their behavior. We're trying to be an alternative to having your whole life delivered to you on a couch. That's really how we started the company is to say, rather than getting on a Bird scooter to ride a kilometer, what if you could walk that kilometer and have all your shopping follow you? Instead of calling a rideshare, or jumping in a taxi, why couldn't you just do that with a robot? Or even instead of driving your kids to school in the backseat. Most parents say, the quality time with their children is driving them to school, because there they can take their phones away, and they have to talk to them. So it's better, maybe, we think it's better to walk to school and have a robot carry all the kid's backpack and stuff. You can talk to the kid while you walk and be aware of your neighborhood.

It's a change in behavior and it goes very much against this, 'we're going to do all the work for you'. You're going to shop on your phone, and we're going to bring it to you. It's definitely not aligned  with certain services, where people are supposed to just be like, you know, a nerd and things just come to them. Even without them knowing they want things people are selling you things that they just think you might want. We'd rather have you walk around and see things for the first time rather than push things at you and deliver them.

**Severin Matusek**

I just remember that when you talked about the robot - and also in your article about robot etiquette, which I found very interesting - you talked about that, yes, the machines and the robots that you create, and that you believe will will be part of our future should basically mimic and support already existing behavior, rather than super imposing something that an engineer thought out in a white room. Then now you said that as well as that, there are already certain values and worldviews as well built in. Probably values and worldviews that I as well agree with. I totally agree we should work more and I want cities to be more walkable and less for cars but so is there a tension between those two, because if you would just observe how people behaved, then you would probably not build a robot that encourages them to walk, you would build an app that serves them food on their couch?

**Greg Lynn**

The robot that serves you the food on your couch, there are thousands of brilliant people working on that problem and we do think that there's space for both. *We do know that 100% of people's lives just can't be spent on a screen on their couch having things delivered to them.* So that's for

sure. We just want to be that alternative. We have found with COVID that solving 100% of a problem with a machine is really hard. Having a car drive itself 100% of the time is a very hard problem. Having a car drive itself 90% of the time is actually practical now but that 10%, it's hard and it could take fifty years to solve that 10%.

It's the same thing with us. I mean, that's why we put some of our technology on other people's robots. For construction sites and for agriculture and things like that because there is a place for a full replacement of a person's work, or full replacement of a service with a robot but even then you have to interact with people. At some point, maybe at the beginning and the end, or maybe on the journey, you have to interact with people. We're just focusing on that part to make these machines be more human, not human, that's wrong but to have more etiquette, so that people can interact with them without losing something.

**Greg Lynn**

We hear from people that have shopping centers and things. They have a zero robot policy, because they don't want their shopping center to feel like a warehouse and they don't want robots getting in the way. So a lot of times when our customers will even walk into a shopping place, a security person will say, we have a no robot policy here, not because of safety, but because of the atmosphere. We're trying to solve that thing, so that they move with people in a way that you don't feel like you're having to get out of their way or they're too slow. If you take a self driving car approach, and put that on a sidewalk, it's a disaster, because the sidewalk is more dynamic than a street, much more complex.

**Severin Matusek**

I think you use the word partnership between humans and robots, which I think is an interesting word. It's a partnership. What kind of relationship do we have with robots in the future? I think, is a question a lot of people ask themselves in the light of artificial intelligence, the news of more and more robots are going to replace jobs. What is the future of work? Have you thought about this when you use the word partnership, that this is not something, maybe that robots replace humans, but rather humans and robots enter some sort of partnership?

**Greg Lynn**

Yeah, I mean, we think of robots as robots and so it's funny, because in some situations, people will say, the robot needs to be your friend, or like your dog or your cat or something like that. We don't really think that that's our job, to replace the social part of humans, we don't believe in replacing that human interaction socially with a robot but we do care about how robots interact with people. We also don't want to replace workers, we want to power workers, and we don't want to replace, you know what we really want to replace is cars. I mean, if there's one thing that we want to substitute, it would not be a person, it would be a car.

**Severin Matusek**

So when you say you want to replace the car, and you know, you also mentioned micromobility as a major trend with scooters, electric bikes, I think things that actually accelerated a lot over the last few years. When it comes to envisioning a future, a desired future, the desired future of Greg Lynn, of the city in 10 years. How would that city look like?

**Greg Lynn**

What we've seen is that people are choosing to live somewhere because of the market, the restaurants, the schools, the parks, the sports places, entertainment, but that it's local, and they're not choosing to live in major metropolitan places. So even you know, San Francisco, Los Angeles, New York, Boston, their population is all dropping, and probably will continue to drop and even the population that's there is not living there all the time. There are people that are investing in residences and having second residences, but they're just not as dense as they were. Whereas places like Nashville, and Charlotte and Austin and Salt Lake City and Boise, Idaho, these places are booming. Sometimes 50 people a day are moving into these places, or 50 families a day are moving into these places.

I think that people are finding urbanism in smaller towns and cities, they don't feel like to have an urban lifestyle, you need to live in a major metropolitan place. You can find all those urban components in a slightly smaller place with a better quality of life where also the distances overall are smaller, but the travel distances are a little bit longer.

So for us, we're really focusing on those places and thinking about automation and robots. Rather than saying, well, this is a solution for Manhattan. First off, Manhattan doesn't need robots because they have subways and a lot of ride hailing and you don't need it but someplace like Nashville, you could really use it. So because there's tons of stuff to do in Nashville, and a lot of it is walking distance, but right now nobody's walking. Los Angeles, its neighborhoods, and powering those neighborhoods is even what we want to do in bigger cities. I could take what I have in my neighborhood and go find it in Boise, Idaho. I mean, I've been there. It's like there's these places now that have all the urbanism of Los Angeles or New York, or Vienna, but in smaller packages.

**Severin Matusek**

To conclude our conversation, I'm curious about your thoughts about the climate emergency. I think I read in an interview, that the one thing that's deeply troubling to you is the loss of the natural environment. When it comes to architecture and design, I think something that has been very prevalent over the last few years was human-centric design, which is I think, an approach that you follow, as you explained it, but now there is also these principles coming about planet

centric design, right? That everything we do and design, it shouldn't just be for humans and for our needs, but for the planet at large. Is that something you're currently thinking about?

**Greg Lynn**

I think we have to look at things at a little bit larger scale and with a larger lifecycle. I know a carbon fiber building. Carbon fiber is one of the most energy intensive materials you can make. So if you just said, 'oh well should we build in brick or should we build in carbon?' I think your average person would say, 'oh brick is natural, it's made from the earth, it's a great material' but when you look at transporting a brick, and the embodied energy, and firing a brick, and the weight of a brick, and then you look at the weight of the amount of carbon fiber we use, it's an incredibly green building material because you use so little of it. So net sum, it's better for the environment than building in brick but it's counterintuitive.

I think it's the same with a lot of things that there's a little bit of not marketing but I think what people think it's common sense, which actually doesn't make common sense when you really look at it at the scale of a planet. It does mostly come down to transportation, you know, like the glue-laminated wood industry in Austria, it's really great. It's one of the most sophisticated technologies out there and every Silicon Valley company wants to build with, wood panels, cross laminated construction. So they cut trees down in Washington, they send them to Austria to get cut and assemble them panels. They put them on a boat to Long Beach and then ship them up back to Washington State to build them at a at a headquarters and it actually would be much better to build it another way. It was the same thing with bamboo. You just want to be careful not to get on a bandwagon, but to always be a little bit critical.

**Severin Matusek**

That just reminds me what you said in the beginning of our conversation, that the role of the architect is as well to challenge and not to be the developer-friendly architect. So when it comes to climate change, is this something you think more architects should act on and understand the responsibility in maybe challenging some of these common-sense notions that in the end might not be what's best for the climate?

**Greg Lynn**

No, for sure, for sure and I think architects can have a lot of influence on those decisions if they take that on. I do think, with my kids. If there's one thing, well, there's two things they've grown up to believe in. One is a fundamental value of diversity, whether it's gender, race, economic, they believe in diversity in a way that no generation has before and they believe in sustainability and protecting the environment. I mean, these are the two values that they've been taught and hold true, much more than any other values. So I think this generation is supporting it and would

actually make the sacrifices necessary to make those decisions. So I think it's just a question of, how do we deliver on that?

**Severin Matusek**

I guess someone like you, who's also teaching at university, can be be a major part of that, right?

**Greg Lynn**

Yeah, absolutely. I mean, right now in the studio, we're looking at natural ventilation, you know, because of, you know, because of COVID, but also because of energy. So we're we're really trying to think like what are alternatives? Instead of putting filters in your, your climate system, what about just having Windows you can open? So we're trying to be, you know, anything is open for for a proposal right now and I would say a lot of it is being driven by sustainability and also now, kind of health and hygiene and safety.

**Severin Matusek**

So Greg, we're at the end of our time. Thank you so much for the conversation and finally, where can people follow your ideas? How can people engage with you or interact with you? Where should people find you?

**Greg Lynn**

Well, right now, what I care about is is people learning about Gita robots and that's at piaggiofastforward.com or also mygita.com. I'm curious. I love hearing all the feedback and I have like a little dashboard every day that tells me what people are commenting on and saying. So I think that's what I would love all the feedback on. It's the newest thing.

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This episode was recorded in May 2021 during Creative Days, an annual conference that gathers creative minds from around the world in Vienna.

If you're curious to dive deeper into the world of Greg Lynn, the references mentioned throughout the conversation and his work with Piaggio Fast Forward, check out the show notes in your podcast app. There's a list of interesting links waiting for you.

The Culture and Technology Podcast is produced by the Vienna Business Agency – The Vienna Business Agency supports businesses, the economy and the city to develop Vienna's creative industries further.

Over and out. Until next time.