

Kris Turner:

Hello, and welcome back to Wisconsin Law in Action from the University of Wisconsin Law School. I'm your host, Kris Turner. Today we're joined by Professor Jason Reinecke, Assistant Professor of Law at the University of Wisconsin Law School. Professor Reinecke's research focuses on intellectual property and innovation law, particularly patent law, and explores questions about how legal systems encourage innovation and how courts make decisions.

Before entering academia, Professor Reinecke worked as a patent litigator, clerked on the US Court of Appeals for the Federal Circuit, and served as assistant professor of law at Marquette University Law School. He also brings a very unique perspective to his work as a trained mechanical engineer and an alum of UW Madison. I'm out of breath already by going through all of your experience and all of your accolades. This is going to be a great podcast. Jason, thanks so much for joining us today.

Jason Reinecke:

Yeah, thanks so much for having me, Kris.

Kris Turner:

Of course. I'm looking forward to our discussion, but let's start with your journey and just learn more about how you got to where you are. What drew you to the law in the first place? What does it mean to return to Wisconsin and join the faculty at your alma mater?

Jason Reinecke:

Yeah, thanks. So I'll start with what drew me to the law. So when I was in college, a couple of friends of mine and I, we created this phone application that was designed to help people stay safe while they were, say for example, walking home alone late at night or something like that. And in doing that, we were considering starting a business and commercializing the product, maybe getting patent protection, and we also participated in some innovation competitions. In doing all that, it got me thinking about how innovation competitions compared to patents and what both of those things were and weren't able to incentivize us to do.

I can give you an example. A patent is a very speculative future reward that you can really only get if either somebody pays you for it or if you actually do commercialize a product. But that already takes a lot of money to commercialize the product in the first place, and we didn't have any money. In addition to that, patents were extremely expensive. They cost maybe \$30,000 to obtain. And so at the time, the patent just didn't seem like a viable way for us to get things moving.

In innovation competition, on the other hand, a lot of times they will let you enter before you've actually commercialized your product. So it was a lot more attractive for us, but the ones that we participated in didn't offer enough money to provide enough capital to really get things going. So that's kind of what got me thinking about all these different innovation policy levers. And I somewhat shortly afterwards learned that lawyers, or at least legal academics, think a lot about all these innovation policy levers and how we can best incentivize innovation. So that's what first got me interested, thinking about these really important questions about innovation.

On the second question, I grew up in Verona, Wisconsin, just outside of Madison. I was a Badger fan my entire life, and there was really no question in my mind where I wanted to go to college. I applied to UW Madison on, I think, the first or second day that applications opened. And I shortly afterward got my acceptance letter and I didn't even apply to any other schools. In my head, I just thought, well, this is

clearly where I'm going. It's where I always wanted to go. Why would I put the time in to apply anywhere else?

And it was very fortunate, because I had a really great college experience. I love the university, everything it has to offer. Yeah, I'll stop there just because words can't really describe how thrilled I am to be home and to be an active member of the university again.

Kris Turner:

We're very glad to have you return for sure, and I already hear that from students and the faculty that are enjoying working with you. It's been fascinating to learn more about how you developed that phone app. And you were kind of thrown into the deep end of here's how patents can work and here's a little bit of law in action for you that you can learn about on the spot, which is something I think a lot of people in the clinics here and then the students you work with also have had that background or experience. Have you run into students that have discussed that with you so far?

Jason Reinecke:

Yeah, I've had several students tell me that they have some sort of product in mind and are thinking about commercializing something. Notwithstanding that they're either an undergrad in the school or in the law school. And I've spoken with them a little bit about what their options might be and what the general cost might be and when they might want to think about obtaining patent protection or taking some other route. Yeah, I think it's been helpful for them.

And I think you're right, it's very pragmatically focused, right? It's focused on the real world and what people are really doing and how these different things can actually help people in real life as opposed to in theory.

Kris Turner:

We need the theory, but we need that in practice as well. And I think that you're doing a good job balancing those two aspects of law school. But for listeners who have heard the term patent and kind of have a general understanding but don't really think about it too much, can you give us a crash course please? Why should everybody just care about patent law?

Jason Reinecke:

Yeah, it's a great question. I think there's a lot of students these days, more so than in the past who come to me and say or think with all the stuff that's going on in the world right now, why should I focus on intellectual property law or patent law, as opposed to say immigration law or, pick your poison, some topic that is more heavily covered in the news. But I think patent law matters far more than most people realize. There's a ton of evidence that innovation is a leading driver of increased living standards and wellbeing. Whether that be through the development of better and lower cost products or otherwise.

So for example, televisions have dramatically improved over the past 30 years and at the same time, they've actually become far less expensive. And then perhaps more importantly, innovation has also brought us countless medical advances that have helped us live longer, better lives. We need to incentivize innovation because inventions are public goods. What I mean by that is they can be copied relatively inexpensively, absent some sort of legal intervention. So it may take a lot of money to figure out that a drug works and that I can actually sell it for some purpose, but then actually creating the drug itself is really inexpensive.

So without something like patent law, a pharmaceutical company may say, "Well, I'm just not going to engage in this expensive R&D efforts because if I spend billions of dollars developing this drug, then all the other companies are just going to free ride off me and develop the drug I created at a really low cost and undercut me in the market, and I'll never be able to recuperate all those investment costs." And so a critical question then is like, okay, well, if we need to incentivize this stuff, how do we do that?

Patent law is one of the key policy levers that we have to incentivize innovation. So at a really high level, patent law, if someone creates a novel and non-obvious invention, they get a patent and that patent lets them exclude others from making, using, or selling any products that incorporate the invention for a limited time. In many cases, that means the patent owner will be able to charge higher than competitive prices for their product and those super competitive prices are the reward for innovating.

So for example, a branded drug company will have exclusivity in the market, for example, for a certain amount of time so they can recapture some of their investment costs before other companies can enter. So to be sure, we have other levers as well, such as grants and price competitions, which I mentioned a bit previously. But patents nevertheless play a key role in incentivizing innovation. And I'll just lastly mention, the stakes are really high. If we're systematically giving out patent protection too frequently when it's not warranted, that means we're dramatically increasing the costs of some products for no return.

If we are systematically giving out too little patent protection, we'll miss out on important innovations altogether because we won't actually be incentivizing people to engage in these risky endeavors. In some fields, again, it could be a matter of life and death. Drug development again is a great example. If we offer too little patent protection, some drugs that may help people may never be made, or at least may not be made for many, many, many years so a lot of people will miss out on it. But conversely, if we give out patent protection when it really isn't warranted, then a lot of people are going to be priced out of the market for some drug for no reason and not be able to get it.

Kris Turner:

It sounds like a balancing test where you have to find just that right area where you encourage them enough, but not in a place where it's blocking people from actually getting access to these things. The engineering aspect comes to mind too, where if you have the patent law that doesn't allow people to innovate for say building bridges or just engineering in general, that could definitely lead to degradation of fundamental services that people rely on as well. But I'm going to shift gears briefly here. How did you choose to become an academic?

Jason Reinecke:

So I'd always been interested in teaching. I taught swimming lessons for several years. I was also a tutor for several years, and I really enjoyed both of them. First blush, you might think teaching swimming lessons and teaching law are extremely different, but they actually have a surprising amount in common. And then when I was an undergrad and while I was in law school, I conducted a lot of research and learned that I really enjoyed doing that as well. And I turned out to be really lucky because two of the things that I love have actually been combined into a single job, which is a professor. So it's been really great for me and I love it.

Kris Turner:

I feel very similarly about law librarianship with the research and then some of the teaching as well. I actually had a certification to teach high school students. That's what I was originally planning to do with my career. And people ask, "Well, what's the parallel between teaching high school students?" Well,

actually I taught long-term fifth grade as well. Fifth graders and law students, and again, there are things in common there. Would you be able to expand on that? What do you find that's in common between teaching swim lessons and teaching law students perhaps?

Jason Reinecke:

Yeah. So in both scenarios, you are working with people who are complete beginners in something that you know substantially more about. And there's always an initial struggle of trying to figure out, okay, what is obvious to me and what is obvious to them and what are they just not going to understand, notwithstanding the fact that I know it? You have to kind of put yourself back in the shoes of somebody you were a really long time ago before you actually knew the information.

And so I can give you an example in law, there's lots of times where I'll ask a question and I'll think, man, this seems pretty easy to me. And then some students will struggle with it. On the other hand, there's questions where I say, man, this seems extremely difficult to me. And then basically all the students get it almost right away, and I'm just shocked and thinking, wow, I thought this was really challenging. How did they figure this out so fast? And I think the same thing happened in swimming lessons.

And then another aspect of it is just trying to figure out what's the best way to convey this information? And obviously in swimming it's a little different than in law, but you're still thinking ahead of time, okay, this is the point I need to get across and what's going to be an effective way to convey that given the audience that I have?

Kris Turner:

Again, we are speaking the same language here, Professor Reinecke. I agree with you that sometimes it's very surprising to see what is taken right away and what takes a little bit more time for people to latch onto in law school, or in any given learning situation or learning environment there. And I do find that a great teacher will take the time to know that they have to put themselves back in the shoes of that incoming 1L or that swim student or that fifth grader that has never approached this topic before.

So it's reassuring to me to hear that I might be on the right track for a professor such as you, like this is the way to teach properly. So what a relief for me. This is a good interview so far for me. It's really boosting my self-esteem. I appreciate it.

But I want to turn to a little bit more of the background on your career, continuing off of how you turned into academia. You clerked for then Chief Judge Sharon Prost on the Federal Circuit, the court that handles the most patent appeals in the United States. What did that experience teach you about the judiciary and how important decisions are made?

Jason Reinecke:

Yeah, so clerking for Judge Prost was truly an honor and privilege. She's a really fantastic judge and I learned a lot from her. She was particularly good to learn from because she spent a lot of time explaining to us what was actually going on in the courthouse and how they were actually coming to all the decisions they were making. So I felt like I really learned a lot about what was really going on, including in the background. Perhaps the biggest takeaway that I think others can benefit from was just how much time and effort went into every single decision that the court issued.

Each case is reviewed very carefully by three judges and at least three clerks, so it's already six people. And then the clerks meet and they try to hash everything out prior to oral argument and reach some sort of at least clerk consensus. The court then holds oral argument. The judges talk to each other about the case. One of the judges will author an opinion, and then that'll actually be carefully reviewed by, I

counted at least eight people, including every judge or every clerk, I'm sorry, in that judge's chambers, and by the other judges on the panel and their clerks who are assigned to the case.

Most of the time, all the judges and clerks reach complete consensus, which is pretty remarkable if you think about it. If the opinion's designated precedential, then the entire court gets 10 business days to review the opinion before it issues. And yes, the other chambers absolutely do review these opinions. When that happens, that means the case is reviewed at least to some extent, likely by an additional 18 people, if not more. So lots of people are reviewing these opinions before they go out.

I think many commentators are often really quick to spend maybe 20 minutes reading opinion and then judging the Federal Circuit and the decision they made. I generally try to withhold judgment until I've carefully considered the opinion and the relevant briefing as well, although I'm sure I'm also not perfect in that. Clerking also really got me interested in thinking about a couple of things. First, how do judges reach their decisions? And a fair bit of my research is based on that. And then second, I've done a fair bit of thinking on the costs and benefits of having specialized courts, like the Federal Circuit, as opposed to more general courts like most of the other courts of appeals. And so a bit of my research goes into that as well.

Kris Turner:

You had mentioned that you've done some research into how judges reach their decisions and the costs and benefits for the Federal Circuit and elsewhere. Can we talk a little bit more about that? I'm curious to hear what you've found in your research so far.

Jason Reinecke:

Yeah, so I'll start with the first question. I wrote an empirical paper that looked at whether the outcomes of Federal Circuit cases were at least partly explained by the composition of judges who heard the panel. So basically is there panel dependency? And I made several findings. One finding is yes, the answer is it does matter to some large extent. On the other hand, there was a lot of evidence suggesting that the law, meaning what the actual governing legal principles were, played a far larger role, which I think is pretty significant. So they both play a role, but the law does play, I think, a substantially larger role or probably does.

And then another thing I looked into was there were some scholars who found in an earlier paper that some judges on the Federal Circuit appeared to be using summary affirmances, and by that I mean an affirmance without an opinion, to bury these cases that might otherwise create precedent that they wouldn't like. But they only looked in the specific area of subject matter eligibility in patent law. And it turns out that's the most controversial topic in patent law right now. And so I thought, okay, well, maybe that's happening in the most controversial area, but it doesn't really tell us if it's happening in other areas as well.

So I looked more generally at whether that appears to be occurring and it looks like it's not, which is good news for the Federal Circuit and for society. On the second question in terms of the costs and benefits of specialized courts, so I think that paper gives us a little bit of a window into this question. But I would say mostly the research I've done on this has been kind of slowly getting at that question, but I will just briefly mention a few things that people think about.

One is that specialized courts will more efficiently handle decisions because they are subject matter experts and very familiar with that area of law. And so one benefit is they can more efficiently handle a higher caseload. And that can be really valuable, not only because efficiency is valuable, but also because courts are faced with extremely heavy caseloads these days. So specialization, some commentators have argued might just be necessary moving forward. And then one of the big downsides

is the concern that specialized courts may become a little bit isolated and produce kind of a stale jurisprudence where there aren't very many voices involved.

And then relatedly that there could be capture because it's maybe really hard to capture 13 different courts, but capturing one court with a small number of judges might be a lot easier. And given the wide diversity of views and the wide amount of panel dependency there appears to be on the Federal Circuit, it just seems like that's probably not an issue at least for now, but those are potential concerns.

Kris Turner:

All right. And we'll link out to that paper that you'd written, the empirical one that shows your findings so everyone can read further on what you have discovered about how judges reach their decisions. So I'm going to step back. I think that we're starting to see an answer to this next question already, but I have to ask it anyway. So you're both a lawyer and a mechanical engineer. How has your engineering training influenced the kinds of legal questions that you ask and the way that you approach your scholarship?

Jason Reinecke:

Yeah, so engineering was all about logic and math, and I think that's actually surprisingly useful for studying law, generally more useful than people believe. But it's been particularly useful for me because I do a lot of empirical research, which involves programming, math, and statistics, and those are all skills that engineers work on while they're studying.

Kris Turner:

I think it's funny that people are surprised that logic and math play a big role in research and the law academia. Yes, believe it or not, you can use math skills in law school from time to time. It is a very helpful thing. You once said that courts don't always say what they mean or mean what they say, and lawyers need to learn to read between those lines. What do you mean by that and how do you teach students to develop that skill?

Jason Reinecke:

Yeah, so it's well established that while the law plays a critical role in judicial decision making, kind of like we just discussed, also as we discussed, judges are also greatly influenced by their own personal views, but judges don't openly admit that, particularly in their opinions. And likewise, some legal tests are a bit wonky for a whole bunch of different reasons. They might not actually make sense at all or something else. And again, judges usually don't openly admit that, particularly in a majority opinion where they're using it to try to persuade people that they're reaching the right outcome.

A good example is subject matter eligibility. Between 2010 and 2014, the Supreme Court issued four opinions that drastically changed patentable subject matter. And in an upcoming article, I'm arguing that the Federal Circuit has, without admitting it, subtly applied a more subject matter permissive rule in life sciences than in technology cases. Despite the fact that they definitely have not said that, and despite the fact that the same rule is technically supposed to apply to all cases.

And why is the court doing this? So the court's likely doing this because many of the judges think that patent protection is far more important in life sciences than in high-tech for a whole host of reasons. So for lawyers to really pick up on this, they need to learn two things. First, they need to have a basic understanding of the major policies and policy disagreements in the relevant area of law. They certainly don't need to be a legal academic, most judges aren't. But they need to have a basic idea of what intuitions and beliefs and policy preferences these judges are going to bring to these legal questions.

And then second, lawyers need to be really good at interpreting what cases are saying and understanding what does this test entail? Does this test make sense? Does it not make sense? How much judgment does this test leave for the judges? These skills do not come easy. And the first one I think is really challenging because I think a lot of students are resistant to the idea that policy is relevant to their future jobs. And particularly when an academic is saying it is because it's obviously important to an academic's job, and I think some students think that maybe we overplay how much policy matters just because it's so important to us.

But I spend a fair bit of time explaining to students why it does matter. And when I bring it up, I explain why it will matter to them and why it has mattered in the past. And so just the patentable subject matter is a great example. How could anybody predict or understand what the Federal Circuit's doing in that space without having a basic idea of what the policy debate is in patent law? If you weren't aware of the relevant debates about whether patent protection is more or less warranted in life sciences than in high tech, you'd be really confused.

Kris Turner:

Right. To almost have your head on a swivel for the awareness of the policy impact in your practice area is so important, and that is an additional burden on new lawyers or just any lawyers to stay aware of what the arguments are that will impact the outcome of your case. It's not quite, but it feels like a soft skill where you have to be able to read the opinion in a very special sense. And this is an additional burden for students.

So you're teaching students who are going to enter a profession that's increasingly shaped by different kinds of emerging technologies. So what skills, in addition to the one you just outlined, do you think lawyers need most if they want to work at that intersection of law, technology, and innovation?

Jason Reinecke:

AI is certainly changing our day-to-day professional lives rather rapidly, and I'm sure tomorrow's going to look a little different than today even. But at the same time, I do think the most essential core skills remain the same. To work in law, technology and/or innovation, I think someone must have a really, really solid understanding of the relevant area of law, such as patent law, for example. And second, they must be willing to really deeply learn the relevant area of technology.

Now note, I did not say that someone must have a technical degree or a technical background, which is a common misconception. Many of the best patent litigators I worked with had no such degree. But they were all willing to roll up their sleeves when they needed to and put the time in to learn the relevant technology and they enjoyed that. And some people aren't willing to do that. And if you aren't willing to do that, then it's probably not for you.

Kris Turner:

Something like GenAI, I think you and I could probably have another three-hour discussion about the impacts on patents or just innovation in particular. When you think about innovation in law today, what are some of the biggest legal questions AI is creating for the courts, lawmakers, and innovators? In a parallel vein, I'll also ask a follow-up. What excites you most about the future?

Jason Reinecke:

Yeah, so as you mentioned, these are really big questions. I think all of us are far from sorting these questions out, and if anybody tells you they're really confident in their answer, I'd definitely significantly question that.

Kris Turner:

I'd say they're selling something. That's what I would say.

Jason Reinecke:

Yeah, exactly. They're selling a point of view more so than... Yeah. So with that qualification though, I'll just flag a couple of things. First, how generative AI and copyright law interact. So do AI companies engage in copyright infringement when they train their LLMs, if that training involves copyrighted works in some fashion? And if so, when is that use fair? Those are important questions.

Separately, when inputting information into an LLM, does it matter if the information that I feed into it is copyrighted? And when would there be copyright infringement and when would that be fair use? And then who's liable in that circumstance, the person who's using it or the AI company or both? And then we have those same questions relating to the output from an LLM. And getting these questions right will really greatly influence the future of generative AI and creative innovation. And I certainly don't have answers to them. Although I know our faculty member, BJ Ard, wrote a paper discussing many of these issues that I thought was really helpful.

Generative AI has also made innovation less expensive to produce. I think this is particularly true for software, although it's happening with almost every area of technology. I've heard many people say that their productivity creating software is now, depending on the project, maybe two to a hundred times faster than it used to be. Again, depending on the person and the project. That's an incredible difference. If innovation's becoming that much easier to produce, it ought to be harder to get a patent because the invention is more likely obvious, and patent protection would seemingly be a little bit less necessary.

It also should be harder to get trade secrecy protection because the information is more likely to be readily ascertainable by others because they can just create it themselves. Relatedly, if innovations can be made more quickly and inexpensively, I think intellectual property becomes something that we don't need as often for incentivizing innovation. And then sorting all this out is going to be really critical to make sure that we're getting that balance right that we discussed earlier.

And then on your last question about what I'm excited about, so I don't know if it's clear exactly how excited we ought to be about the rise of AI yet. There's ways in which it could go really well or maybe not so well. So I think the optimist in me is excited about the prospect of AI to continue to dramatically speed up innovation. Because as we discussed, that's a leading driver of increased living standards and wellbeing. So if we're able to dramatically increase the rate at which we're innovating, that'll end up helping out a lot of people.

Kris Turner:

And you had actually co-authored a paper called Can AI Hold Office Hours? That discussed this to an extent to actually test the practical aspects of AI in academia. Could you discuss some of your findings that you and your co-authors uncovered in that paper?

Jason Reinecke:

Yeah, so I co-authored a paper with Amy Motomura, Lisa Ouellette, and Jonathan Masur, and we created a list of questions that we had either received from students or were like ones that we had received from students in our patent law course. Although the questions were also very similar to ones that legal practitioners may ask as well. And we fed them into various large language models and compared the answers that these tools gave us to our model answer.

And we found that the models who do really amazing things, in many cases, they provided very good answers that were much like the ones that we gave, although a little bit longer. But also the AI tools gave us incorrect answers in many circumstances as well. There were answers that we'd be very embarrassed to give and that could be very harmful for learning if somebody didn't spot the errors.

So our conclusion was that, at least at the time that we did it, which is relatively recently, the AI tools were not ready for prime time to answer all these things without having people spend a lot of time double-checking the work. And then another difficulty was that the responses were very long and they were a little bit difficult to grade because sometimes there'd be incorrect language mixed in with a sea of correct language. And then sometimes the language was deceptively wrong. And by that I mean it was wrong, but it wasn't super easy to spot. So it was kind of odd.

So that's what we found. It was a really helpful project both for learning how much should students be relying on this, but also for trying to figure out how much practitioners should be relying on these tools without doing their own independent research.

Kris Turner:

I found the same concerns in my own work with GenAI where it'll generate an answer that looks very good and it's hard to spot that very, not subtle, but there is something that's misrepresented or almost nefariously wrong about it. It's just like a not outright hallucination, but it's also not something that's exactly correct. And that can be very hard to suss out, grade, or understand from a student's perspective. The paper is a great example of the tipping point we're at right now with the new technology innovation that's happening out there about the excitement you had mentioned previously.

How excited should we be? Unclear. There is potential and there's our concerns as well. But this all leads into my final question for you because as you look at the upcoming year at UW Law, what are you most looking forward to, both in your research and in the classroom?

Jason Reinecke:

Last year I taught around 40 students. This year I'll be teaching around 200, which is really exciting for me. I'm really looking forward to getting a real chance to engage with a really substantial fraction of the student body.

In terms of research, I have maybe three or four active projects that I'm working on with others and I just really enjoy the process of working together with other people and the collaborative process and co-authoring with others. And I'm looking forward to seeing where these empirical projects end up going.

Kris Turner:

And we'll be linking out to all of Professor Reinecke's scholarship, both on SSRN and in the University of Wisconsin Law School Repository. Professor Reinecke, thank you very much for joining the podcast today to discuss your journey, your work, your research, your classroom work with students. I look forward to hearing more about where your scholarship is going and what you uncover next.

And then again, to find that list of Professor Reinecke's latest scholarship, you can visit the University of Wisconsin Law School digital repository or Professor Reinecke's page on SSRN.

Thank you all for listening. This was Wisconsin Law in Action from the University of Wisconsin Law School. To hear more conversations with our faculty about their research and its real world impact, visit wilawinaction.law.wisc.edu. You can stay up to date on Wisconsin Law School scholarship by subscribing

to this podcast via the Apple iTunes store or Spotify or follow the Wisconsin Law School on social media for updates on faculty news and publications.

I'm Kris Turner. See you next time and happy researching.