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2019

### Panel 2: Art Law and Blockchain

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#### Recommended Citation

Tonya M. Evans, Derek Fincham, Katya Fisher & Jeanne Schroeder, *Panel 2: Art Law and Blockchain*, 37 *Cardozo Arts & Ent. L.J.* 589 (2019).

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**PANEL 2: ART LAW AND BLOCKCHAIN**

TONYA M. EVANS\*

DEREK FINCHAM\*

KATYA FISHER\*

JEANNE SCHROEDER (MODERATOR)\*

**PROFESSOR JEANNE SCHROEDER:** Okay, welcome back. My name is Jeanne Schroeder. I'm a professor here at Cardozo. I think this is an all-legal panel. I specialize in corporate, commercial, and financial law. I also write extensively in property theory. I think one of the things we want to discuss this second panel is: what are the legal implications of the things we talked about in the first panel? I do teach a course called Electronic Commerce. I find a lot of writing on electronic commerce in blockchain.

For one, a lot of people assume that because the technology is new, there's no law that applies. In fact, there usually is law that is directly applicable. And it may not work the way that people hope it works. Maybe we need amendments to the law. And two, related to that, we heard a lot of discussion. For instance, today we heard about property interest, etc. in title and we need to discuss whether or not those so-called property interests are in fact legally recognizable interests, and what the implications of those things are.

Now, on my panel today is: you've already met Tonya who's Professor of Law and Chair of Intellectual Property and Technology Online Programs at University of New Hampshire School of Law. And we're being joined by Derek Fincham who's Professor of Law at South Texas College of Law, Houston. His research interests include art law,

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heritage theft, antiquities looting, and repatriation. Then, Katya Fisher who's one of our proud Cardozo alumni. She is a partner at Fisher Cataliotti P.C. and member of the Board of Directors of Level Blocks and an advisor to IBM's blockchain accelerator and to Mark Bell Capital.

Now, to start off, I'm going to give each of the panelists a moment to speak a little bit. Tonya has a few points that she wants to finish up from her presentation earlier today. Tonya?

**PROFESSOR TONYA EVANS:** Thank you. So, the purpose of the brief remarks that I gave earlier was to level set in terms of the technology, generally speaking. But what I thought would be helpful and in fact, I'm going to take one step back to this slide and then go to the fungibility issue. Because I think it's important to distinguish between what you are probably more familiar with in terms of crypto currencies that would be fungible versus the non-fungible token and what that might mean. In order to discuss that, we should also talk about the fact that, I think you're aware that we have really hundreds of different blockchains. It's not a one size fits all thing by any stretch.

Much of what I told you in the beginning focused specifically on how the Bitcoin blockchain functions. It was created ten years ago. So, I also want to keep that in context to suggest that we are very early in the build of the infrastructure. The stack that will support blockchain technology. We'll be talking about decentralized applications and smart contracts and how that plays into ownership and transfer of digital art or crypto art.

The precursor to that is how you even get there. The second big-ticket blockchain is the Ethereum network. You heard from the last panel—someone mentioned an ERC 721. The ERC stands for Ethereum Request for Comment. There are many, many, many different ones. That's how we get from ERC 20, which I'll talk about in a minute, to ERC 721. But that comes from the language of tokenization of the Ethereum blockchain. The difference between the Ethereum network and the Bitcoin blockchain: the Bitcoin blockchain was created to solve a double spend problem.

We wanted to make sure when A sent something to B that A in fact owned it. Even though it appears that we exist in a digital world, it's really a digital veneer over the double ledger entry system of currency. So, if I have something and I send it to Devin, my Wells Fargo or USAA will have to do settlement on my side, his bank will have to do settlement on his side. It's still the age-old, 20<sup>th</sup> century, dare I say, before.

What we're talking about with the Ethereum network is a blockchain that was built for a different purpose in addition to having its

own native currency, which is Ether. It was also built to support programmable transactions. What do I mean by that? Decentralized applications that can run on top of it, as if it were its own world computer. So, in addition to supporting its own native currency like a Bitcoin blockchain, it does all of these other things. And it's not to say that other blockchains couldn't do it, but you need to understand that, because smart contracts and decentralized applications will come over daps as well.

The other way to have this conversation. We're talking about crypto assets; it really is this class. There are at least seven different things that we could name right now that are not specific currencies, but operate in other ways. When we think about currency, we're talking about this medium of exchange that one dollar will always equal another dollar. We're talking about fungible assets. Dollars, apples, currency, commodities.

And so, from that perspective, that's the fungibility that we understand with exchange, with stores of value, things of that nature. What makes it unique? And by it, I mean when we're talking about the uniqueness and scarcity of crypto assets generally, crypto art specifically. It's because of the code that is used to create these tokens, the ERC 21 standard. About ten lines of code that says each one is unique, as if we were buying property.

Each parcel of property is unique in a certain way. So, that is the way if someone creates an ERC 721 token to represent purely digital art or even tokenized art. That's how you would be able to track ownership. That doesn't mean that we wouldn't still have the same problem that we have from property, of course. Who are these crazy people that pretend that they own this property and rush to the Register of Deeds to file? We may not be able to solve all of those issues but in terms of provenance, we are far more ahead in the Web 3.0 world than we are in the current iteration of it.

Where we have verifiable, provable methods of authentication, provenance and what we will also talk about in terms of downstream participation for an artist. My last point there is that this is happening a lot in the music space as well. Ujo Music is a fantastic example of that, where it is up and running—it being the Ujo Music platform on top of Ethereum where there are very prominent artists selling their work and directly connecting with their purchasers or their fans.

The way that this could be more relevant for art in particular is that each time that token is transferred, a smart contract can automatically make a micropayment back to the original creator. Even when they no longer have control over that particular artwork. So, downstream market participation is one of the most exciting things that I think could happen in this particular area in addition to some of the other things that we'll

talk about as well.

**PROFESSOR SCHROEDER:** Okay thank you. Derek?

**PROFESSOR DEREK FINCHAM:** Okay, thank you. I come to this panel and to this conversation as a very much a new student of blockchain and the promise that it can offer. There is definitely a lot of excitement and possibility surrounding the technology. So, I think it's a good moment to think about what might a different way that the market works, the way that the antiquities trade works, what might that look like? So, we're almost kind of putting on, in my view, we're writing science fiction. What will the art market look like in fifteen or twenty years? What should it look like?

There's also a thing we need to be careful of which is that people will joke that every couple of years a tech startup will reinvent the public library or a taxi cab or a public bus. So, some of this stuff already exists. So, when we think about a smart contract, I don't know that we want to call them smart. They're kind of dumb. They just do one thing, right? Or a couple things based on, from what I understand, from what the code tells the contract to do. So, that kind of already exists in the art world. There was something in 1971 called *The Artist's Reserved Rights Transfer and Sale Agreement* by Seth Siegelaub and Robert Projansky. It was published in the New York Times and it was used throughout the United States by some artists.

But the problem was, do you have that contractual power to get art buyers to do that? One aspect of that contract was, there would be, as Professor Evans says, a downstream, revenue stream for the artist. Kind of a contractually implemented artist resale right. Given that we've had obstacles getting that legislation passed at the state level and the federal level, it might be that contract is the way to get artists' resale rights to happen.

So, a couple things to maybe think about. There is a need in the art trade and in particular, the antiquities trade for some transparency, for new ways to think about justifying ownership, justifying provenance, thinking about the history of objects. So, blockchain might allow us the possibility to do that but only if the programmers and the people creating it want them to. We need to ask some tough questions maybe with some of these initiatives.

Who's going to benefit, who's writing the code, who's deciding what happens? Why should things be anonymous, why should they not be anonymous? There are some hard questions and I think we'll continue that conversation. Artory was talked about a little bit in the first panel. That seems to be one of the leading blockchain initiatives. But there are a lot and some of them come and go.

There's another one called Pieces of Eight, which is attempting to raise money through a cryptocurrency to basically loot underwater archaeological sites under the oceans. They've made claims that there's \$100 billion worth of gold from Spanish ships that were wrecked on their way from the New World back to Spain. The problem is nobody's ever had a profitable shipwreck treasure excavation. What they have done is destroyed the archeology and created a lot of problems.

So, we need to be careful about getting so excited about some of the possibilities of blockchain that we don't ask the good questions and think about what are the consequences? I look forward to continuing that conversation.

**MS. KATYA FISHER:** First of all, I'd like to thank Tonya because I speak on blockchain panels quite frequently. And no one ever actually takes the time to explain what blockchain is. I think you did an amazing job, so thank you for that. I think maybe I understood for the first time. I am very proud to be here. I am a Cardozo alum. I graduated in 2010. While I was at Cardozo, I was extremely interested in art law, so I interned in the art law department of Herrick Feinstein which I think is probably the best-known art law department.

I worked at the art loss registry—I did quite a bit. My father actually is the Director of Research for the Claims Conference. He's one of the leading figures in Holocaust art restitution research in the world, so I learned quite a bit growing up about databases, restitution, the art market, and all the problems inherent to it. When I opened my own practice, I concentrated more on working with tech companies. I've worked with a lot of art tech companies. I know a lot of the players within the industry and I've seen how it's changed tremendously over the last ten years.

I've been doing quite a bit in the blockchain and digital currency space for the last two years. It's been something extremely exciting, and I certainly am very happy to be here today to be talking about these two areas and how they fit in with each other. I think that when we talk about art and blockchain, we're really talking about a number of different things, because blockchain, it's a technology, it's a tool. It's not anything more than that.

The question becomes, what are we talking about? It's very important to understand the distinctions. So, number one, e-commerce. When we're thinking about digital currencies, digital payments, how to actually transact within the art world—this is something that's extremely important—you're talking about artists around the world, galleries around the world. How are they dealing with these payments? How are they transacting? How are they securing payments? How are they making sure that that's done appropriately?

The next is that art as investment. There's a lot of discussion right now about the idea that you could fractionalize art ownership through tokenization, through the ownership of a digital asset that represents something that's perhaps equity or asset backed. There's digital art, which is what the first panel was discussing, which I think is a really exciting area, because right now, it's in such early stages that we're all kind of laughing and rolling our eyes and saying, "this is so silly." But we're not seeing the big picture if that's how we're looking at it.

First of all, people love to collect. They love it. For years, look at people's Instagrams. I used to work with an app called All City Arts, where the whole purpose of the app was to take pictures of street arts and upload it. And you would be the coolest kid on the block because of the fact that you had the most uploads. People want to own something. So, that's the first issue.

The second is, when we talk about digital art, you have to start thinking about what this could turn into. This has huge ramifications for the gaming industry, for the music industry, for the film industry. How we look at art is going to change tremendously over time. And then the last is provenance and tracking. Obviously blockchain is a fantastic tool for its transparency, for insuring that you have full provenance on a work. But there are a lot of questions inherent to that, like, what do you do with physical works of art? What if somebody lies in terms of what they report on the blockchain?

Or what about the fact that there aren't that many people in the art market who want to reveal that kind of information on a blockchain, right? That takes away all the fun of the art industry. So, there are a lot of questions there as well. So, that's why I'm very excited to be here and talking about this stuff.

**PROFESSOR SCHROEDER:** Great, actually some things I'd like to talk about with this panel. The first panel talked a lot about the crypto art itself. But what I'd like to talk about a little bit with all three of you is that, how does blockchain relate to more traditional forms of art—music, fine arts, cultural property, antiquities? And one aspect of that, the first panel talked about and Katya just mentioned, is the concept of tokenizing interests in art. Now, you can say, yes, you're going to sell coins on Ethereum or another blockchain that will represent interests in arts. But does that have any legal status whatsoever—having a token that somebody says is an interest in the artwork?

**MS. FISHER:** Basically if you think about a token in that context, don't think about it as a coin. Just think of it as a digital asset that's the same thing as a share certificate.

**PROFESSOR SCHROEDER:** That's what I want to ask: it's not a share certificate; how does it fit into the law?

**MS. FISHER:** So, are you talking about something that would be a token that represents a physical asset? Or some kind of fractional ownership of digital art?

**PROFESSOR SCHROEDER:** A fractional ownership of, like the Picasso.

**PROFESSOR EVANS:** Physical, tokenized.

**PROFESSOR SCHROEDER:** If you could talk about that.

**MS. FISHER:** People have talked about that. I've met some people who have said that they've engaged legal counsel to come up with ways to show that that's not a security interest. That that's a direct interest into the Picasso. I would beg to differ. I don't think that that's possible. I think that that's quite a risky business. I think at the end of the day, what you're looking at is the token itself. If you have a token that represents digital art and the digital art and the token are one in the same thing, we're talking about something else.

But if you're talking about something that represents ownership, you're talking about a security interest. So, all you're talking about is instead of a piece of a paper, I have a digital token. And there are wonderful, wonderful reasons to do that. I mean, it becomes much easier to manage lots of investors in one piece of art if you're doing it digitally. That's honestly the biggest and best reason to do it.

**PROFESSOR EVANS:** I agree wholeheartedly and I do want to continue to make the distinction between something that is a native digital asset versus something that is a real-world asset. Here, we're talking about art. We could also be talking about physical property like a home or land. There are a number of projects going on in the pure, real property respect. I can think of some counties in Illinois that are already trying to transition their deed system to some form of a blockchain-based representation or registry.

So, that's going on with a lot of different real-world assets and how they might be represented in token form. But it sounds like securities to me. I'm no securities lawyer, but I would be very hesitant to categorize that or write a legal opinion that would say that it was something other than that.

**PROFESSOR SCHROEDER:** I was thinking that if you have actually the physical, the painting, the Picasso, legally, that's a good. And transfer of that is governed by the Uniform Commercial Code. One of the parts people talk about with ownership and title, one of the fundamental principles of article two which governs goods is that except - - otherwise provided, there's a lot of exceptions. That the rights and interests of buyers, sellers, creditors, donees, etc. are determined regardless of title. By physical possession is probably the most important thing. That's what we're getting at. When you talk about title in goods, that has very, very little legal resonance. So, it doesn't really give you physical control over the goods when you're talking about physical artwork, physical control. Now, what you could do is, economically, you could transfer the artwork into an entity. And then the entity would sell interest.

That would be almost a security under securities law. And then it would be governed, the very nice ways of doing that but it raises a whole—.

**PROFESSOR EVANS:** Well I think this brings up both on the properties side and then, I'm an intellectual property lawyer and law professor as well. So, I'm constantly thinking of how this fits in. I taught real property for ten years so what does that mean for the bundle of rights? And how those can be disaggregated and you have use and enjoyment, also rights to exclude, all of these other things. And whether it complicates it unnecessarily to be in tokenized form. I'm not against it. I'm agnostic about which way it's going to go.

So, we're just talking intellectually about the what ifs of what might be. The fact that you can do something doesn't mean that you necessarily should. And so, I'm far more interested and excited about the pure, digital asset arena and what that means for digital assets that were difficult to protect in the Web 2.0 world—that we have a new chance to do something different and empower artists in that respect. But I appreciate the comments about when we think about possession and possessory interest within the bundle, how this might be complicated and not even getting to the securities.

**PROFESSOR SCHROEDER:** Right. Actually, in commercial law, possession as a property theory is the right to exclude others. And physical possession is one way of doing that. Unfortunately, in the statute UCC, they use the word "possession." Physical possession, not the right to possession. So, that's going to be a problem when you're talking about physical art. Now, you talked about copyright, that's another whole issue there.

**MS. FISHER:** I mean, just sticking with property and physical art for a second before we move on. I will tell you what my skepticism is about all this discussion. About fractionalized ownership of major artworks. I think that there might be a market for it on the very, very high-end level. I'm not going to opine from a business perspective. What I'm concerned about with it is what's the reason why fractionalizing, using this new technology, is such a great idea? It's because of the idea is that the average person out there, even if that person isn't a credited investor, can't afford a \$100 million artwork.

But that person might be able to afford to invest \$50,000, something like that. So, you could have a group of people who are all going ahead and investing into this piece and are able to reap the benefits of the fact that the piece is going to go up in value supposedly over time. In a way that you weren't able to before because the technology makes it much easier to manage all of these people, right? Because if you were doing it in a manual way, you might not want to deal with millions of investors.

The part that concerns me is, when people talk about tokenization of physical real estate, if everybody invests and owns a little equity piece of the Empire State Building, we know where the Empire State Building is located. It's not going anywhere. Who's going to be in control of that artwork? Where's it going to go? What are people going to do with it? Who gets to say how it gets displayed and what happens? Most of the works people are talking about now is people are talking about owners of major works who maybe want to create; they want some liquidity.

They want to get some cash. So, they want to go ahead and have a portion of their ownership tokenized so that they can add some liquidity to what they're doing. But I'm owning this Picasso and I don't necessarily know where it is. I mean, if we're talking about a big museum piece or something like that, there are protocols in place, but I'm concerned about those types of things.

**PROFESSOR SCHROEDER:** Derek? I don't think that is, when you talk about cultural property, but it's to be a major issue.

**MR. FINCHAM:** Yeah and part of, I come from the UCC and art context from a little bit of a different perspective which is that, the art market has traditionally been very good at avoiding responsibility under the UCC. So, they don't take obligations in terms of the major auction houses don't really warrant that a work of art is authentic. Sometimes they do, what they usually do is say, "It's my opinion that it's a Picasso." So, you can't sue someone for an opinion. So, they've effectively gotten around a lot of those rules. I'm pretty confident that

the art trade will continue to do that no matter what blockchain looks like, if it wants to do that.

One other thing to think about, do you really own a Picasso? You do, I guess. But you can't throw it in the trash. You could do that but who would?

**PROFESSOR SCHROEDER:** There's no world right in the United States. You can burn your Picasso, you can.

**MR. FINCHAM:** Well, there are moral rights for living artists. And Picasso's dead so I guess we could do it. We could trash his work if we wanted to.

**PROFESSOR EVANS:** This has taken a terrible turn.

**MR. FINCHAM:** Yeah, it is right. That's what we lawyers think about is the worst case. But art sometimes isn't quite like other property. It is and it isn't. Because we all kind of think that's awful if somebody destroys a Picasso. Nobody gets to see it again. The way we talk about it, the way we think about it, our emotional reaction to art doesn't treat art like other property. We try to use these property ideas and sometimes the fit is very neat and it works and then sometimes it's not a neat fit theoretically with what we try to do.

You think about possession as the right of exclusion. Some art collectors only want to work at a work of art for themselves. I think that's a rare art collector. I think every art collector I know wants to show it off, wants to say, "I bought this." Maybe not to everybody, they want to let you in and say, "I bought this."

**PROFESSOR SCHROEDER:** But it's the right of exclusion that they're the ones who decide where to show it, when to show it, etc. Of all intellectual property, many people can use it in terms of seeing it and enjoying it. But exclusion is power over it. Now, your question, the tokenization of art is really, when you talk about art as an asset class, sometimes it seems like a more cynical way of looking about it. Whether you're just buying this token, where's the art? It's in some food court or something. And, you know, who controlled it? Well, you can have a dow or each token can vote on what you do with it. But really, it is art, it's looking at art in the most cynical way possible. We want to talk about law but law isn't everything. It's not morality, it's not aesthetics, it's its own thing.

One thing that I think is extremely exciting about blockchain, if it ever can really be scaled up in the way we talk about, is precisely what you were saying about payments, micro payments. We talked about

Picasso, but let's not talk about Picasso. Picasso the works aren't selling for \$100 million. You're talking about artists, musicians are a very good example, who do want to monetize their art, not the cynical values but they want to eat?

But they also want their art to be performed. They want people to hear it. And that's been one of the real problems that we all know if the Internet is how you get your information out there or your art out there—getting anything back. You can go on YouTube, you go on Patreon, etc. and get advertising or on Patreon you get sponsorship, etc., but it's very hard to move very small amounts of money.

**PROFESSOR EVANS:** So, that kind of takes us back to the discussion of smart contracts and how this all functions. So, we talk about these micro payments. How it actually happens, kind of goes back to this concept. I will say and it came up earlier, this idea of smart contract makes lawyers heads explode. Because we know as a matter of contract law, this term is a - - neither smart nor contract. We hear that on every panel and it's true.

What it can do, and I practiced for ten years before I started teaching, mostly on the literary law side. I could think of a number of different ways that a smart contract could function to facilitate the performance of a legal contract. We have started to hear also a legal smart contract to push the point that a smart contract is not a contract. It actually is also code that works in an if-then function. Think of it like the most rudimentary way to think that Nick Szabo wrote about it is the vending machine example.

I have \$2.00, I going to buy a ginger ale, it costs \$1.50; I put in \$2.00. I get the ginger ale and \$0.50 back—if-then. That type of technology, that type of coding, already exists. And now we can push it into this context. In fact, I participate on the IP Summit working group, I should say, for the Accord Project. We're trying to figure out ways to reduce certain parts of a legal agreement to the performance of that transaction. On the literary law side, that means that my client's royalties escalate every time there's 5,000 sales of her book on Amazon.

Amazon would be the oracle that would inform my smart contract. When it hits 5,000, bada bing, bada boom—she's paid immediately. She doesn't have to pay me \$425 an hour to do that. There are other things I can do; I'm not going anywhere. But I could spend my time with good lawyering on the front end. We can also not have to have an agent do that. Go sell the property, I don't have to call you to make sure that this happens, we don't have to have reserves. They're like a whole host of other areas to inject efficiency in.

And the same could be said in the art world. Where someone who is a creator initially and again, on one hand, in the purely digital - - of

the world, but also for tokenizing. I'm going to focus on the native creative side. That person will always be connected to that cryptographic representation of this artwork because they're inseparable in that way. So, every time that token exchanges hands, or wallets, I should say, a bit of that money goes back. That's how Ujo Music works in the music world. So, that's really exciting.

**PROFESSOR SCHROEDER:** Would you explain that a little bit? How Ujo Music works?

**PROFESSOR EVANS:** So, with Ujo Music, artists sign up through Ujo and Ujo has this great representation. It's a pie chart and I see crypto. So, I can see their website where they have a great graphic representation of precisely how much the platform keeps for the privilege of being a new type of intermediary, but one that is purely transparent. I think there is at least 20% that goes to the artist and they also participate every time something is resold. So, that's a constant stream of micropayments that doesn't exist today. We also never know when an artist signs with a major label or even an independent label, how much that music is going to be worth. Sometimes it's not really worth a lot of money until that artist has passed, so there are a number of reasons why someone would want to remain connected. We don't have that resale right, but you can cryptographically build it in now. The law wouldn't have to change because the technology did, and so that's another really interesting way that would function.

The really great things of what we do here and those are answers that we are still figuring out, should there be a kill switch built in as well that says, if this goes terribly wrong, this smart contract, then there's some type of back door to undo what's been done. From a libertarian cypherpunk thing, that sounds horrible, but for reality and where we are, to make users, the majority of users comfortable, that may be what has to happen.

**FEMALE VOICE 2:** To discuss this and understand it better, copyright is a bundle of rights, right? So when we're talking about music as an example and we're talking about the music industry, we're talking about so many different rights that are inherent to one download. We're talking about the person who wrote the song. We're talking about the person who sang the song. We're talking about the producer who produced the song. We're talking about the ability to perform the song, cover the song, play the song at a restaurant, play the song on TV, play the song on a commercial, play the song in a film, so the issue is right now, there's about \$2.5 billion sitting in a black box of uncollected royalty payments where nobody knows where it's supposed to go and

who it's supposed to go to, so blockchain technology could solve some of the problem in the fact that the smart contracts will go ahead and just execute the payments everywhere and it becomes a little bit easier, but that's assuming that they have the right information. So, the problem with a lot of songwriters is they don't necessarily record their copyrights, right? They fight with each other. So, what happens if the wrong person gets paid, so these are the types of issues that concern us, as attorneys. Turning from music to digital art, this becomes even more interesting. Actually not more interesting, but it becomes equally interesting, which is that digital art, when we were talking about non-fundable tokens on the first panel and this idea of art collectibles, the concept is that now all of a sudden, you can do something that you were never able to do before, which is you can own something that's unique and one of a kind within the digital space. So, this is amazing because all of a sudden, the technology not only has solved the double spend problem for currency, it has for art, as well. Meaning that instead of just being able to go ahead and just transfer all kinds of copies of songs, artworks, film, whatever around the world in two seconds in an unlicensed, illegal manner, now the technology is there that you would be able to track it and you would also be able to have one of a kind digital assets, which, over time, let's assume, on the last panel, we were talking about how you can still download Pepe, but imagine a world in which we get rid of that, a world which everything is on blockchain and you're not able to create those copies anymore, so that's when it becomes really interesting.

**PROFESSOR EVANS:** This is actually something that's happened and a conversation that goes on. I'll give you two examples from recent presentations, one I saw down at South - - when I was there and another in another place. So, supply chain is a huge topic of conversation in a number of different industries, and I think of it in the healthcare industry in particular and on the pharma side, as well, when you're trying to track the authenticity from beginning to the time it goes into someone's mouth, right? And the obvious reasons why that would be critically important. Another use case that's no longer a use case. It's actually going on is in the seafood industry, which is very important to someone like me from New Hampshire, that oyster or that salmon says it's coming from a particular area that they actually have along that supply chain from being pulled up in the boat to the time that it hits my Whole Foods and everywhere along the way. IBM is introducing that as well. It's being introduced for diamonds and things of that nature, and it's a really, really interesting way. So, those have been some interesting ways that might play into, the point is well made and when you're talking about illicit areas, that's the whole point where you have

something where no one trusts anyone in how to keep blood diamonds, for example, out and things of that nature, so this sounds like it's another area or arena that's going to be problematic.

**PROFESSOR FINCHAM:** Well it's a - - article and I cited it. Jen Krater authored it, and I don't know who her co-author was but yeah, it's a good idea, and so who knows what form it's going to take. It could take lots of different forms. So, you talk about objects that we don't know about. We do know kind of sort of what illicit objects look like, and so if there's material from, let's pick Yemen, where there's a conflict, and we know, or archeologists know generally what kinds of objects come from Yemen, so if an object comes up for sales, let's say at a market and it said it's from the Middle East and it's vague intentionally, well, it might be checked against an object registry or something else to say it raises some red flags. You need to do some heightened scrutiny of that object. That's just one way it might work.

**FEMALE VOICE:** I think what he's saying is a registry is only as good as, you know, garbage in, garbage out. There is so much incentive for people not to put things on the registry. Now, the pressure would have to come, really, from the buyer's side where people will not buy something unless it can be identified on the registry, but there's, if you're talking about illicit sales, it's like anything else. That's going to be on the black market and it's getting it onto the registry that's the problem.

**PROFESSOR FINCHAM:** So one question I had for my co-panelists is can you fake a blockchain? Is it hackable? Some, I think some cryptocurrencies are starting to be hacked, I believe.

**PROFESSOR EVANS:** It's not, when you hear about the, there are a number of different things that can threaten a blockchain, a 51% attack or there are lots of talks of what quantum computing might do, but when we hear about hacks, usually the headline of the news is someone or some, first of all, it could be a honeypot, like an exchange, where they were not taking good care of the crypto in their hands because if I send crypto to an exchange, I've lost control of it. It's under control of their keys and so it's been compromised already, but it is access to the crypto to redirect funds has been the issue. The 51% attack is always going to be a consideration, as well, so it certainly is going to be conceivable. The larger the network and the longer it's endured. In ten years, it makes it more and more difficult. I think in the industry, we're starting to back away from always immutable forever because the next day something could happen, right? But the strength of a network,

based upon the number of nodes over time and the number of blocks, etc., makes it more and more and more difficult until the next technology comes to compromise it.

**MS. FISHER:** Blockchain is a ledger, right? So, when you're talking about a ledger that's going to record analog information and put it on the blockchain, there's an opportunity to lie, of course there is. There's an opportunity to withhold information, to fudge the information you're putting in. Once the information is on the blockchain, it becomes immutable. So, the thing is, when we're talking about digital art, when we're talking about digital artworks, music files, entertainment, film, television, gaming, etc., you have an incredibly strong technology for all of those things. When we're talking about the recordation of artworks, physical artworks and putting that information onto the blockchain, we're talking about what's a really great tool. It is. It's a great tool. It's something very useful for that part of the industry. I don't think that it's the grand savior of anything because obviously there's a lot of room for error.

**PROFESSOR SCHROEDER:** Our work here is done. Well, Devin?

**MR. DEVIN NEWMAN:** I'd just like to thank our moderators and our panelists here today. Thank you. [applause]

A brief note is we did get all our moderators and panelists gifts, of which I also made my first trip into the crypto art world and it took me like five hours to figure out how to do it and I have an undergrad in computer security so there's a certain level barrier to entry here, so I've really appreciated the discussion we've had here today. I think it's been enlightening, illuminating, certainly very interesting, so once again, let's thank all our panelists and moderators. [applause]