Short Circuit 163

Anthony Sanders

Hello, and welcome to short circuit your podcast on the Federal Courts of Appeals. I'm your host Anthony Sanders, Director of the Center for Judicial Engagement at the Institute for Justice. If you haven't already, please check out our newsletter available at short circuit.org, providing weekly summaries of the often zany antics of the Federal Courts of Appeals. You can also check out our sister podcast Bound by Oath, which this season is telling the story of the right to a remedy and all the barriers placed in its way. You can also either give Bound by Oath, or even this podcast, a five star rating on Apple podcasts. We're recording this on February 18, 2021. And it's time for something a bit different as we do every now and then today is a special short circuit. And we have a special guest. He is Ed Walters. Ed is the CEO and founder of Fastcase, a legal research software company that some of you may have used in the past. He has a storied career as a corporate attorney, litigator, presidential speech writer in the White House of George H.W. Bush, graduate of the University of Chicago Law School, and bringing it back to short circuit Locklear to Judge Garza on the Fifth Circuit. He also is an adjunct professor at Georgetown Law and editor of Rail, the Journal of robotics, artificial intelligence and the law. Of the many things Ed could talk with us about it's that last bit robot law that we asked if he could come on for because who doesn't like robots, Ed, welcome to Short Circuit.

Ed Walters 01:47

Hey, Anthony. Thanks for having me. Hey, I should I should add the plug, man short circuit is awesome. That's sort of how we were introduced because I'm a frequent reader of the Friday newsletter, which is just an awesome, hilarious and always informative roundup of what's happening in the circuit courts.

Anthony Sanders 02:08

Thank so much. It's one of my favorite parts about working at IJ is for my colleague, John Ross to write those summaries and for me to laugh about them. So I'll pass on the good news to him of your kind words. And also, it just struck me short circuit. We're kind of coming full circle here, because not only a short circuit, of course, a podcast and newsletter, but a movie from the 80s about robots. So We truly have completed our mission having you here today, I think. So let's start off with a little terminology

before we get into maybe what led you to robot law, and then what robot law is all about? So this may be a little obvious, but what is a robot? And what distinguishes a robot from you know, just artificial intelligence, generally? And does it? Does it matter?

Ed Walters 03:04
Yeah. So I think that the classic idea of a robot is something that can sense, think, and act in the real world, right? So software does some of those things, but it doesn't necessarily act in the real world. And it's that ability to do real tasks in the world, or cause actual harms in the world that differentiates a robot from something that is pure software, or artificial intelligence or something else.

Anthony Sanders 03:35
Sure. And I in it, you know, sometimes it seems are too artificial, or skin deep, you might even say but that ability to interact in the real world, you know, that really pulls at how we think about the law, how we think about what is regulated, because it's really stuff that we interact with, that's regulated differently than say, you know, copyright.

Ed Walters 04:00
Yeah, that's right. And, you know, I tend to think of robots as combining some of the machine revolution of maybe the Industrial Revolution, and the intelligence revolution of the information or internet revolution, those two things come together in this robotics revolution, that creates things like autonomous cars that drive themselves and act in the real world. They wouldn't cause like a crash on your computer, they would cause a crash in the real world. That has much more serious consequences than getting the blue screen of death, or the spinning beach ball on your Mac. You don't want to see the spinning beach ball on your center console of your car, right?

Anthony Sanders 04:47
Yeah, that's something I tend to avoid. I kind of

Ed Walters 04:52
Like literally the blue screen of death behind the wheel.

Anthony Sanders 04:56
And for better or for worse, I have not interacted with that type of robot. But I'm, I'm sure it's coming all of our way, at some time or another?

Ed Walters 05:05
Well, let me just tell you, I think you may have. So this is really interesting to me. So we sort of imagine autonomous cars to be a, you know, magical transformation where the car does everything. But the truth is that your car, unless it's, you know, a classic car or something, unless you're running around in a 1970s, you know, Mustang or something, your car already does a lot of driving for you, if you slam on the brakes in your car, and your car's made since 2010. An algorithm is going to decide how quickly to pulse your brakes based on the road conditions, right? That is, that is a robot that's driving your car, in a lot of ways, the traction on your tires, and slippery conditions like the ice in Washington, DC today, is governed by software and determines when to spin the tires to keep traction on the road. There's all kinds of new cars that have lane assist or parking. If you drive a Tesla today, there's, you know, a handful of features that sort of keep the cars on the road or do some of the driving tasks for you. So I tend to think of it more like a continuum than an event. There's all kinds of these features in cars now, have been for years. And we'll just keep getting more and more of them. It's interesting, though, like the better these things get, the more invisible they are to us. We don't even think about them anymore. Cruise Control is like a robotic foot on the gas

Anthony Sanders 06:34
Isn't the quip that something is artificial intelligence until we're used to it. That is just technology.

Ed Walters 06:39
Yeah, that's right. That's right. software developers say that as soon as it works, we stopped calling it artificial intelligence.

Anthony Sanders 06:45
Well, so tell me, how did how did you get into this, the subject of robot law coming from the background that you have?

Ed Walters 06:54
Well, I'm a geek. And you will see this played out in our conversation, probably more than once. In my work at Fastcase.

Anthony Sanders 07:02
You're on the right podcast.

Ed Walters 07:05

Hopefully, it's a kind of a geek tolerant audience here at short circuit. But the work that I was doing it fast case, was increasingly algorithmic. And the specific thing I was working on at the time this came up was a feature called Bad law bot, which is designed to algorithmically figure out when cases have been overturned. So think about automating the, you know, hundreds of people who create shepherds or Keysight, every day to figure out whether cases are still good law. We've been building algorithms that do a lot of that work. And as I was thinking about this, I was thinking this is a function that was traditionally done by people. And thinking about whether you would regulate algorithms in quite the same way, whether an algorithm could have liability where a company using an algorithm to do something that people would do in the past would have a different kind of liability than if they had a person doing the same task. Anyway, I'm taking the train to New York, while I'm noodling this over, and I run into a friend of mine, Professor Tanina Rothstein, who teaches at Georgetown Law. And I said to her, you know, it's interesting, as, as I'm thinking about the responsibilities of algorithms, this is something that never would have come up when I was in law school in the early 90s. There should be a law school class about this, about how law thinks about things that change quickly, when to create new law, when to apply existing law, when you should reason by analogy from existing statutes, and when you should create an entirely new regulation or a statute, pick some frame like robotics, that changes very quickly, and then analyze what that means for tort law, criminal law, copyright law, constitutional law. And I said, you know, so maybe one day when my schedule opens up a little bit, you could help me pitch this to Georgetown, and I'll come teach it as an adjunct or something. And so Tanina called me the next day and said, "Hey, you know, good news. I spoke. I spoke to the dean about this. And the dean loves the idea, bad news. We need you to come teach it in like seven weeks out." So it was a great opportunity. And I'm always grateful to Georgetown for the for the opportunity to come teach. I now teach as an adjunct at Georgetown in the fall at the law school, and Cornell law school and Cornell Tech in New York City. In the spring, as an adjunct, originally the law of robots, and now we're doing a kind of a frolic and detour into just the law of autonomous vehicles, which I've been teaching at Georgetown for a couple of years. And I'm teaching at Cornell law school for the first time this semester.

Anthony Sanders 10:03

So when we're thinking about how the law interacts with, you know, robots artificial intelligence, whether whatever we want to call it is, is it primarily a question of we have problems today and what maybe outmoded, maybe not…statutes, regulations, case law, interact with that? Or is most of it still, in

a sense, anticipating what is to come in the future when the really hard questions will come? Right. The hardest questions I anticipate will come when we eventually have the Cylons with us for Galactica fans. But short of that, there's plenty to worry about, there's plenty to be excited about. So is it still, if it ever was, a futuristic sense of what most people think about it? Or is it really here? And now, this is what we need to grapple with?

Ed Walters 11:06
Well Anthony, I mean, it's interesting that it's both, but I'm constantly reminded that we are living in the future. In some sense. We are past the point in the future that Marty McFly went to, right? We are post Biff. Yeah, where's my flying car? Right. So we are living in yesterday's future. And a lot of these issues really are present to us today. The responsibilities of companies who moderate content with algorithms, even 20 years ago, when these, when the Communications Decency Act and Section 230 was being passed, the idea that you could comprehensively monitor content with algorithms was fanciful. You know, it wasn't even a consideration that platforms could do that sort of thing. Well, you know, that that world is sort of changed. How do we think about those responsibilities now that we're living in the future, and of course, the future always continues to rush out ahead of us. There will be mountains, beyond mountains, we will have more fully automated cars will have machines that can do more, but if we, if we traveled back to when you were in law school, or when I was in law school, and said, "Hey, you know, 99% of the volume of stocks traded in the world will be completely executed and by computers." We would say, gosh, that sounds dystopian. That sounds terrifying. You mean, we're gonna put most of the world's concentrated wealth, most people's retirement savings at the whim of unpredictable software algorithms. And yet, that's the world we live in today. Right? That's exactly the, the world in which we occupy. And so I sort of think about both things when I'm teaching the law robots or the law of autonomous vehicles. We need the law today, to be ready for the fact of today. And then we need to extrapolate that to tomorrow to what is likely to happen in the future. And the problem is that, you know, it's really hard for regulators to do that. Whether they're legislators or agency regulators, it's really hard to take a process of lawmaking, that takes a long time and apply it to things that change very fast. Well, so that's part of the tension of my class. Right? So when do you just apply the law of a different time? When do you apply the law of Henry Ford to cars built by Elon Musk? Right?

Anthony Sanders 13:53
Well let's dig into that a little bit. Of course, in in the common law, and in law, generally, we often reason by analogy. So this seems like that, therefore, this legal principle should apply to that perhaps we're going to twist it a tiny bit along the way. When people think about how the law affects machines,

you I think a lot of people might think, well, what's, what's the big deal? At bottom, robot is another machine and artificial intelligence, despite the fancy name is another machine. We've had laws for dealing with machines since the 18th century if not before. It's an extension of the owner of the machine and liability therefore follows from that owner, and, you know, we don't arrest robots like you and I were talking about before we started recording, we arrest the person who created or own the robot. So how do we analogize to robots? Do we analogized to as you say, “dumb machines,” do we analogize to domesticated animals, which I think actually are treated a little differently than machines or minor children? Or, you know, what, what is the proper way of doing that? And maybe, rather than putting you on the spot, how have lawmakers and courts thought about this so far?

Ed Walters 15:21
Yeah. So I would say that there's kinds of different ideas about responsibility in civil law and criminal law. In tort law, in civil law, there tend to be different frames of reference, right. And it's reasoning by analogy in exactly the way you said, in some ways, especially low functioning machines, or robots are considered to be like tools. Right? So you, you would consider it to be like a screwdriver, or a crowbar. If a criminal used a crowbar to break open the door of your house, right? You wouldn't hold the crowbar or the crowbar manufacturer are responsible for breaking and entering right? It is just an instrument, or an agent of the actor and the actor is the criminal who uses that crowbar to break your front door. A step up from that when machines are really acting in a more cognitive way. They're doing some things that are emergent, they are doing some things that are, you know, more creative or unpredictable, things that people themselves couldn't do, maybe, then you start thinking about natural probable consequences liability. This is from a professor Patrick Hubbard's great article on the subject. When someone creates a machine that is specifically used to commit crimes, imagine like a safe cracking machine, right, that uses artificial intelligence, to listen to the tumbler tumblers and figure out how to open the safe in some way, when somebody uses that artificial intelligence to then crack a safe, it is not a big surprise to anybody. And so you might imagine the machine or the machines manufacturer, having some sort of accomplice liability. And then for the most intelligent, unpredictable, emergent machines, you know, you have like direct liability, you could imagine in our future where machines are unpredictable, and in some ways, like not fully controllable by the person who owns them, that they might have independent liability. So that seems a little crazy when I say at the idea that your robot could have independent criminal liability for its actions. But I'll use a very simple example of this, which is an autonomous car. If you have an autonomous car, and you send it to pick up your grandmother, who has mobility difficulty, can't drive by herself. And on the way to grandma's house, the car drives 100 miles an hour through a school zone, right? The responsibility there is hard to assign, do you

assign that responsibility to the owner of the car, maybe in a civil way, if it creates some property damage, right, like runs over someone's mailbox or crashes into another car, should the owner of the car who's sitting at home watching TV, or maybe recording a podcast it's kind of hard to say that person should have tort liability or criminal liability for the action of the car, that they couldn't change in any way, there's nothing they could do to rewrite the software of the car to make it safer. It just sort of independently kind of creates this consequence. And so the, you know, the question there really is, should the car itself have liability? Should the operator have it like way Waymo or Uber? Or Tesla have responsibility for those actions? Should it be like kind of a no fault system where society just says in order to have these machines, these unpredictable consequences are just table stakes. And so we should just have insurance that pays out in those circumstances. And I think the biggest thing of all of this is, we have other examples of these things that we can draw on from the past. They don't always perfectly map on to the events of the future.

Anthony Sanders 19:33
Well, so the parallel that I'm thinking of is products liability law for you know, a product that you use, as it's intended to be used, and yet it still screws up and there's some kind of injury or damage because of that, that no as modern product liability law has evolved that goes to the manufacturer of the product, perhaps the person who sold you the product? But perhaps not the actual operator of the product if he causes harm to a third party? How, how is your example of picking up grandma? How is that maybe different than say just you know, I use a lawn mower and it accidentally goes off into my, my neighbor's yard?

Ed Walters 20:22
Yeah, well, so permission to be somewhat nerdy about products liability for a second?

Anthony Sanders 20:27
That motion is granted.

Ed Walters 20:29
I'll allow it. So, you know, the traditional modes for product liability are things like, there is no warning that is supposed to be there. Or you can have a manufacturing defect, this, this autonomous car doesn't match the blueprint in some way. And that's we're not talking about either of those first two, though in plenty of warnings in the car, the car in our example, will match the blueprint perfectly. The last part of products liability is that there was an alternative design that the manufacturer should have

considered that would be safer. That's a really hard case to make, you know, at least for most litigators, who are going to say like, you know, there was a, there was an accident, you hit my mailbox, and you need to pay for it. To bring a products liability case, for most damages, in the absence of very great harms, is going to be almost impossible in the expert witnesses, you would have to bring to make a product liability case, in a circumstance like this would be very expensive for anyone to carry, at least on a contingency basis. And you're gonna have to go against, you know, Waymo or Tesla, the world's greatest experts in creating these systems. So the idea that you could show products liability in a traditional sense that there is an alternative design to the one tested for 3 billion hours and simulators, you know, seems like a hard case to be right.

Anthony Sanders 22:00

Well so, I just really like this example of the car going 100 miles an hour, maybe we can stay with that. So for. For there's many say, products liability law doesn't give the result that we think is best from whatever standard. So there's different ways that law could address that. You have some folks like myself, libertarians who are fans of work of theorists like Bruno Leoni and Friedrich Hayek, who liked the common law method, and that, by analogy by evolution of the common law, we're going to get to a point where courts can address that better. Of course, there are some as Hayek himself noted, there are some ways that that doesn't work. And perhaps you need legislation. Now, of course, these days most of these problems are going to be addressed by legislation, whether through the legislature as I know, some states have tried to do with autonomous vehicles, or you get a bunch of experts in the modern regulatory state you issue some regulations. Where on the continuum of that lawmaking does it seem like things have been most optimal, so far, have actually worked in practice, when the sausage is actually made, and whichever you're looking at, and in which is maybe most hopeful and most dour? As we look to the future?

Ed Walters 23:33

Well, that's a great question. So I'll try and break it into parts. You know, I love the idea of reasoning by analogy. And we actually have a lot of law in the U.S., a lot of common law, dealing with vehicles that seem to have a mind of their own, and they cause accidents, and casualties in ways that surprise the driver. And that's horses. So there's literally 1000s of cases in the US of accidents caused by horses, autonomous vehicles, in some sense, that, you know, swerve out of the way or, you know, ride off

independent of a driver, you know, without a human in the in the loop, and create all kinds of accidents, right. And so one of my most fun areas of research has been into the law of the horse in a way that the law, the common law of what happens to these autonomous vehicles before the Motor Carriage, and that's really interesting. So there is a, you know, a whole vein of very classic torts scholarship about who the lowest cost avoider is, and the you know, reasonability precautions that are taken by the trainer of a horse or the breeder of a horse before selling it to someone who operates it. And I think that has a very interesting application in autonomous vehicles, if you sort of think about the Waymo's or the Tesla's as horse trainers in some way, who establish the code, and the training set for, for the literal horsepower that people use to operate an autonomous vehicle. And so that's, I think that is an interesting kind of opportunity to reason by analogy. And I'll just say that, you know, there's a great debate about this actually about literally the law of the horse, that I use it in classes. It comes from the very first law of cyberspace conference at the University of Chicago, my third year there in 1996. And, you know, scholars from around the world came to Chicago, to think about this new world of cyberspace and how we might establish law that governs it. And the keynote for the first day was Seventh Circuit, Judge Frank Easterbrook, who said, and I'm paraphrasing, “many of you have come to the University of Chicago with the idea that you're going to create a law of cyberspace: don't, you will screw it up, as you always do.” And he actually gives a speech called the law of the horse saying that, you know, the University of Chicago prides itself on not having classes on the law of x. Because it you could, you could certainly do a class about the law of the horse about, you know, transactions involving horses, torts caused by horses, horse betting cases. But it wouldn't eliminate either the individual case of horses, or any of the broader categories of torts, or criminal law, or gambling law, or commercial transactions, right. And so what he said was, we don't come up with a new kind of law, for every new thing in the world. We apply existing law, to new facts, whole history of common law. That's the way we should deal with things that are new. Don't create a law of cyberspace, you are dilettantes, you are not cyberspacians, go home. Right. He does say, by the way, you know, the most important thing is simply to establish clear rights. And then take as much friction out of the commercial private transactions between people as you can kind of a Coase theory, idea there that people can engage in private transactions to reach efficient outcomes. And then, you know, really, once you've created those bargaining institutions, get out of the way. So the keynote on the second day was a then 34 year old Larry Lessig, who said, “Yes, of course, Judge Easterbrook is right, as he always is, we always apply existing law to new facts, except the whole history of common law is the history of except, it's the history of exceptions that we create along the way.” Because sometimes when you apply existing law to new facts, the facts are so different, that the outcome seems perverse. And so you create an exception, right? The Fourth Amendment protects these kinds of communications, except when they're transmitted

through a third party. So you have the third party doctrine and exception to the Fourth Amendment. Right. And Professor Lessig says in the speech, and then an article in Harvard Law Review, called what law of cyberspace might teach. He says, "look, sometimes the new facts are so different, there is an additional architectural feature that is not present. Or there is an architectural feature of the real world that doesn't exist in cyberspace, that when you apply the existing law to the new facts, the outcome is broken. Right. And so, of course, Judge Easterbrook is right, we should always apply existing law to new facts, reason by analogy. Except, sometimes the facts will expose a latent problem in the law that we couldn't see until the new facts are present. And now that we see them, we might have to re-examine the whole law or create an exception for these new facts." And that's, that's kind of the frame that we take in the law of robots and the law of autonomous vehicles. We will say, copyright law always assumed that you could write only so many melodies in a year. When you can mathematically create every melody that is possible, and submit them for copyright protection. Do we think differently then, about what Copyright protects. By the way, this is a project that my colleague Fastcase, Damian Reel undertook. It's a project called "All the music." He and a software developer, created algorithmically, mathematically every musical composition that could be composed for the eight major keys and submitted them to the Copyright Office for copyright protection, and then release them cc zero into the public domain, saying nobody can copyright original new melodies anymore so that they are all protected in the public domain going forward. And so that's kind of the central premise of this class, how do we rethink the law in the presence of machines that make the decisions that people use to how do we rethink their responsibility? How do we rethink their agency? And does that make us question any of the premises of our existing law?

Anthony Sanders 31:05
Okay, that's all fascinating. I'm gonna back up just a couple sentences there. Every tune in all eight keys that could possibly be made?

Ed Walters 31:18
Yes.

Anthony Sanders 31:19
Isn't most of that just random? You know, noise? Not melodies?

Ed Walters 31:21

Yes. Well,

Anthony Sanders 31:25
how do you? How does the guy the Copyright Office, like, listen to all that stuff? It sounds incredible.

Ed Walters 31:30
At the Copyright Office, they don't have to listen to every melody for copyright protection, any more than they have to watch every YouTube video to grant a copyright protection.

Anthony Sanders 31:42
But and by the way, do you mean that like, a melody must mean a few measures. And then you can copyright those few measures, not like entire works that they made on a computer?

Ed Walters 31:54
No, it's just an

Anthony Sanders 31:55
infinite number of monkeys banging on notes.

Ed Walters 31:59
Well, its something like that, right? So, so yes, and Damien Reel, the kind of architect of this gave a great TED talk about it, that you can find online. But some of the, the idea was that all of these artists were being sued, because their melodies, maybe, incidentally, echoed a melody from a song that they never heard, right, and so to win at suit, they were sort of forced to have to prove these negatives to show that they had never heard the song before, which is almost impossible. And so the idea is, as more and more time passes, the creative space for music becomes more and more crowded. And so, you know, there's a great suit that Damien talks about, where George Harrison is sued for a song that, you know, for copying a song he had never heard. And he says, like, you know, what am I supposed to do? Like, how am I supposed to, you can't, you can't do preemption review for every melody. And so the idea that Damien and his collaborators had was, if we, if we just consider tone composition, almost like math, right? You shouldn't be able to copyright math, you shouldn't be able to copyright, the sum of 42 and 197. Right. And so they basically created all of those melodies, submitted them for copyright protection, and then release them through a Creative Commons license into the public domain. So that

anyone working in the white spaces that existed as of the time they did that project, can do so without fear of copyright lawsuit going forward.

Anthony Sanders 33:57
What was the outcome of that, by the way?

Ed Walters 33:59
Oh, well, so I think it's still pending. But I haven't seen a lawsuit about it yet. But at least as of right now, this is a tag and release program for music.

Anthony Sanders 34:11
Wow, wow. Well this is, of course, usually a constitutional podcast. So let's, let's do a little bit about that, you mentioned the Constitution at one point, about how robots intersect in the Constitution, how we should think about in the future. So I have a couple questions about that regard. I know that there has been claims made and I'm not exactly sure what the latest is on it, but although it hasn't been decided by the Supreme Court, but the argument is that coding is speech, right? If I write out computer code, that for some kind of computer program to do whatever, that is, that's my speech, just like if I was writing a novel and so that, that is First Amendment protected. If the government did something like try to censor that code or try to regulate that code in some way. Now, on the flip side of that, this is like what your colleague was doing with music. If I come up with a computer program, that then in turn is going to speak, what we would look think of as actual speech. So say, let's say it writes a poem or a novel or short story. How do we …

Ed Walters 35:27
Like what if it criticizes the government?

Anthony Sanders 35:29
What's that?

Ed Walters 35:31
It could criticize the government?

Anthony Sanders 35:33

Sure. Right So is the outcome of that? it's not what I composed, I compose the thing that composed it. Is the outcome of that speech? And if so, who is protected by the Constitution? Is it the coder? Or is it the computer program?

Ed Walters 35:51
It's an awesome question. And I've often wondered whether the answer to that would depend on whether the Constitution of protection is a right or a Liberty? So if it's a positive, right, granted on somebody, I think you'd have a pretty strong case to make that you'd have to be a natural born human person, or maybe a corporation, maybe an artificial person to exercise that right. Right? Whereas if it's a Liberty, Liberty is really meant to be a restriction on government power. And it might not matter in quite the same way, who is doing the speech? So the First Amendment, you know, "Congress shall make no law," this is maybe classically designed to be a restriction on the government's power. In fact, it starts with the object Congress. And so would it matter whether the speaker is a natural born person, that human person, or say, an artificial person, like a corporation, and the Supreme Court has been pretty clear on this, they basically said, it doesn't matter whether it's a natural person or an artificial person. It's a restriction on the power of Congress. And so I think there are people who would say, look, if a machine is creating original speech, Congress probably doesn't have the right to limit that speech, regardless of who the speaker is. If it's a citizen of a foreign country, if it's an alien from another planet, if it's a machine that thinks a lot about the right way to regulate the government, if IJ creates libertarian bot, that begins criticizing individual sections of the Code of Federal Regulations. Can the government silence or censor that bot? And I think what you'd say is probably no. Right? I think you would say no, it's not that we have to make the that bot into a person or a, you know, human or something. You would probably say that the question is really about Congress's power.

Anthony Sanders 38:11
Interesting. Because we do also have in the law, and this, this was particularly pronounced in say Heller and the second amendment case, that the Constitution, and this is pretty well recognized, that the Constitution, at least when it comes to natural rights, rights that you that you don't have in your interactions with the government. That is a pre existing right. A right that the constitution recognizes. And of course, the Supreme Court says that sometimes, but sometimes the character, the Bill of Rights is as you just said, I mean, what jumped to my mind is, okay, well, when it's applied to the States, right, that is applied to the States through the due process clause is usually the 14th amendment, usually how the Court has said, but many people argue including us at IJ that it should also be applied through the privileges or immunities clause, which are about privileges or immunities, which are thought to be

the same thing as rights, not just a restriction on what the government does. And I could see a point, yes, where it came to when we're trying to figure out what this robot is, is it a person? Is it a, like a corporation? Is it something else? That what side of that mirror you're on could make a difference?

Ed Walters 39:34
See, I was going for like the relatively uncontroversial first amendment example, right? And here you are arming robots. I should have known that when I come on the IJ podcast like the first thing you're going to do is give the robots guns. If my Tesla is armed next year. I'm blaming you.

Anthony Sanders 39:56
Well, I hope that the whatever position Tesla is in that it's the Second Amendment rights are fully recognized. But let's move on to something else that Tesla would be worried about. And that's the Fourth Amendment. And, of course, roadside traffic stops or what have you. Now, there's this great case that many listeners know about one of Justice Scalia's, I think most well regarded cases on any side of the political aisle called Kylo. About heat sensors, sensing whether there were grow lamps within a house, right, and the court grinds down, Justice Scalia comes down to say that this isn't the kind of thing that would have been thought to an ordinary police officer could just see in a house from off from outside the property. And so therefore, it is something more akin to an actual search of the house and it's under the Fourth Amendment, it's considered a search and then presumptively unreasonable. So say a robot does a scan of the house, that sounds a lot like Kylo. But say you have a smart meter in your house. And this, of course, has happened. And the police just check with the power company and who's a third party to see what kind of power readings at what times a day have come out of the house. And of course, there's a million other million other examples there. How of robots in the law, artificial intelligence and the law and the Fourth Amendment? Come about so far?

Ed Walters 41:42
Man, we could do a whole hour just on this. I mean, there's a bunch of really interesting boundary condition questions about the Fourth Amendment here. So traffic stops are a classic example. There's the automobile exception. And I have a bunch of great student papers about whether the automobile exception should apply if there's no one in the car. Because a lot of the rationales for searching a car, you know, that created the automobile exception, aren't present if there's no one in the car. Because you don't worry about flight, you don't worry about someone reaching for a weapon. You don't worry about most of the rationales for that. If you suspect there's contraband in autonomous car, you can

track it, you can follow it, there's a there's a million things you can do to avoid the flight scenario. Other boundary conditions like this case in Baltimore, a couple of years ago, where they had an aerial drone fly over the city,

Anthony Sanders 42:37
which we talked about on short circuit. Yes.

Ed Walters 42:39
Did you? Yeah. So how long was it? It was like a year, right? It was like over the city for a really long time. Right. And it was recording in gigapixel, fidelity, everything that happened in the city now, you know, you can watch where a car drives, there's no Fourth Amendment privacy interest in, you know, where you drive your car, from your house, to your office, to the hospital, or whatever. But if a drone can track every movement of your car, over the course of the year, to show every place that you've been, is that really different? You know, if the police get outside of your house, and see you take your garbage out four times in a day, you know, maybe that tells them something. But if you have a drone that sits at someone's house for five years, looking in the front door every time they open the door, you know, listening for anything strange, you know, does that create a different kind of is that more like Kylo and less like a police stake out. And so you have all of these fascinating boundary conditions, where the facts in this lesson kind of way are different. There's an architectural feature of persistence, maybe, or the ability to sense things that were not previously possible. The presence of an architectural f eature like a smart speaker, that are different. Professor Jonathan Zittrain in a lecture last year said, if the police have a warrant for your arrest, can they serve that warrant on Waymo? So that the next time you get into your car, Google locks all the doors and drives you to the police department? And if not, why not? And so what's fascinating about this idea of the law of robots or law of autonomous vehicles, is that we get to examine the law and the presence or absence of these individual architectural features of robots that build cars or you know, robots to trade stocks, and see whether they affect laws, existing prohibitions, and whether you apply the existing law to the new facts, the outcome seemed right or if they seem perverse in some way that might suggest that we need a different analogy. And it's all about boundary conditions, you know, do we regulate them? Like machines like a screwdriver? Do we regulate them like accomplices? or animals or pets? Do we regulate them like children? Do we regul ate them like other artificial persons, like corporations or people? And it tends to be different in every individual area, every, each analysis is different. But we have to ask the questions, because these machines are not part of our science fiction future. They're part of our haven't quite figured it out present. And, you know, you are constantly in this balance between over regulating things that are new

without fully understanding them, and under regulating them, but having a whole train of abuses or perverse outcomes in law, because we're not thinking far enough into the future.

Anthony Sanders 45:59
Well, one question about the future that I'm sure some listeners are waiting for. But you and I discussed earlier, maybe it isn't a helpful question in this area is, what is the relevance of Isaac Asimov's three laws of robotics, they sound like laws, they're called laws, they regulate the robots, but you think they're kind of beside the point for what for what you're looking at.

Ed Walters 46:23
I love Asimov's three laws. I like Asimov's writing. In particular, there's a short story at the end of iRobot, called the evitable conflict, where we as a society have handed off in our future many of the responsibilities of governing a modern society, to algorithms and machines, so much so that people can't understand it anymore. Right? And when things start going haywire, nobody can figure out why. Because people can't anymore understand the complexity of the world created by algorithms to perfectly manage the means of production in the world. Right. And so, I love Asimov's fiction, and I love how much it reads on to the world we're living in today. The three laws I think are a little less interesting. We're not going to try and build three laws into stock trading machines, or autonomous cars. Really, it's a way of thinking about how ethically to build robots, right? And at least for my law of robots class, you know, the question is flipped on its head, it is really how robots and thinking machines that can sense things and think and act in the real world are a challenge to our existing law as limitations. How do they make us reconsider the law and how we accomplish these things? Just one small example copyright law, right? So in the law of robots, we talked about when robots can write music, which is today, by the way, there's a software called Emily Howell that creates original music. It's not great. But it's like, you know, better than some of the music created by my nephew, who is a professional musician. He can get copyright on itself. Is it good opening band perhaps? Yeah, maybe. So yeah, it'd be it'd be a good warm up act. There's a service from narrative sciences called quill that writes newspaper articles, right. If you if you read stock news on Yahoo, it's written by quill, if you read out of town baseball scores, articles in your newspaper, chances are they were written by quill from narrative sciences. Who gets copyright on that? If, if the Washington Post uses quill to create an article about an out of town baseball game, Mets beating the Phillies, maybe from the box score, and they use quill to created? Can I copy that article from the Washington Post website and put it on my blog? or sell it as part of an anthology or a book or something about baseball? and copyright doesn't yet have very good answers for this? You know, I mean, I think that copyright traditionally said, it has to be a person

who creates these things. There's a great article by Pam Samuelson who addresses this and says, as between the user and the creator of the software, and nobody at all, the copyright should probably go to the user that incentivizes people to create these materials. And, you know, the creator of the software gets compensated when you buy it. That's probably the right balance. But that article was written before we had Wikipedia. Right? I think Wikipedia and other user generated content services point to the idea that the economic incentive model of content creation may not account for all content creation, it might be possible to have content that is created, even where you can't internalize the economic benefit of it, or maybe not even directly, right. So that that might suggest that nobody should get copyright for machine generated articles. If quill software writes that article, it's not clear to me that, you know, either Narrative Sciences or the Washington Post should have any kind of intellectual property in it. And we don't have to make the desktop machine into a legal person, like a corporation, in order to vest it with copyright, either. The presence of software that can write music, or newspaper articles, might make us question the whole kind of economic incentive landscape of copyright, at least for things that are not generated by humans. And so that's what's really interesting to me from a from a legal and constitutional perspective, how the presence of these new facts makes us question or turn on its head, things that we have always assumed to be true. In some ways, robots are the ultimate Black Swan of American law. And that's what I'm excited about.

Anthony Sanders 51:43

Well, I think that is a great line to close on. We will be looking at where robots go from here in the future, what Black Swans may come our way. And I'd like to thank you Ed so much for coming on today. And talking a little iRobot. And for all of you, including the robots listening out there, I'd ask you all to get engaged.