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**(Panel III) Intellectual Property and Artificial
Intelligence**

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FEATURING
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Kirti Gupta: I would like to invite my co-panelists for the panel on Intellectual Property and AI with me. So I'll be moderating this. And I don't think I shared this, but I'm also a vice president at Cornerstone Research, where I serve as an economic expert on IP and technology issues. So focusing on IP and AI issues is one of them.

And my co-panelists here are Andrei Iancu, who you've all heard about this morning. He is a partner at Sullivan & Cromwell, and also a senior advisor at CSIS. Co-founder of the Renewing American Innovation Project. And previously he was the undersecretary of commerce for IP and director of the USPTO. And Andrei has taught patent law at UCLA earlier in his career. And I didn't know, Andrei, you were also an engineer at Hughes. So another engineer on the panel.

And then I'm joined with Francesca Ferrari. She's a professor of civil procedure at the University of Insubria in Italy. And she has extensive academic background, having served as visiting scholar at Harvard Law School and Maastricht University. So she's been publishing quite a bit on some of these AI and IP issues.

And then I have with me Harold Furchtgott-Roth. And Harold is a senior fellow at Hudson Institute. And he had founded the Center for Economics of the Internet, and co-founded the Forum for IP. And he's an adjunct professor of law at Brooklyn Law School. And prior to this, served as the commissioner for the FCC and chief economist for the House Committee on Commerce.

Thank you all for joining me. I think it will be – you know, we can't really have any – can you guys hear me all right with the mic? I'm going to transition from podium to being a panelist. (Laughs.) So I don't think any conversation can be complete without artificial intelligence. I mean, any conference can be completely without artificial intelligence. And AI has met IP in multiple ways in the last couple of years. And it's just kind of accelerating. There are some new developments that we should be talking about.

So there are really two broad themes that I want to discuss with you all today. And between, I think, the three of you and me, we can cover both sides of the Atlantic – thanks to you, Francesca. (Laughs.) So I'm going to – like, the two broad themes in my mind, and, you know, we'll hear from the audience as well, is, first, broadly, what is the patentability or copyrightability of patent – inventions in creative works when they are used or developed with the assistance of AI?

And the second broad question that I think is sort of in a lot of people's

psyche and we've heard, read a lot about it in the news, is the use of works for training data – training of AI models. And where does fair use end and copyright begin for the use of these training data as inputs of these models? And similarly, related to that, outputs? And there's quite a bit of litigation in that space right now.

So those are kind of the two broad themes I would like us to cover in this panel. So let me just start with, kind of the basic question. Andrei, you can take it away, and then we'll go across the conversation. Basic question 101, can AI be an inventor or a creator under IP law right now? Can you – can you put AI as an inventor or a creator?

Andrei Iancu: No. (Laughter.)

Dr. Gupta: That's a simple answer.

Mr. Iancu: Well, you know, I'm a litigator. It's – the question was narrowly answered in the position, you know.

Dr. Gupta: I mean, that's – at least we have clarity there. (Laughter.)

Mr. Iancu: Right. So, OK. So under current law, going back forever, to be an author or an inventor, which are the two categories mentioned in the Constitution for patents and copyrights, you need to be a human being. So this is clear-cut law. It's perfectly established. There's no debate about this. DABUS, as you probably know, has tried to push this issue, and both in the United States and across the world both on patents and copyrights. And, you know, when I was at the Patent Office we denied the application for the AI inventor. They've done the same in the Copyright Office. And that was – the patent decision was affirmed by the Federal Circuit. I don't think it's a debate. And I think this is the case pretty much across the world. There are a couple of jurisdictions that have entertained the idea, but they're smaller jurisdictions. Clearly, in the United States this is a simple answer.

But that really doesn't answer really anything, because the reality is that AI is a tool, I believe. I think it's just a tool like any other human tools that we've been using all along. It's a very advanced tool. Definitely, you know, it's a – it's a new direction, a new construct, and – but nevertheless, it is a tool for humans to use in the creative process. And this is why – and so then the question is, is the AI itself, the tool – is the tool itself being the creator, or acting as the creator, without a human being? Is the AI itself, at least in part, providing creative output, whether copyrighted or patentable.

Dr. Gupta:

Right. And that's where I want to go. Thank you. And that's where I want to go. But I did want to get the basic level question out of the way so that we have clarity for everybody. We're on the same page.

So it's clear guidance, I think, from the Patent and Trademark, Copyright Offices now that if you put AI as an inventor you won't be able to get the patent granted under the name of a non-human inventor or a creator. But now, of course, the much more interesting question is, what is patentable and what is copyrightable when these tools are being used as an assist? And that's where it becomes interesting, because, you know, first of all, where does software end and AI begin? So how do you define what these tools are?

But nevertheless, there have been guidelines from both the Patent Office and the Copyright Offices on, like, what should be considered as – you know, when patents are granted with the help of AI, when should they be considered patentable, and creative works, when they should become copyrightable. So I think I'll take those one at a time. Because, Andrei, you went first, let me just start with copyrights. (Laughs.) So, Harold, I'll turn to you. A little bit about where we are at here, and what's happening in this space.

Harold
Furchtgott-Roth:

Well, copyrights are in a very similar situation to patents. The Copyright Office issued a report in January on the issue of what's copyrightable. And the conclusion is very similar to what Andrei just described with patents. You need a human element to be the author or the creator of the work. And the report focuses a great deal on just the issue of prompts. Can you have a copyrighted work just based on prompts? And the general answer is no. There needs to be more human creativity as part of the final work to be copyrightable.

I find the Copyright Office report a starting point but not an end point in figuring out what's copyrightable. So I think to me a lot of the interesting questions, a lot of the applications of artificial intelligence is if I give an artificial intelligence tool a draft of a column that I written and ask it to modify it in some way, is my original work the copyrightable work or is the element that I've given it – that's just based on prompts – is that copyrightable as well? We're seeing a lot of development of software with copyrights, and the – frankly, I think the Copyright Office report, both from January and from last summer, really don't focus on this use of artificial intelligence for the development of software. It just doesn't – it doesn't really transfer very well.

So I think exactly consistent with what Andrei was describing in patents, with copyrights there's this – there ultimately will have to be human input and human creativity. But exactly where we wind up with

what is copyrightable, I think that's still an open question.

Dr. Gupta: Thank you. And, you know, I was – I did some work on this. I was seeing that when the Copyright Office asked for public comments on AI and copyrightability, I think this was in the summer of last year, and then they issued two reports. One is the Digital Replicas: Part 1, and the second one that just came out in the beginning of this year. Do you remember the topic?

Mr. Furchtgott-Roth: Copyrightability.

Dr. Gupta: Copyrightability.

Mr. Furchtgott-Roth: It's a new word. (Laughs.)

Dr. Gupta: And then part three is coming on the training data soon.

Mr. Furchtgott-Roth: Right, mmm hmm.

Dr. Gupta: On the first one, on the – when the public comments were being sought by the Copyright Office, we did some sentiment analysis on this. And it was incredible, right? We received around 10,000 comments from the public and from the experts. And most of the comments, even if you remove those from sort of the – you know, the general public, that were, like, a paragraph or a sentence or whatever – (laughs) – you know, just – but really focused in on the experts, most of them the sentiment was, well, we're not clear if the content that is generated with the help of AI should be copyrightable because of a number of reasons. So that sentiment analysis I would say, from a copyright perspective, largely was, you know, to put a label, negative. But obviously, there is another side of the story. And there's a lot happening in the space. So let's stay on this side of the Atlantic for a minute, Andrei. What is your take on this? And where do you think this is going?

Mr. Iancu: Well, just, first of all, to finish a story on the patent side, it's very similar. And in the Biden administration they issued guidelines as to where to draw the line. If the machine is involved, if an AI machine is involved, how much machine can you have versus human for it to be patentable? And, by the way, they did not even define, as you said, Kirti, what is AI? What is the prohibited machine, versus what the computer is, which is not prohibited. And so the bottom line is – so I believe that's terribly misguided guidance. And I feel the same about the Copyright Office guidance.

And it is a total overreaction, I believe, by the administration, in the last administration, to artificial intelligence. It really is just a tool. You always have a human being in it. We're not at the point of singularity where the machines are running rampant by themselves. They're creating themselves and, you know, deciding what they're going to do on their own, and so on. There's human beings involved at some point no matter what. And it's not very different than using a camera. You know, we all take these selfies with this thing. Like, there's no question.

Nobody debates whether, if I run around the town, you know, and take a quick selfie, that it's automatically copyrightable. There's no debate about that. And what have I done? I've done literally nothing. I point and click. Well, what kind of creativity is that? There is no question that the machine does so much more to take that photograph. You know, it focuses, it composes the colors. It has lots of technology in it that does much more than me pointing and clicking. And, you know, for sure with an AI machine when you do the prompts and you decide what you want to do with it, you do at least as much, and probably more.

But here is the more important, practical issue. The whole point of intellectual property rights is to enable commerce, OK? It's not – you know, we don't need to have these academic debates. They're interesting and they're fun for us, you know, at the think tank here, and whatever – you know, in government agencies. But the main point is to enable commerce, to incentivize innovation and creativity, to protect that innovation and creativity and investment, protect the investment into that, to have a system of laws to enable transfer of that technology, the licensing and the buying and the selling under the rule of law. That's the point.

If you are telling me now that we have – we're creating in this new era – new area of technology a situation where we're going to have no rule of law, because for whatever reason, academically, we have decided that we're not going to protect this with the rule of law, then what have we done, from a commercial point of view? You have – let's assume that a movie company, Disney, for example, or whoever, instead of having one photograph generated with the aid of a machine, they have a whole movie generated with the aid of a machine. And they're on the cusp of doing that. They pretty much are doing a lot of that now. What, we're going to say, no protection? In what world will Disney ever invest in making that movie? And how are they going to market it?

So from a practical perspective, no matter what we think the law is right now, we have to get to a point where we allow IP rights – patents,

copyrights, whatever – IP rights on AI – on the use of AI in creativity. Otherwise, we're going to stifle this area of technology. And in particular, we're going to stifle the United States' ability to compete because the other countries are not dancing on the head of a pin, like we are here in the United States.

Dr. Gupta: So let me play the devil's advocate here. And, Francesca, jump in too. You know, while I'm aligned with you on this, I want to – like, I want to understand and play the devil's advocate on this issue. So even if we agree broadly on these principles, there is a finer detail here, right? Like, it's very hard to imagine that Disney, a company like Disney, comes up with a creative process of using new tools, and one of those tools is AI now, to come up with some creative works and suddenly that work is not copyrightable.

But there have been instances where, like, I think there's this common example of this photo called "Suryast" that was one of the first, I think, works that was generated with the help of – it was a picture taken by a photographer and then, with a AI-generated prompt, like, on a some kind of a gen AI system, the photographer took that picture and translated into a style of Van Gogh, like "Starry Night." And it looks a bit like that. It's a picture that's, you know, with some filters on it. And the Copyright Office denied it, as it often does deny other works on the grounds of not being original enough, or not having the creative content enough.

So wouldn't – isn't there a risk of the Copyright Offices around the world being bombarded by the kinds of works where they really now have to sit and make a determination, like, is this really novel and copyrightable? Like, now I can generate much more with the help of these tools. There's no question about it. I mean, we write reports about how much more productivity there is because of the AI tools. And how do they deal with that kind of bombardment? And, by the way, to finish the story of this picture, the "Suryast," the U.S. Patent Office denied the copyrightability of this work, but the Canadian and the Indian Patent Office did grant that picture a copyright. So there's also this sort of national discrepancy.

Andrei was about to say something, but I think Francesca, I should go –

Francesca
Ferrari: No, no, no.

Dr. Gupta: Francesca, you should have the – first. (Laughs.)

Dr. Ferrari: What I was saying is that I do agree perfectly with what Andrei said

before, because if you deny the fact that the output of generative AI can be protectable in any way. I mean, with patent, with copyright, and so on, then it's clear that you are putting a severe threat on investment, on research, on development. I mean, we said before that IP is essential for research, is essential for development, is essential for economy. If we avoid to identify any kind of IP protection on generative AI outputs, we are – we are, I mean, in a difficult situation, from an economical point of view.

With respect to the other side of the Atlantic, obviously we are – as you know, Europe had primacy of the AI legislation with the regulation. But in this regulation, while there is – there are some relevant points with respect to training of AI models, there is nothing with respect to IP protection of AI generative outputs. We have some cases. And one of these is a case that was decided by the municipal court in Prague in October 2023. In this case, the plaintiff was using an AI tool to generate visual content. And this visual content was generated on the basis of a specific prompt: Create a visual representation of two parties signing a business contract in a formal setting, a meeting room or an office, of a law firm in Prague.

The plaintiffs filed the lawsuit. Why? Because the defendant copied the image on – this image on his own website without the plaintiff's authorization. And the plaintiff filed a lawsuit against the defendant seeking a declaration of his authorship to the image, obviously asking for the removal of the image from the defendant's website and for an injunction against further infringement. Actually, the plaintiff supported his claim by an assertion that, as the author of the prompt, he was the author of the image. But the court concluded that he did not create the image of his own, but it was created through the use of AI, and so the image cannot be considered as an original result of creativity activity performed by a human being. So it was only first instance of decision. There was no appeal. Someone is thinking that it could have been just a simulated pilot litigation.

Coming to Italy, my country, in 2023 we had a decision from the Supreme Court. We are talking about the Sanremo Festival. (Laughs.) I think most of Italians know about it. It's a musical festival. And in this case, in 2016, the Italian television was using an image representing the reproduction of a flower as part of the communication and broadcasting of 2016 Sanremo Festival. In this case, the Italian television was accused of having unlawfully reproduced this image that was created by an architect through the use of AI. Illegitimacy was firstly ascertained by the general court, was confirmed under appeal. But then it happened that the decision of the appeals court was further appealed to the Supreme Court.

And the Supreme Court, although through an obiter dictum, so it's not part of the ruling – because actually the Italian television grievance was for the first time brought before the court of illegitimacy, ruled that the use of software in the creative process of an image is certainly not sufficient to deny the creative nature of an original work. And as such, use only requires a more rigorous examination of the level of creativity. This, from the point of view of copyright.

Then there is a case pending before England courts in which we are talking about patentability of AI system outputs. This case is pending between Emotional Perception AI and the controller general of patents design and trademarks. And it revolves around the patentability of an artificial neural network, ANN. Specifically, this artificial neural network was designed to improve – to provide improved media recommendations based on emotional responses. And clearly, the relevant rule is Section 1.2 of the English Patent Acts that excludes a program for a computer such from patentability, unless this program makes a technical contribution, OK?

In the first instance, the high court held that the ANN was not a program of computer. And in any case, it underlined that the difference between a program of computer and ANN is that the first one is implementing a series of instructions preordained by a human, while an ANN operates according to something that it has learned itself. I mean, machine learning. Moreover, the court said that the media recommendation, so the output, sent by the ANN to the end user was a sufficient technical contribution.

But a court of appeal disagreed and, first of all, said that the ANN can be defined as a computer, because a computer is nothing else than a machine which possesses information. And so, ANN is this. Moreover, the ANN, according to the court of appeal, didn't provide any technical contribution, but relies on semantic qualities and, like all computers, have applied technical criteria to create its ultimate output, but without any further technical contribution. It's clear enough that the decision of the court of appeals underlines a big problem.

Why? Because in a certain way what we said before, if the situation is such then it's quite difficult to imagine IP protection, real – I mean, at least patent protection. In any case, on November 2024, the Supreme Court granted Emotional Perception permission to appeal. And a hearing should be in the next few months. So we can still hope –

Dr. Gupta:

So we're kind of at the cusp.

Dr. Ferrari: Yeah.

Ms. Guta: But I think in the U.S. as well, you know, there have been many instances where a copyright has been requested for, like, I gave the simplest example of “Suryast,” but where inventors – and I won’t go into, like, case by case – but it’s where the inventors have generated an image, and a novel image, for, like, a novel – like, a book, I mean, a fiction book. And couple of other instances where they’ve generated, like, a brand-new version of a painting with hundreds of prompts with, you know, gen AI models. But sophisticated prompt engineering. And those applications have still been denied, so far.

So I think it’s kind of leaves me still at my original question that I was asking. You know, even if we can agree on the broad principles, how do we thread the needle when now the Copyright Office receives kind of this deluge of, you know, applications, and they have to make these determinations on a much broader set of incoming works because this new technology is now available?

Dr. Ferrari: From this point of view, if I can jump in, I mean, in Italy, for example, copyright is not registered. So in a certain way, the decision if something has copyright protection or not is based on – is taken by the courts. And I have also to inform you about very recent development in Italian law. It’s a project of law – still a project of law, but it has been approved by the Senate. And it’s a law according to which all considered protected by copyright also the works created by the aid of artificial intelligence tools, provided that the human contribution is creative relevant. And you can provide evidence with respect to the human contribution.

Dr. Gupta: Harold, what do you think about this side of the Atlantic?

Mr. Furchtgott-Roth: It’s a problem. Similar to Italy, the final arbiter is going to be the courts and not the Copyright Office. And similar to Italy, if I write something I don’t run to the Copyright Office to get it registered. But ultimately, the courts will decide. And the Copyright Office is influential in how the courts are going to look at these questions.

Dr. Gupta: Right. Exactly.

Mr. Furchtgott-Roth: And, as you say, there’s going to be a deluge of cases as artificial intelligence becomes more and more commonly used, and the products of artificial intelligence become more and more clearly part of the human creative process. As Andrei said, ultimately artificial intelligence is just a tool, whether the analogy is a camera, or a computer, or something else that remains to be seen. But it ultimately is just a tool, and kind of making this, I think, arbitrary distinction between

something that is entirely human created versus something that's human created with the assistance of artificial intelligence, I think, is a very tough line to draw.

Mr. Iancu: Well, it's – to your question, Kirti, it's a self-imposed problem on the Copyright Office. See, until now you never had – whether it's Patent Office examination or Copyright Office examination – you don't decide patentability or copyrightability based on the tools you've used to reach that result. You know, you look at the picture or you look at the painting and you decide whether it's original enough or not, and you register or not based on that. Nobody, until now, asked, hey, did you use a paintbrush or did you use your finger? And if you – if you – if you reduce, you know, to its logical conclusion, the only thing that should be copyrightable are the cave paintings, you know, where people just use their fingers, because everything beyond that is a tool. The paintbrush is a tool. You know, it's not human, for sure.

But that's what humans do. The whole point of being a human versus an animal is that we use tools. And all of a sudden now – (laughter) – all of a sudden now we are examining – for the first time we are examining the methodology of creation as opposed to the actual creation itself. And there's been no explanation as to why we're doing this. There was no Congress that that sat and debated this issue and said that this is the way you do it. You know, you have one person at the Patent Office that basically decided this, you know, a year ago, and then one person at the Copyright Office – with public input, for sure.

But these are really big policy decisions that if, in fact, the United States is going to foreclose a whole area of technology from the intellectual property laws, that is a major decision that needs to be debated and decided by Congress. And it's not just a painting by "Suryast." You know, we're talking big deal stuff – drugs, drug development. We're now going ask the pharmaceutical companies that invest, on average, over \$2 billion to bring the drug to market – we're going to ask them, hey, what tools did you use in developing this? And make random decision as to where we're going to draw the line based on the type of computer and how advanced that computer was, or what kind of prompts you used?

Dr. Gupta: So thank you, Andrei, for taking my bait, because I was kind of using the "Suryast" example – (laughter) – as a simplistic example to illustrate kind of that point of view of, look, if you can just take a picture and embellish it a little bit, how does it become copyrightable? And the point is – your point is that, well, you judge a creation or an invention based on – like, based on the standards that always existed, not and – and be tool agnostic. And I think now I want to move into the domain of patents for a minute, because that's the other side of the spectrum that I

was trying to draw, frankly. Which is exactly kind of where you were going.

You know, and, by the way, at CSIS, we had a workshop – an industry stakeholder workshop or two. I don't remember, Andrei, you were leading them. Where we were asking the industry people, OK, how is it that you're using your AI tools for your inventions and your patentability? And the answers, and some of you were, I think, in the room, came, you know, in like a deluge. Like, yeah, we use these tools all the time, as you would expect, you know, for complex chemicals, for pharmaceuticals, for drug discovery, for, near and dear to my heart, semiconductor design, you know, EDA equipment, and so on.

It's just – it's endless. And these are extremely complex processes and technologies. So I don't know if it's even possible to kind of disentangle when AI is being used and when AI is not being used. So if you can –

Mr. Iancu: Especially when you don't define what the AI – what AI means.

Dr. Gupta: (Laughs.) Yeah. And, I mean, there is no clear definition, because there can't be. It's a moving target.

Mr. Iancu: Right. But, look, I mean, to take my own devil's advocate position, and if you look at the PTO guidance from about a year or a year and a half ago, they give a simplistic example of where it would not be eligible for patent. So your prompt simply is – to the AI machine, create an automobile axle with the following properties. That's it. And then the machine creates the axle, OK? They said, that is not human invention. You're just asking somebody else to invent. And the actual invention, what the axle – you know, what the material composition is going to be, and dimensions, and, you know, whatever, is done by the machine. So, sure enough, you can envision a system that is so advanced that the human prompt is very, very small.

Look, you can go to ChatGPT now and ask ChatGPT, write me a sequel to Gone With the Wind, you know? And it is capable for sure of doing it. And it's not bad. Should that be copyrightable? Putting aside, you know, issues of prior authorship, and all that. I still maintain that, yes, all of that needs to be protectable by intellectual property laws. All of it. You can't make distinctions – again, taking a photograph with a camera, we're not making a distinction between a good photographer that, you know, spends a lot of time composing the image and using different filters, and then compare that to me taking a selfie walking on the street. We're not making those distinctions. We shouldn't make them now.

Because the reality is these are – they're commercial instruments. We need to maintain the market for creativity to be created, to be invested in it, and to be transferable. And for that, you need a system of laws. And I'll say one more thing. If we don't think that the current system of laws, which says you need to have a human being as a creator – if we don't think that permits protection for all these academic reasons, then we need to change the law.

Dr. Gupta: And what is the – like, this famous report of the U.S. Patent Office, isn't that now rescinded, because of the new executive order on AI by President Trump? So it doesn't stand today?

Mr. Iancu: I think the acting director has rescinded it as well, I think. Like, a month ago or something.

Dr. Gupta: So we don't have any specific guidance.

Mr. Iancu: Yes, now we have no guidance, which is, you know –

Dr. Gupta: A good thing or a bad thing? (Laughs.)

Mr. Iancu: Well, no guidance is better than bad guidance. But – (laughter) – but they should come out with clear guidance to say everything goes or whatever. Just tell the public.

Dr. Gupta: Well, why do we need guidance? It's just – I mean, it's business as usual, status quo. We use the tools, we use the tools, and we continue to –

Mr. Iancu: Yeah. And eventually, look, the courts will eventually speak on this, to Harold's point. It's the same here as in Europe. The courts have not actually spoken on this specific issue yet in the United States, either on patents or copyrights. We'll see what the courts say. But it is important to note that the courts will look to what the Copyright Office has said, because they view them as the experts on copyright, even though the USPTO has a lot of copyright expertise as well. And they'll look at the PTO to give patent guidance. And they will defer, to some extent, to the administration, potentially.

Dr. Gupta: Yeah. Thank you. And, I mean, that's why guidance matters. So I think where we stand today it's fair to say the Copyright Office is still coming up with – like, they have this part one, part two of these reports on digital replicas, copyrightability. The Patent Office – right now, it's we're at this kind of level setting stage, where basically we kind of want to be until we figure this out, with the courts' help, on whatever is patentable, eligible subject matter, the usual standards regardless of the rules.

Mr. Iancu: Yeah. Which, by the way, it's a terrible position to be in, because imagine the patent applicant from six months ago who might have had his application denied and now the guidance is rescinded. What are they supposed to do now? This is why we need legislation. You know, this is a really important area where the administration, in my view, has gone in the wrong direction. But even it's fluctuated, to say the least. So you can't have industry not know what the rules of the road are. We have to have stable rules of the road. And the only way to achieve that is with some legislation, or at least some amendment to some existing legislation.

Dr. Gupta: Yeah. Or some certainty. There's already uncertainty in the creative process.

So let me move to the area where we actually do have some guidance from the courts, or at least it's emerging right now. And most of the disputes, as I mentioned, is the second part of the theme of this conversation, which is the training data. The use of training data for training – large amounts of data for training AI models. And where does fair use end and where does copyright begin? There have been several disputes in the courts, and some of them in the limelight, like The New York Times, OpenAI. I'm sure most of you in the room have heard about that in popular media.

You know, and there are many others, from the Authors Guild, and from the Getty Images, and so on. (Laughs.) And the key tenet of basically all of these lawsuits is that when the – you know, the gen AI model – developing foundational model companies used a whole bunch of training data, certain copyright was violated. And then the question is whether that fell under the fair use doctrine or not. So a lot of lawsuits right now. I don't think there's any clarity on either side of the Atlantic on any of those lawsuits that are being resolved. But at the same time, there are some policy developments that are happening in real time that we should be keeping our eye on. You want to start with Harold, let's say, this time.

Mr. Furchtgott-Roth: I would be doing second hand. Andrei, I think you actually have closer knowledge of what might be coming down the pikes. Let me defer to you on that.

Mr. Iancu: Well, predictions are difficult to make, especially about the future, as Yogi Berra would say. (Laughter.) So, look – so, just to step back for a second. So now the question is on the reverse side, which is –

Dr. Gupta: Exactly. Thank you. Yes.

Mr. Iancu: Which is what data – that is already protected – what creations, that are already protected by – on their own by somebody else – which of those can be used to train the AI models for them to do their work? And there's a lot of debate about that. And the question is, can the AI machine ingest images, or technology, or information that belongs to somebody else as a matter of fair use, for example, or some other similar concepts? And I think the administration currently is grappling with this exact issue.

And I think what you're alluding to is that there are some rumors out there that President Trump might issue an executive order saying that the use of any information for training purposes, for AI training purposes, is to be deemed as fair use. I don't know if that's – if that's true. And, by the way, even if there is such an executive order, that doesn't really carry the day, because, you know, in the end, the courts will have to decide. But again, it's administration policy. And courts do look to the administration for guidance on that stuff.

But I got to say, again, here we're over complicating ourselves. We are humans. And we have big machines up here above our necks. And we ingest a lot of data, OK. Doesn't mean that we can steal it for free. You know, we train ourselves, you know, for our whole lives with other people's works, but we don't steal it. You know, we buy the book at the store, for example, and pay our 20 bucks, you know. Or, you know, if we listen to a song, if I'm a musician, I ingest all the songs, but I pay for those songs. We don't just use it for free.

I don't know why all of a sudden we think it's OK for machines to use other people's property for free. I just think it's just another tool. You got to treat it the same way. And the tool – by the way, the machines are not ingesting this thing on their own. They have human beings telling them, you know, where to look, and what to take in, and how to use it. So, you know, I think we have to be protective of the of the IP owners' rights with respect to these machines. So we'll see. You know, I'm not sure that the rumors are accurate about the use of data as fair use at all times. But if that's what – if that's what they do, I think it would be devastating for the creative community.

Dr. Gupta: So for the creative community, again, I mean, it's not such a straightforward question. Harold, I think you're going to say something. Let's start with you. Then there's the EU AI Act, that has quite a bit to say about training data. And then I'll be the devil's advocate.

Mr. Furchtgott-Roth: OK. Ultimately a lot of this is going to wind up in litigation, as either primary or secondary copyright infringement. And if there were an executive – I think the artificial intelligence companies are

understandably fearful that they're going to wind up in court on various infringement matters. And an executive order along these lines would help them out a lot, if nothing else – even though it's not binding law, it would – that's where the Department of Justice would be advocating in court, rightly or wrongly.

It is a tool. It's a tool that can be used for good purposes. It's a tool that can be used for bad purposes. Recently I did a little personal experiment. I went to some artificial intelligence platforms and tried to get them to tell me where to get Taylor Swift songs for free. And fortunately – I was surprised. I was surprised. If I just go to Google search and put in Taylor Swift – you know, free Taylor Swift songs, it'll give me a whole list of places to go. If I go to ChatGPT and ask the same thing, no, that's protected by copyright. Oh, you know, come on. Just tell me where this site is. No, no, we don't – it was – (laughs) – I have to say, it was – the artificial intelligence platforms were more mindful of copyright protection than Google search is.

But ultimately, that's where – that's where litigation surrounding artificial intelligence, or at least one area, is going to be in the future. Lawsuits brought by content owners going after the artificial intelligence platforms for secondary infringement – they may not be the ones infringing, but they facilitated the infringement and also, oh, by the way, they make money off of that infringement. So there's additional liability for that. Or, alternatively, the ISPs who provide access to the artificial intelligence platforms could also be sued for secondary infringement. So these are very important questions.

And if there were an executive order saying everything is fair use, well, that would undermine a lot of these cases. But it would also, I think, completely undermine the concept of copyrightability of, really, almost anything. If it's all fair use because you can – if you scrape the internet for everything, everything there is fair use, well, then if you scrape the internet for anything, then it's fair use, and you just take it. You don't have to pay any royalty. It's all fair use. So I think that's deeply, deeply problematic for the copyright industries, and for the concept of intellectual property generally.

Dr. Gupta:

So, you know, like, I think Andrei was saying, and I want to emphasize, this is the other side of the coin, right? The content creators have this content. And now there's a ton of data that is being used for training these models. OK, so there are licensing deals that are out there. There are many, many licensing deals that are being struck in the industry between the gen AI model developers and the content creators, or especially the big ones – Reddit, OpenAI, right? That's one example. And many others. But it's still never possible for all of – like, you know, you

talked about licensing of this data, Andrei. But there's also just a ton of data. And there can be – you know, like, the transaction cost is real. (Laughs.)

Mr. Iancu: So? So they should pay for it. There's a price.

Dr. Gupta: Right, I mean, like, again, like, my point is that we can agree on the framework, but even if we agree on the framework there is still a complexity that needs to be resolved. And there need to be mechanisms to create a clearinghouse of the enormous amount of licensing content that needs to go through these deals.

Mr. Iancu: Totally agree. But the answer is not to make it all for free. You need – you clearly – look, to step back –

Dr. Gupta: You need frameworks, yeah.

Mr. Iancu: To step back for a second, there is a national U.S. macro-level problem, both economic and national security, here, OK? So AI becomes better and grows faster if it is trained with more and more data, OK? If we compare ourselves to China, China has a centralized government, centralized dictatorship, really. They don't care so much about people's privacy, and divisions between companies, and whatnot. So they can have one humongous, giant database of data that everybody can use. That's their system.

Here in the United States we have individual companies that have the right to protect their own data, not share it, and there's a lot of segmentation. And on top of that, we care about privacy, right? And so we're very careful – so that does limit our abilities here. And the fear of administrators is that we're going to be left way behind if we're not allowing bigger and better training of our AI. Fine. I understand that. But, again, the answer is not making it all free. You have to find ways, create new mechanisms, for pooling the information, for using clearinghouses. And there are examples of this in other parts of the economy, right?

The music industry has created a clearinghouse, you know, with ASCAP and so on. And, you know, it's not the same thing. It's different. But let's put our creative minds together to solve a real problem here, while at the same time we respect the rights of the IP owners and the creators. Because otherwise we're going to kill the golden goose – the goose that laid the golden egg. Otherwise we don't have a creativity in the first place –

Dr. Gupta: We remove the incentives for the creators in the first place to create the creative content.

Mr. Iancu: Exactly.

Dr. Gupta: So that's – I mean, I'm just pulling out these challenges because that's, you know, exactly to strike sort of this picture of these – yes, these are challenges we need to solve. And the way to solve these challenges could be, like, you – the incentive system – if the incentive system is protected, we can still resolve these challenges.

And it's likely that if there is not sort of this overarching regulation, we do end up in a place that the music industry ultimately ended up. And, you know, for those who don't follow it, it's basically collective licensing schemes across the industry, these big clearinghouses like BMI and ASCAP, where the rights are pooled in one single place, and the license source act as the aggregators of a whole bunch of content, and then license it, like, in one single, you know, transaction, with whoever needs to license the data. So it serves as – like, the transaction costs, as – I'm speaking as an economist – are significantly reduced.

Now, let me turn to the EU. The EU AI Act does say something specific about training data. And where do we fall on that side of the Atlantic, so far?

Dr. Ferrari: On the other side of the Atlantic the main problem is the TDM exceptions, Text and Data Mining Exceptions, that are containing the Directive on Copyright in the Digital Single Market of 2019. The TDM exceptions allow the reproduction and extraction of lawfully accessible copyrighted content, without the right holder's prior consent. And these exceptions apply – there are two exceptions. The first one applies to scientific research and cultural institutions. The second exception is linked to commercial purposes. But in this case, it is lawful, this text and data mining, only if the right holders had the possibility to opt out.

Dr. Gupta: So since they didn't have the possibility to opt out because all of this stuff was new, the TDM exception doesn't hold?

Dr. Ferrari: Moreover, the point is, how can you opt out if they do not tell you which are the instruction to opt out? I mean, how the opt out has to be done? Is it has to be machine readable or not, and so on. What is – to be honest, on these points now at EU level there is quite a debate, because of these specific issues. These specific issues are dealt by the AI Office, and namely by the experts who are drafting the code of practice, to which AI Act make reference. And the creators at European level, I mean, I know much more about Italian level, but at least the creators

are not really happy of how the third draft of this code of practice is dealing with TDM exceptions.

Why? Because, actually, what is underlined is that the exceptions enacted in articles three and four of the Copyright Directive, at a time when generative AI was not there, can be interpreted as covering some specific operations of training of a generative AI model. But certainly not all aspects of this training, not all aspects or stages of the life cycle of AI models and systems. And thus, what is – what is requested is to identify the exact scope of the TDM exception. Moreover, according to the creators, within this third draft of the code of practice the transparency obligations on the AI deployers are really mitigated too much in order to protect properly copyright.

From this point of view, it has to be also mentioned a recent case that had been decided by a Hamburg court. In this case, the plaintiff is a photographer who made one of his photos freely available to the public via a photo agency website, specifying that it was not possible to use automated programs also to get content, or indexing, scraping, or catching any content on the website. In this case, the defendant is a nonprofit organization dedicated to promoting research activities in AI. For the purpose of AI training activities, the defendant downloaded and stored a copy of a variety of pictures from publicly available resources, and also the photo of this photographer.

The plaintiff requested the defendant to stop any reproducing activity, to remove the photo, and originally an injunction. The court dismissed the claim because, although recognizes that the plaintiff in his position as the author of the photo hold exclusive rights of reproduction, stated that text and data mining activities for the purpose of AI training activities fall within the definition of text and data mining, that research organizations are entitled to make reproduction for text and data mining activities for the purpose of scientific researches, that research organizations, who can – who can ask for the application of Article Three of the directive – are not only research institutions, but also other institutions active in research – in scientific research. And moreover, within this judgment it is also said that, with respect to the opt out, the opt out can be a plain opt out. It does not need to be machine readable.

Clearly –

Dr. Gupta:

OK, I'm struggling to follow. But the key point here is that the court is saying, well, yeah, we understand you have an exclusive right, but maybe there's an opt out that's available for this institution because it's used for scientific research?

Dr. Ferrari: Yes. And moreover, they ascertain that in this case it was for scientific purposes, so article three.

Dr. Gupta: Right. So this exemption applies. OK. And, I mean, that's fair. And I would say that, you know, from the economic perspective there are other couple of challenges that we didn't discuss. One is that it's very hard – like when this – like, trillions of tokens are being used for, you know, creating the training data. It's really hard to determine the specific value of one input. And, by the way, you know, much like the patent world, it's kind of – like, it's not the same. Not every data is created equal in terms of the value of their input in the training data. And also with, like, the enormous, large amounts of training data, it's diminishing returns for every incremental input. So I just want to note that as a challenge for, you know, how the courts are grappling with this, and will have to grapple with this issue.

And the second is that, you know, even if stuff is used in training data, and now somebody comes and says, oh, by the way, I want you to – exclude this one input from your training data. Is that technically feasible? That's another challenge is these cases I've seen. So any thoughts on that before I open the comments to the floor.

Dr. Ferrari: Someone in in Luchan Lidi (ph) was talking about – (laughing) – machine and learning. I don't know if it's an option, I don't know anything about it from a technical point of view. Certainly the idea is – that as you can – it's like a reverse engineering process. So you can avoid to remove all – remove all the data that are protected by copyright, or by privacy, or anything like that. It seems quite difficult. (Laughs.)

Mr. Furchtgott-Roth: One of the challenges is even if you had a marker on data as being copyright protected, and to do to use that for training purposes you'd have to pay royalty or something like that, pretty close to all legitimately copyrighted works that are available legitimately online, there are also countless illegitimate sites that have pirated information. And so if you're an artificial intelligence platform and you're essentially scraping the entire internet for information, you're going to be collecting both legitimate information, or paying a license for that, as well as collecting illegitimate information and not paying license for that. And I don't know how – that's, I think, a real challenge for these platforms to figure out how to deal with that.

Dr. Gupta: Yeah. There are these – I mean, it's fair to see that there are these interesting challenges that courts are going to have to deal with, even if we have some kind of alignment on the overall framework of protecting property rights on both sides of the coin, of the creators whose content

is being used for training data and of inventors who are filing for patent and copyright applications. So I think we'll keep an eye out for those.

But let me also open the floor for any discussion from the audience. And if you could, please introduce yourself when you ask the question.

Q: Yes. I am Dr. Gonzalez from CIAFAI (ph), private sector. I'm also – I have experience in IP and artificial intelligence.

My question is, it seems to be that there is – disagree in a comment that was made regarding that the USPTO has not accepted a challenge patent in which AI is a tool. I disagree with that because since 2022 – well, actually I have patents related. In 2022 – there was explosion of patents since 2022 in AI. And there are so far 22,000 patents and AI use it as a tool. And specifically, 40 percent are related to AI-driven drug discovery. And in other areas, leaders in AI patent is IBM, Microsoft, and Google. All of them have more than 3,000 patents, so far, related to AI. So the point is that it is – it is not correct to say that USPTO is stifling innovation because it doesn't allow it. It does. If you have a good patent, and you know that your invention is unrelated to any prior, you get the patent. So in that sense, this is my comment.

And now, another question is that, in regard to authors, you say, well, we have to take care of the ones that are authors, which they want some money back about their inventions. But also, we had to make sure that it's not just that, but also remember that when AI scrapes for the internet, also scrapes a lot of garbage. So we had to add one more thing there. That's the reason why it is super important to do a very high quality curation of data for every company that uses or whatever set of data, because, like, that slogan that is out there, garbage in, garbage out. So you have to be very careful, not just with protected, unprotected, but the garbage. So, I want others' thoughts on that. Thanks.

Dr. Gupta: Yeah. I think those are two comments. But let me just paraphrase them. First of all, I'm sure you find it endearing as former director of the PTO to see some protection, some advocacy for the Patent Office. You want to – just on that?

Mr. Iancu: Well, of course, they allow a lot of patents that use AI tools. There's no question. So if you look at the guidance that was promulgated a year or two ago, they give examples. Some examples are not eligible. And some examples are eligible. And they're trying to draw this line as to how much machine was used versus how much human has been used. And if the examiners under that guidance determine that enough human was used, then they will allow the patent to proceed, if everything else lines up – validity, novelty, obviousness, and all that. But if the examiner,

under the guidance, determines that too much machine, not enough human, they won't allow the patent. So that's where the line they're trying to draw. Same thing in the Copyright Office, where the "Suryast" is not allowed, but many other photographs are allowed. And I just think that that is a very bad way of running an IP system.

Dr. Gupta: Tool driven, as you were saying. And I think the second point that, you know, we have to be kind of mindful of the content that is being mined for training of this data is both legitimate content and sometimes content that isn't – you know, I think, pirated or not kind of quality of whatever.

Mr. Furchtgott-Roth: Yeah. There's a lot of pirated material out there. Yeah.

Dr. Gupta: And I think what – the point that I was making – that the incremental value of every unit of input varies significantly. So, yeah, I think we definitely acknowledge those points. Another question from the back.

Q: Hi. My name is Adam Kahn.

Dr. Gupta: I'm sorry, name and affiliation?

Q: Adam Kahn. I'm from SpaceX, but here in a personal capacity.

How does the Patent Office actually determine whether AI was used or not? What is – what is to prevent an inventor from submitting something that was generated using AI? And it's, like, maybe a second question real quick. Are we entering an age where IP may be irrelevant, given the pace of AI? And should we just abolish IP? And figure out how to – (laughter) –

Dr. Gupta: Great forum to ask this question in. (Laughter.)

Mr. Iancu: OK, the answer to your second question is, no. (Laughter.) On the first question –

Dr. Gupta: But, look, I mean, it's a valid question. We should answer it.

Mr. Iancu: Yeah, but it's a whole other – OK. On your first question, it's a very good point. And the way that the office under that, what I think is misguided, guidance was going to do it is it's a self-declaration. You, as the applicant, have an obligation to declare if you've used AI, and how much of it you have used, OK? So it's self-declaration. Now, nothing stops the applicant from lying, you know, but you're submitting something under oath. And then if you get the patent and then you want to litigate it, for

sure your opponent will discover during that process that you have committed fraud on the Patent Office.

But this is actually a real problem with the guidance. And to some extent you're creating a litigation trap for applicants, especially when they don't know exactly what the definition of AI is. Have I used AI or have I just used a really good computer, you know? Because only AI you're supposed to disclose, not the rest of it. But it's self-policing.

Dr. Gupta: And now the litigation – yeah, that's a really good point. Now the litigation can be about, well, what is AI and how much has this been used? But to the second question, can I take it? Like, I think about that with the broad framework of an economist. And I would say that, you know, innovation in the economy happens with multiple mechanisms. And IP isn't the only one, intellectual property, but it is certainly one. So I think it would be foolish for us, as a forum who are experts on intellectual property, to say, well, you know, intellectual property is the only way for innovation to occur. Clearly, innovation will happen in different ways in our society, even if you fully abolish the IP rights, and the Patent Office, and so on.

But there will be a cost. It does provide one of the important mechanisms for inventors and creators, right? And that's why it's instituted. There are many macroeconomic studies that look across countries and time series analysis and so on to try to understand the impact of having a system like this. So, you know, for what it's worth, why should we abolish one important mechanism for innovation and not protect all of them?

Mr. Iancu: Yeah. Look, I really don't know, Kirti, whether you can have an innovation ecosystem in a free market economy without an intellectual property system. For sure, it hasn't been tried. So it's a big ask to ask the country, which from the very beginning – from, like, day one had an intellectual property system, it's in our Constitution. It was the fourth bill that was passed when the – when the government was instituted in 1790. And ever since then everything we've done, all the technological advances, everything has been under the auspices of this intellectual property system. So before we start abandoning that, we better be sure that we know what we're doing. Because technology is moving very fast, as you indicate, and, you know, I don't know what other mechanisms we're going to have to make sure that we keep pace.

Now, the question, nevertheless, is a really good one. And it's a much bigger topic. It's, like, you can spend a full – you know, a lifetime trying to discuss that. But just simply to say that technology today is very different and moving at very different speeds than it was in the 18th

century, when the system was established. For sure. And they didn't have AI back then. They didn't have DNA processing. They didn't have data that's generated at huge rates. And it is fair to ask whether we need to make some modifications to the system. Maybe we need a new IP right. Maybe we need – in the United States we have no protection for data. There is no IP right of any kind for data. It doesn't exist. No patent, no copyright, no nothing for just simply data.

Maybe we need a sui generis right for that. Things of that nature. Maybe we need a sui generis IP right for software, as compared to other types of technologies. Maybe we need a sui generis right for DNA processing. I'm not advocating for those things. I think the system works as it is now. But it's a fair question to ask. Not to abolish the system, but what adjustments or what new types of IP rights need to be generated? And, again, this is something for Congress to discuss. They haven't really touched these issues since the 18th century. And technology has moved a little bit since then.

Dr. Gupta: Yeah. Property rights and their role, and where do you draw the line? Back to AI, anything that the audience would like to jump in with? Or we can – I think we have one more question from the back. And I maybe we can take a couple – or we will see how it goes. We can take one.

Q: Hi. Just as a quick question. How does –

Dr. Gupta: And if you can introduce yourself, please.

Q: Oh, hello. I'm Todd Wiggins. Just an interested and curious participant like everyone here, I think. (Laughter.)

But the question is, how do we compare to our neighbors across the world? I mean, they're having these discussions too. And so we don't just operate out of vacuum. So what do – how are we going to compare to them? And are they gaining an advantage with their own intellectual property rules in competing with us in the big picture?

Dr. Gupta: What's the question?

Mr. Iancu: What are the other countries doing?

Dr. Gupta: What are other countries doing, right, across the globe? That is a fantastic question. I know we'll discuss it in the final panel of the day, but just quickly opening the floor for it.

Mr. Furchtgott-Roth: I'm happy to start. The U.S. has a comparative advantage in some industries, one of which is artificial intelligence, another of which is

intellectual property. If you are a young musician, a young artist, a young software engineer, a young electronic engineer developing the latest semiconductor chip, you want to find your way to a country that's going to protect your work. And you do, as – we are a magnet for great intellects of all types of persuasions. And that makes our country strong. It makes – it's a great source of growth. The same thing with artificial intelligence. Artificial intelligence in the United States are way ahead of the rest of the world. And we want to keep it that way.

These are important industries to the United States. And they are – in sort of economic terms, you kind of want to play to your strengths. You don't want to undermine places where you have sort of a natural advantage. And these are industries in which the United States has very strong natural advantages, in part because of the rules of law we have that protect intellectual property. And it's very important to keep this in place.

Dr. Gupta: That's a very nice answer, Harold. Maybe I can be a little bit of a damp towel here, because Adam Mossoff and I just did a panel on this last week. And we were taking the tour across the globe. And we were talking about how far the pendulum has swung in the United States for difficulty in both getting patent rights, in terms of subject matter eligibility, and the enforceability over the last 30 years with, you know, like difficulty in getting injunctive relief, and so on.

And at the same time, there's China moving very fast with, you know, like, enforcement is much more – first of all, like, the docket is five times the size in terms of patent litigation. The incentives to file patents is just off the charts. It's the largest patent filer at WIPO. And in terms of enforceability, the timeline itself – it just, like, takes 12 months to go and move the docket in any code, is incredible. And then with the Unified Patent Court recently established in Europe, there's the same kind of goal that the Europeans have, of this extremely fast-moving dockets. And you're seeing this impact on patent enforcement sort of moving to others jurisdictions. I don't know, as a patent litigator what do you say, Andrei?

Mr. Iancu: Well, yeah, from a – I agree with you. From a patent litigation perspective, enforceability, really, we have fallen behind. We've overcomplicated our systems. We have too many redundancies. It's very expensive. It's really hard to get an injunction, which is really strange because these are exclusive rights. And you compare ourselves to some European jurisdictions – like Germany, the Unified Patent Court, China, even Brazil where you actually can enforce in a much more streamlined manner and actually have, you know, significant relief – we've definitely fallen behind.

Still, it's a very good system here. And it's definitely – the protections are definitely good enough, for sure, to enable the type of creativity we need. But we can do a lot better. And we need to modernize. We need to simplify. We can learn from others that have raced ahead of us a little bit. And on this AI stuff, we're overcomplicating ourselves. I think other countries are not – you know, the Chinese are not having some of these issues we're having. We're just overcomplicating ourselves. And I think we need to simplify there as well.

Dr. Gupta: But I think, Harold, you were – you were absolutely right in concluding that we should be playing to our strengths, and we should be sort of aspiring to staying there. (Laughs.) So thank you.

Mr. Furchtgott-Roth: I can't speak to the patents. I think it's very different to enforce laws in a country that's kind of a centralized government. (Laughs.) And enforcement is very easy in that situation.

Dr. Gupta: But thank you again, all three of you, for your remarks. Really appreciate it. And for great participation from the audience. (Applause.)

(END.)