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On Technological Innovation, Inequality, Regulations and Governance: An Interview with Roger Brownsword

*Sobre inovação tecnológica, desigualdade, regulação e governança:
Uma entrevista com Roger Brownsword*

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Resumo

Nesta oitava entrevista da série realizada pelo Grupo de Investigações Filosóficas sobre Transhumanismo e Biomelhoramento Humano (GIFT-H+/CNPq), temos a preciosa oportunidade de entrevistar o Professor Roger Brownsword, um dos maiores especialistas em direito, regulação e governança tecnológica. Perguntamos a ele sobre os impactos da inovação tecnológica e as possibilidades de regulá-la e governá-la. Focalizamos o papel e os limites das leis nesse processo fundamental para as sociedades profundamente influenciadas pelo rápido avanço tecnológico.

Palavras-chave: Tecnologia. Desigualdade. Regulação. Governança. Melhoramento Humano.

Abstract

In this eighth interview in the series conducted by the Research Group on Transhumanism and Human Bioenhancement (GIFT-H+/CNPq), we have the precious opportunity of interviewing Professor Roger Brownsword, one of the leading experts on technological regulation and governance. We asked him about the impacts of technological innovation and the possibilities of regulating and governing it. We focus on the role and limits of laws in this fundamental process for societies profoundly influenced by rapid technological progress.

Keywords: Technology. Inequalities. Regulation. Governance. Human Enhancement.

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Introduction

In this eighth interview in the series conducted by the Research Group on Transhumanism and Human Bioenhancement (GIFT-H+/CNPq), we have the precious opportunity of interviewing Professor Roger Brownsword, one of the leading experts on law, and technological regulation and governance, which is what we focused on in this interview, as well as commercial and contract law, biolaw and bioethics.

His extensive career – about fifty years – could not be summarized here, but we can highlight his teaching at the University of Sheffield (where he is an honorary professor in law) and at King's College London (where he was the founding director of the Centre for Technology, Ethics, Law and Society - TELOS). According to the King's College London website¹, it is also worth noting that from 2004 to 2010 he was a member of the Nuffield Council on Bioethics and from 2011 to 2015 he chaired UK Biobank's Ethics and Governance Council. Since 2010 he has been a member of the UK National Screening Committee (UK NSC). He has been a member of working parties in the Academy of Medical Sciences (on 'drugs futures') and the Royal Society (on neuroscience and the law, and on machine learning); and he has acted as a specialist adviser to parliamentary committees on stems cells and hybrid embryos.

Among the numerous articles and books that make Professor Roger an international reference on the subject of regulation and technological governance, we will highlight just a few of his most recent books: *The Future of Governance: A Radical Introduction to Law* (2024), *Technology, Humans, and Discontent with Law: The Quest for Better Governance* (2023b), *Technology, Governance and Respect for the Law* (2023a), *Law, Technology, Governance and Respect for the Law: Pictures at an Exhibition* (2022), *Law 3.0* (2020), *Law, Technology and Society: Reimagining the Regulatory Environment* (2019), *The Oxford Handbook of Law, Regulation and Technology* (2017).

In the interview, we asked him about the impacts of technological innovation and the possibilities of regulating and governing it.

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Interview

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Professor Roger, thank you for accepting our invitation to give us an interview. We are honored to have the opportunity to interview you. You are a reference in the debate on technological regulation, and your expertise on the subject is very relevant to our research group.

Roger Brownsword: Thanks. It's extraordinary how the interests that we, lawyers, philosophers, and ethicists have in technology is opening up a conversation that is truly worldwide. This week, I heard again about another of my books is being translated into Chinese. This will be, I think, the third or the fourth book. The books I used to write about contracts... no one wants to read those in China! The same is true with South America. Well, particularly with Brazil, I think, where Portuguese is the language. When I was giving a talk in London one day, a Brazilian professor came to the talk and asked me if he could publish an article in the journal he edited in Brazil about one of my earlier books on law and technology, which he then arranged for that to be translated into Portuguese. But, again, I think you know I teach in Lisbon, and lots of the

¹ Available at: <https://www.kcl.ac.uk/people/roger-brownsword>. Accessed on November 03, 2024.

students who will sit in on those classes come from Brazil. So, I'm very interested indeed in making the connection with you. And I've done, actually, with some other colleagues in Brazil, I think in São Paulo. I've done interviews with them too, another law tech group. So, it's great to have the opportunity. It's a two-way thing. I am pleased to meet you.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Thank you very much. We believe that the chances we have of expanding these collaborations are great. We've been in touch with colleagues here in Brazil who teach philosophy courses, but who also have legal training. So, we think we'll be able to expand our collaborations a lot.

Roger Brownsword: That's fantastic.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: So, we're going to start the interview.

Roger Brownsword: It might be helpful if I just get that out at the beginning before you ask me. It will take me a little while, but it's the kind of the bigger picture, if you just bear with me.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Of course. Please go ahead.

Roger Brownsword: Imagine that a group of humans were arriving on planet Earth for the first time. They were looking for a planet that they could live, and they found Earth, and it worked for their biology. So they arrived. There's no other comparable intelligent life on Earth. But they arrived, let's suppose, with the kind of knowledge and skill that we humans on Earth here do actually have in 2024. So, they are sophisticated technologically. Now, although they've traveled together, and they are from the same species, these humans, like we humans, have very different interests. They're not all the same. They have different plans, different values, different priorities, you know, but the one thing they all agree on when they arrive is that although they will go their own way and form their own communities, their own groups, and be different in that way, that they will all respect the conditions on Earth that make it possible for them to do this in the first place. That's the one thing above all. If you imagine Earth as being a kind of platform or an infrastructure, they must do nothing to compromise that infrastructure, and nor must they do anything that will compromise the possibility for the development of community life. You know, there will be groups of humans who go very different ways. Some of them might be very much in favor of technology, but others might want to live without too much technology. But there will be peaceful coexistence. They will respect differences well. So they respect the infrastructure, the platform, they will respect differences. And within their own communities, they know, too, that although these won't be fundamental differences, there will still be differences and conflicts that will need to be managed. And they will try to do this without disrupting or destabilizing the possibility of other communities going their own way.

And that's the sort of general picture. And that's the kind of blueprint that I have for where I think we should be on planet Earth. The problem is that we didn't agree or have an awareness of these things when we settled here. So we are where we are on planet Earth, and it's not a good place relative to this picture. But that bigger picture tells us what is kind of universal, and as I would say, cosmopolitan, and has

to be agreed by all humans on Earth, that they do nothing to damage the possibility of humans existing and functioning on Earth, flourishing on Earth. But as I say, we are where we are. And so these cosmopolitan commitments that I'm saying is where we should start the settlement or the colonization of it – they're not very visible. I mean, we talk about international law and international relations, but I'm not talking about something that's an agreement between nation states here, although that's the closest we get. But something that's prior to all that, you know, it's even before that. And then, as I emphasized in this imaginary, communities form in their own way, and they're different, but each will have its own distinctive identity, its own distinctive values. They are what make these people the people they are. And we should respect that.

And so, where we have governance decisions within these communities, those with governance responsibilities should always try to keep faith with the community's fundamental values, which, you know, as lawyers we identify particularly with the statements we find in national constitutions or civil human rights declarations, that kind of thing. And then again, there are everyday conflicts to be resolved as well. And they have to be dealt with within each community in the best way they can to accommodate the different interests.

So, what this amounts to, Murilo, is that I think those who govern here now have three levels of responsibility. The most important responsibility is to make sure that the Earth remains habitable for humans, and that humans can form their own communities, peacefully coexist, go their own way without damaging one another or without damaging the Earth itself, the environment. And of course, wherever you look, you would say we're not doing very well at all. We're doing very, very badly in this respect. Wherever you look is terrible. So that's a fundamental failure of governance. And the most important thing of all, you know, to protect our deepest interests as humans, we're doing very badly.

And then the next responsibility, the next level of governance would be within a community relative to the fundamental values of that community. I mean, your community might be one that is very religious, and those religious values have translated down into the fundamental, how you identify yourself. So you would expect governance there to be very respectful of whatever values are guiding in that religion. Whether there be other communities where they take a much more secular view, but still, I mean, it could be that some of the secular values coincide with or converge with the religious values, too. But it will be their own particular values that they will be trying to keep faith with, and just like any Supreme Court in Brazil or the United States, or wherever, will be looking to its Constitution and saying: "how do we interpret these provisions?", because these are what make us the people we are.

And then the third level of responsibility would be to try to do the best they can with the conflicts that arise between individual members of their communities who, you know, have different interests. They're not now, necessarily, interests that go to what's fundamental or identifying about this community, but they're still matters that have to be resolved. So, dispute resolution is something that has to be done as an everyday business as well, whether you're talking about disputes between individuals or between groups, and different views on what the law should be. So there's a lot of business to be done there.

But I think that our problem is that we're aware of these everyday responsibilities, and we often will remind ourselves that we have to attend to the fundamental values of our community as well in deciding what we can and cannot do. Like in the UK at the moment where we have big questions about immigration policy. Some people would say that the government's approach to this violates the human rights to which we are committed here in the UK, that you can't just ship people out to Africa. So each community should

try to hold its politicians, especially, to the values that are fundamental for that community, even if it might be inconvenient. But again, to go back to where it started, the most important thing of all, which everybody has to agree to, is that there are some foundational features that are conditions that we have to protect at all costs. And these speak to the possibility of our humans, with our biology, being able to exist on this planet. They speak to the possibility about being able to exist with one another, particularly given the kind of dangerous weaponry that we now possess, the harm we can inflict on one another. And also, and I think the most difficult is that we also have to leave space for our agency, for our autonomy, our sense of who we are as individuals to flourish as well. There has to be room for self-development, and the context has to be conducive to that.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: We don't think there could be a better way to start the interview. This background that you established certainly positions the problem by highlighting some or maybe all of the most significant aspects of the scenario we want to address. I'm going to resist the temptation to abandon the script altogether and continue the conversation from this point on, because the richness of what you're proposing, not only in terms of content, but also in terms of the mental exercise, is very interesting! Imagining scenarios helps us enormously to understand what is at stake and also to indicate what are perhaps the key points, the fundamental axes for resolving... I don't know if resolving, but for understanding a problem and seeking to solve that problem. So, you highlighted a lot of aspects that I would like to talk about. Maybe they will come up in the course of the interview, but just so that this interview has a beginning, middle and end, because that's important for publication, if it were an event, we would continue from your starting point, which is very interesting, and the interview would begin with a description of that starting point, which I think elucidates things in an incredible way, because you managed to synthesize diverse and complex things and present very clearly what's ahead of us and what some of the options are for solving it. You thought about how to design a scenario for us to introduce this interview, so I thank you very much for taking the time to do that.

Roger Brownsword: One footnote, because this is Brazil and because this is Rio. Rio is famous in governance for the declaration on the environment in the 1990... you know, climate change, in the 1990s, the most famous declaration of the so-called Precautionary Principle that we should take measures to protect the environment even if we're not certain that the risk will eventuate or will be as harmful as we fear. And precaution has lots of critics, because protecting the environment costs money and it's inconvenient. It stops people, businesses doing things they otherwise wouldn't want to do. But if you think about the three levels of responsibility that I've just sketched for you, the protection of the environment is at that top level, the most important of all. And if what you are saying is "yeah, but this will cost money, it's inconvenient", this is another level. It's lower-level argument. So, the three levels have a priority over one another. I don't know whether you know the phrase "lexical priority" that John Rawls used in his [A Theory of Justice]... This first level will always outweigh arguments at the second or the third level. The second level will always outweigh arguments at the third level. So, the environment – precaution is absolutely appropriate there. It might not be appropriate everywhere, but in relation to the first level conditions... It's appropriate to say. Yeah, that landmark in governance really gives a particular example of how this scheme works.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Please, Roger, be our guest. This is a conversation that the more it shifts, the freer it is, the more interesting the result will be. We remember how much it mobilized society and how much it mobilized the international community, because it was a global meeting, many years ago now, in the name of something that is now manifesting itself in a way... There are the deniers of climate change or the climate crisis, and we have to live with them, but in Brazil today... Brazil is a huge country, and I don't know if you're familiar with the division of regions. There is a state in Brazil called Rio Grande do Sul, which is in the southern part of Brazil, close to Argentina, close to Uruguay, which has already experienced two catastrophes caused by floods in less than a year, and catastrophes that the state does not have the material conditions to meet all the demands. The bridges are literally being destroyed. People can't get around. And there are also metaphorical bridges. We have also broken metaphorical or symbolic bridges and we are experiencing in Brazil, as in a considerable part of the world, a context of polarization in which solutions are not thought of together, they are disputed in conflict. So, my solution is actually a springboard for my next election. In a scenario like this, of climate crisis and political crisis, and of non-compliance, because we have many declarations from meetings, such as Rio 92, which have been systematically dismissed by the most powerful countries, or the richest, or the most industrialized, or the ones that pollute the most. So we don't think it's a scenario, unfortunately, that we can be very optimistic about, but seeking an answer to it is undoubtedly the first level, because everything depends on us still being here to solve the rest. If we're not here, the rest doesn't seem to be much of a concern, not just us humans, but we could make life impossible for many living beings, not just humans.

Roger Brownsword: Yeah.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: So let's get to the first question. There's an Italian economist, Michele Boldrin (2017), who claims that, in general, innovations exacerbate inequalities. He cites a few examples, such as the loss of jobs. Technology destroys jobs faster than we can create them, and this tends to exacerbate inequality, because people are left without jobs. In Brazil, technological innovation takes place in companies. There is now a Ministry of Science, Technology and Innovation. Innovation has become a kind of government principle, but innovation itself continues to take place in the private environment of corporations. If innovation generates inequality, and considering that companies are the owners of innovation, they increase the possibility of exercising power, especially over the state, in state structures. I think this also happens elsewhere, but in Brazil we suffer from the problem of lobbying. Companies lobby the government a lot, both at the legislative and the executive level. So we have a scenario where innovation is held in higher esteem, because is supposedly related to economic growth, but which can have the side effect of increasing inequality and the power of companies over public interests. To conclude this question, we would like to mention that we interviewed Allen Buchanan, who in 2011 proposed a kind of institute, the Global Institute for Justice Innovation, and the aim of this institute was precisely to think about how to use innovation to promote justice (BUCHANAN, 2011). That was in 2011. We interviewed him in 2022 (VILAÇA, KARASINSKI, 2023), and asked him if he thought this institute would still make sense and he said very clearly that it wouldn't, and made mention of the vaccine crisis during the pandemic and the

unequal distribution of vaccines. Having said that, we wanted to hear from you if you see a viable way out so that innovation is stimulated, but does not promote inequalities and does not also compromise democratic regimes even more strongly.

Roger Brownsword: There are really three questions in that one question. The first question is about technology and jobs. The second question is really about the power that private enterprise has as the primary innovators. And the third question is about a more equal distribution of tech and its benefits. I think I'll answer these questions independently, but the overarching question I think is always about we have a certain level of public power in our legislative and government institutions and the enforcement agencies of the state. And the question is: how far and/or are they prepared to go in using those public powers to constrain and channel the activities of private power in enterprise and commerce? And, I mean, there are several books around at the moment where the authors are telling the story of how technology has developed, particularly through the last two centuries. The story is that wherever you look in the world, there have been followers of people like Hayek, who think the market is the answer to everything. You just let the market do all the work, maybe with a bit of help from, you know, competition. But basically, it's light touch public power, the governments don't interfere with the economy. Just let the markets do the work. And then against that, you've got authors who have the view that no, you can't just let the markets do this. It has very bad consequences for us as humans. There have to be corrections, not just minor corrections for a bit of competition, but there have to be major corrections. So now to take each of those questions.

First one, well, I mentioned in the email that there's this book, it's called *Power and Progress*, huge book, it's this thick, by Daron Acemoglu and Simon Johnson (2023). It's an excellent book, but the main point they make time after time after time is that new technologies are brought in from the industrial revolution onwards that transform the workplace and, you know, machines... I mean, labor saving devices, and we get around to thinking that the enterprise will be more efficient and more profitable with these technologies, otherwise they won't be adopted, because it's private enterprises making these decisions, and private enterprise is trying to optimize its profits. And it's a story about huge profits being made thanks to the technology, generally speaking, being well, creamed off, I would say, if you follow, by the elite, a lot of very rich people getting even richer, and the working classes who work in these factories or whatever workplaces, they don't get any better. In fact, they might even be worse off. But the worst thing that can happen is that the machines destroy the jobs, so that, you know, from the Luddites here in England onwards, working people have been fearful of the machines taking away their jobs. Now, it's true that in some cases an economist will, you know, we can argue about this forever, that there will be new jobs that appear as a result of the innovation, and there will be some opportunities there for some people to do jobs that weren't previously there. Ok. That's right. But when you look at the overall picture, I think the history is that jobs get lost rather than created. In the end, it depends on those who are introducing the technologies to kind of make a risk assessment of how this will impact on jobs, and that in an ideal world, what we want enterprises to do is only introduce technologies where they complement what humans are already doing. For example, my laptop here complements what I'm doing because it enables me through Zoom to talk to you in a way that wouldn't... In other words, it's like technologies that enhance what humans can do. I know we're going to talk about enhancement in another way. But yeah, that seems to be the desirable thing. But as long as you just leave it to private enterprise to make those decisions, they will only protect jobs so long as that's

something that they need to do. Do you remember that famous story about Henry Ford when he introduced, in the early part of the 20th century, the first kind of production line in the car factory? There was quite a lot of automation involved already, and Ford was showing someone round the factory and the visitor said “well, yeah, but look, if you only need so many people now to work on the productions lines so that these people will no longer be drawing a salary, who's going to buy the cars”? I mean, if the argument is that it's kind of win-win that we, people who work and people gain, but those who are the entrepreneurs are also getting, then that's fine. But you know, whether government public measures can be used to constrain private enterprise in a competitive global economy strikes me as highly problematic. What you really need is a culture of good employment practice, good innovation practice.

So, on the second question, which is about the control that private enterprise has, you know, whether you're talking about Silicon Valley or the big Chinese tech companies, wherever they are, they basically call the shots. Yeah, of course! And not only do they call the shots because they have the technical expertise. The law has helped, contributed to enabling the kind of control that these tech companies already have, particularly through intellectual property [IP] law. And if you are asking why don't we have more access to the kind of innovation that's going on here, it is because it might be hidden behind trade secrets or patents, or it might be out there in the open, but the patent proprietors are able to control who is licensed to use the technology, or again, copyright. And it's quite interesting at the moment that with generative AI, there's litigation going on by the creative community who have copyrighted the individual texts to challenge the right of the AI developers to access this data to train their AI models. That's a very interesting turnaround. But generally, IP law works to favor private interests and the public interest is a secondary consideration.

So, and leading on into the third question... Access to medicines around the world, whether you're talking about vaccines for Covid or antiretrovirals, whatever it might be, access in the global south is generally a lot inferior to access in the privileged north. And over the years there have been struggles between the IP proprietors in the global north and those generic manufacturers in the global south who tried to provide drugs. And I mean the international institutions which have well, a list of essential medicines or whatever, you know, they will try and inject some justice into this, but in the end, you're up against the pure power of the pharmaceutical companies and you're up against the IP laws that enable them to shield their inventions. And if you want a national regulator to try and apply pressure to a tech company, particularly with pharmaceuticals or biotech companies, there's resistance to this because the tech company can say, particularly with some low-cost produce tax, they'll just shift their business away from this jurisdiction, you know, to a jurisdiction where legal position or the tax position or whatever it might be is just more advantageous. And, just like with tax havens worldwide, I suppose we would have regulatory havens for tech companies that want to keep things to themselves. Probably like some of the tech companies that have set up in the Republic of Ireland here. They're within the European Union, but it's thought that data protection is not quite so well protected. Maybe it's more advantageous for the companies to be located in the Republic of Ireland, and tax advantages too. I don't fully understand that, but it's a familiar kind of story. I'd agree with Alan Buchanan, that the prospects for setting up an international agency, pretty much anything actually, at the moment aren't great. In of my books, I argued that we just don't keep an eye on the development of tech in the way we should. And there needs to be an international observatory about this. But it's not a good time for trying to do something like that. There's not an interest in doing it. And so, when you've got big players, like, if the United States or China, Russia... not on board, then there's no use the EU

is on board or Brazil's on board, you know, it's just not... I mean, there are huge players! Well, Brazil is one of them. I mean, India, China, Russia, any of these places not really on board with an agency or a scheme for, you know, fair shares, then it's just full of holes. I don't take a very optimistic view of it. So I think that probably since the time that Buchanan first made that proposal, things have got more difficult as I guess is what he's saying too, is it not? Yeah. I suppose he is probably looking at this particularly through North American eyes, and probably you had the interview with him in the wake of the Trump regime. And if Trump tech politics is the way the US goes, they're not going to be interested in putting money into an agency. And if America's not on board, then well, yeah, it's not really a runner. So, there were many questions in that first question, but I hope that gives you a bit of an indication of where I stand on those things.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: No, you answered all the questions within this question and I thank you for that. We just wanted to make a comment, because you mentioned the issue of patents, generic drugs and antiretrovirals. And this is an exceptional case, in the sense of rare, here in Brazil, because there was a time when the government managed to break the patents on certain drugs, create this idea of generic drug and, especially, drugs for the treatment of HIV/AIDS. So maybe this is an interesting case study of how the government managed to confront the pharmaceutical industries and impose the public interest that people with HIV/AIDS should be able to receive this treatment free of charge, which is the case, I believe you know, here in Brazil. We have a single healthcare system, so people can go to hospitals or clinics and get these drugs for free. So this would perhaps be an interesting case study of how the state managed to win a battle against the big interests of the pharmaceutical industries. But it's an example that's very familiar to us in Brazil, and perhaps this can inspire something in relation to today's big techs, especially in the field of artificial intelligence and the lack of transparency from there to here (we don't know how the algorithms work), and the excess of transparency from here to there (they know everything about us). This creates an asymmetry that can be unbearable for the democratic regime. But you covered all the points. Thank you for that.

Roger Brownsword: Yeah, I mean, I don't know what the answer to the question about the antiretrovirals in Brazil is, but the one thing that can damage pharmaceutical companies or any big tech company is if their reputation takes a big hit. For example, Volkswagen, you know, they took a big hit when news broke about the way that they were misleading customers about the emissions from their cars. I think antiretrovirals are very cheap for the pharmaceutical companies to produce. I don't know whether that means their profit margins aren't that great, or they can afford almost to give them away. I don't know. But it could be that they're not actually the drugs that really matter for their profitability. I don't know. It could have been that because HIV/AIDS is such a global issue that if they were seen to be unfairly depriving people of access to these drugs, which were low cost, then that wouldn't do their reputation any good at all. Yeah. Do you know the Sackler family and that scandal at the moment in the United States? Huge pharmaceutical company and very big philanthropists, too. You know, lots of universities in England have had money from the Sackler Foundation and are now trying to divest themselves off this because of the way the pharmaceutical company pushed a pain-relieving drug that was highly addictive. It was loaded up with opioids. There is a documentary about it.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: I thought it was brilliant that you highlighted the issue of reputation, because that's what it's all about these days – how we maintain a public reputation and generate dividends, which is not a reputation for moral commitment. It's a reputation for market commitment. But whatever, there is a way out, even if it's not exactly moral. But there is a political way out against companies, which is to attack their reputation, perhaps.

Roger Brownsword: Yeah.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: In your book *Technology, Humans, and Discontent with Law – the Quest for Better Governance* (2023b), you analyze a phenomenon that is very familiar to us in Brazil, which is discontent with the laws, especially with the institutions that are responsible for applying them. The inequality of access to the law and legal institutions can be illustrated by the existence of the possibility that, by paying bail, some people can respond to legal proceedings in different conditions than those who do not have financial resources. It's as if there were a court for rich people and another for poor people. In fact, if you'll pardon the politically incorrect term, justice is far from blind.. The dissatisfaction with the law is the scenario of your book. And you address this in two scenarios or in two contexts: low-tech and high-tech. I think what you've done is highly insightful, because there is a tendency in this debate on technology to say that the current laws and institutions are not adequate to deal with technological advances. So, if we're already unhappy with the laws today, imagine in the future. The question is: you acknowledge in your book that the governance of the law is imperfect, then what is your prognosis on the matter of the search for better governance of new technologies? As there are many technologies and each technology may require a specific type of governance, if you want to choose one technology to answer this question, feel free to do so.

Roger Brownsword: When I was writing this book, what prompted it really was a book I'd written just before that, in which I've been discussing the idea that we should respect the law, even though we have reservations about it. And my thinking was that...well, there are some reservations that are more serious than others... like access to the courts. If you are rich, the courts are open to you and you can hire expensive lawyers. But if you're poor, you don't, you know, formally the doors of the court are open, but in practice you can't. And in the same way, if you're poor, you're not going to be able to afford expensive bail bonds. So the system works in a way that you see is unfair, and that seems to me to be a pretty serious reservation to have about. But the fact that a law takes a particular position on something it has to take a position on, but it's not the position you personally would have favored, that might not be such an important reservation, because you understand that, you know, you can't please everybody! So yeah, I was interested in that respect and the reservations we have, and that led me to think about the kind of discontent we have with law. And then I was starting off with, say, discontent in a low-tech setting, just to try to identify what the kinds of discontent were. And particularly about the performance of law and practice and what is promising, and about particular, you know, discontent... I mean, lawyers have a very bad reputation. Discontent with lawyers, or, again, because so much of the discontent these days is with the politicians because... when I was a student back in the 1960s, we were taught that there was a sharp distinction between law and politics. Law

was one thing; politics was something else. And the center of our legal education was on the courts, disputes and cases. That was where in the common law world, the civilian world, it would be still with the courts and the codes, and the politicians somewhere else, you know? But already in the 1960s, most of English law was being made by politicians in the form of legislation. It's true we had the historic, traditional, general principles of law, but judges understood then that it was not their role and responsibility to make new laws, you know, certainly not to set new policy. And so much of the statute book is, of course, policy driven, but it is thought to be business for politicians. So the line between law and politics becomes unclear. But whether you're looking at lawyers like judges or practicing lawyers, or politicians, in the public's eyes, they don't have a good reputation for one reason or another.

And so what I was really wanting to do in the book was think about how, when technology comes on to the radar, in what ways this might change the situation. Might it have made things worse? Well, yeah. Might it have made things better? Well, possibly. Or it might have been novel forms of discontent that, you know, new technologies provoke. So, to join up two of the things that you said already about... one about bail and the other about the lack of transparency and the way algorithms work, you know, the black box nature of algorithms. Let's suppose the bail decisions are being made now automatically. Automated decisions, they're fired up by algorithms, which we don't understand. So, your original point still is a good point – that people who are rich will be able to pay for bail, but poor people won't. But going back to the prior decision – do we grant bail or not? The algorithms say: “this person is a high risk; we are not going to grant bail here”. “This person here, we think is a low or medium risk, we will grant bail, but we'll charge, you know, the bond will be quite a high level”. Now we have a new kind of problem with law because in a kind of Kafkaesque way, the algorithm says “no” to you for bail, you're not going to get bail, and you don't know why! And, you know, yeah, sorry! It's not just, I mean, when maybe you look at a whole range of decisions made and you see the... you say “ok, same old story actually, working class people don't get bail, rich people do get bail”. Same old story! Yeah, the algorithms, they might look as though they're neutral in that respect, but the way the variables, they actually work off, just pick up the old practice. On the other hand, having said that, there might be some technologies that do ease some of our discontent, because as I was saying earlier on, poor people generally don't have access to justice in the same... they can't take their disputes to court. They can't afford to pay lawyers, you know. But we can automate certain kinds of low-level disputes and decision making, like on eBay. eBay is the classic example, I would say, where millions of small disputes get settled by automation every year. And without that option, poor people would not be able to do that. You know, my one previous visit to Brazil was to a conference that was really about the interest rates that were being charged on credit for consumers – 200% interest on loans. And, you know, it was about consumer protection. But worldwide you would say there's a problem where ordinary people, as consumers, buy something that doesn't work or is not satisfactory. The law, doing what you said sort of symbolically says “you have certain rights here”. You know, “you have a right to proper quality and fitness in the goods you buy”. But if the retailer, or the person from whom you bought the goods, says “forget it, we're not going to help you out with this”, then consumers generally don't have the resources to take it further. So, although on paper they have a legal remedy, in practice it's not worth anything. But if they could just online fill in a fairly simple form, there might then be a way of getting better justice for consumers in low value cases. And people could perhaps get that. The trouble is they don't bring these cases before a fellow human, necessarily. It is automated. The algorithms make the decision, and generally they might be

ok, but you take the human out of the loop. And again, that's going to be another source of potential discontent that we don't have in old fashioned law. Because old fashioned law is about humans and their rules and principles and standards. That's it. And it's very inefficient, and it's open to capture and corruption. It's problematic. But if you can get to a court, you get to have a hearing before a fellow human. In the future, I suspect that in the interest of efficiency and a kind of justice, we may settle for automated decision making, where humans just don't figure at all in the loop. And so, I think that with new technology, some of our older reservations about the law get amplified. They get amplified and aggravated. There might be some ways in which we can ease things, but it's a mixed bag. And yeah, as I indicated to you in the book I'm now going to be working on, I see that, over the next decades, this is the main issue as to how far we try and do governance through humans and how far we try and do it through machines, instead. And I think we're going to be discontent whichever way we do it. This goes back again, though, to where I started, where I think each community has to make its own decision on these matters. You know, it's for each community to say "we prefer to have governance by our fellow humans". Even though it might be inefficient, even though it might be unfair, we prefer that to handing it all over to the machines. There might be some places where we want humans and others where we'll accept machines, you know. There'll be many halfway houses. But it's for each community to make its own decisions on this. And there will be differences. Yeah. So, I think that's probably as far as I can go on that question.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: In addition to thanking you for your answer, we'd like to thank you because currently, the maximum a credit card can charge is "only 100%". I didn't know you had...

Roger Brownsword: One hundred percent? Ok. Oh, well, that's better, but still penal.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: We didn't know you'd been invited to Brazil to talk about it, but it worked!

Roger Brownsword: Oh, many years ago. Many years ago. I think in the late 1990s or the early 2000s. It was right about the turn of the century.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: It took a while, but your contribution has finally been implemented. Let us take this opportunity to ask you about a specific point you made. Do you think these decisions are going to be made in the context of a community, a specific state, or a specific country? For example, the United Kingdom is going to make this decision, but there are other countries like the United States where the states, California, New York, you name it, can make decisions autonomously, so how does this question of the community making a decision look in countries like the United States? So that would be the first question. And the second is whether you see any alternative to a decision by the global community, like a kind of international law on technologies.

Roger Brownsword: So, this is a very interesting question. You know, there are some technologies like telecoms where you might say “look, we just can't really do this on anything other than a national level”. Like the railways. If we leave the railways to go state by state or region by region, the tracks might not join up! The kind of interoperability and connections won't work. In healthcare, too, there might be some things where we have to have, well, within the region... the biggest area we can just for the sake of making it workable. But there will be other questions where it would be possible to devolve the decision to the lowest level or the smallest group possible. It's not about tech this, but the U.S. Supreme Court a couple of years ago made a decision to overturn a case called *Roe v. Wade* of the 1970s. Do you know about this?

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Yes.

Roger Brownsword: In the 1970s, in a five-four split decision, the Supreme Court decided basically to let women have a free choice about termination during the first trimester, and they set this three-trimester framework, which was supposed to be balancing the interest of the woman with the interests of the fetus, you know, unborn life. And this was kind of giving women the choice, more control over their reproductive lives. In American political terms, this was seen as a Democrats thing... it was they, not the Republicans, who were pushing for this to happen. And sort of in line with a liberal philosophy. But a couple of years ago, the Trump Supreme Court with now a Republican majority overturned [this decision].² Republicans for years have been trying to get *Roe v. Wade* changed. But I mean, what the change does is to say that essentially this decision is one for each state to make in its own way. And so recently, there's been a lot of discussion about a decision made in Alabama, which was very restrictive indeed of the right to terminate. Very restrictive. And one way of viewing this would be that with this kind of decision, as with some decisions about technology, you can't actually impose just one kind of view on a whole nation where there are serious divisions, and particularly where you can localize those differences so that you can paint each region either “blue” or “red” in American political terms. I mean, I don't know, it's probably the case in Brazil. I mean, my impression of Brazil, I guess that in the big metropolitan areas, the politics is a bit different to, say, the politics up in the north of the country, or again, right down in the south. I don't know. I'm only guessing, but it might be that you do have very different views in some... I mean, maybe there are some parts of the country where the indigenous population is dominant or has a big presence. And their views about the kind of lives they want to have, the kind of community they want to be is very different, indeed, to what you find in the metropolitan cities. Their views about biodiversity and about technology would be very different to the views that you might find from city people. So I think that, yeah, one option would be to try to ease our conflicts by giving the decision to groups that do have relatively similar sort of views about this and localize it. I mean, in the UK that's been done with questions like putting fluoride in the water, you know, region by region they've been able to make their own decisions.

Although I have an English name, I was born and brought up in Wales, which as you may know is part of the United Kingdom. We have our own language: Welsh. If I were to say “good day” to you in Welsh, I would say “*bore da*”. If I asked you if you spoke Welsh, I would say “*siarad cymraeg?*”. That's how it

² See, for example, The Supreme Court overturned *Roe v. Wade* 2 years ago. Here's what's happened since, CNN US, June 22, 2024. Available at: <https://edition.cnn.com/2024/06/22/us/roe-v-wade-overturned-2-years/index.html>. Accessed on November 06, 2024.

sounds. It's a completely different language. Not many people speak it. But the Welsh are fiercely independent like the Scots. And they're also, particularly in the area where I lived, very religious. There were chapels. We weren't allowed to go out to play on a Sunday. Shops didn't open. Everything was shut down on a Sunday. And one thing that had to stop on a Sunday was drinking alcohol. Not allowed to have it. Well, in your own house, you could, but you could not go out to a pub or a club where you could. But there were different views across Wales about this. The counties, the areas that were closer to England, were more in favor of having drinking on Sundays. So they had a vote area by area. And in the area where I lived, the vote was against Sunday opening. So, bad news! I mean, there are some precedents for this. And, you know, again, within the EU, although sadly we are no longer part of that, but there is a doctrine called subsidiarity. It means that in Brussels, they will not make a decision for everybody if it's the kind of question that should be decided locally. I think that might be sensible, too. But again, I mean, what about this internationally? Does there have to be a kind? Well, I don't know. And again, I'm conscious here that so many of these decisions that, particularly in Europe, get pushed down to technical standard setting bodies who, you know, you talk about the technology being not transparent, the way these technical standard setting bodies work is not very transparent either. Because we think "oh, they're just dealing with technical matters like, you know, to do with electricity or whatever it might be, and plugs". But, I mean, you do want some standardization. Like, I mean, well, just the plug is a good example, isn't it? I'm not sure what kind of plug you have in Brazil, but I know that... Is it two pin? Two or three pin?

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: That's a great example, Roger, because it happened here very recently. There was the standardization of the three-pin plug. It's very recent.

Roger Brownsword: Oh, you have three pins! Ok. I have like a cube that I carry around with me when I travel.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Yes. We have to take it, right?

Roger Brownsword: Yeah. So some international standards may obviously make sense in many things, and it doesn't really matter, does it, with a plug? But with some of these technologies, it does matter. And yeah, I suppose we have to work out which ones really do matter to us and how strongly we feel about this.

Murilo Vilaça: Perfect. Just briefly on what you said about Brazil... there is a more or less clear separation between the duties of the federal government and the duties of what we call state governments and municipalities. So, for example, public security and law enforcement are the responsibility of the states. We have a system in which some decisions, such as whether or not abortion is a crime, would be made at the federal level, and those decisions would be valid for the whole country. It wouldn't be possible to have a law for Rio de Janeiro or a law for each state. And this is an issue, as you said, and in the case of Brazil, this is even stronger. I would say that Brazil fits into a multiplicity of things as a country, because it is multi-ethnic, multicultural, and multi-religious. This top-down decision, let's say, from federal to the states, would help people from patriarchal regions, for example, to exercise their reproductive freedom. There are regions

in Brazil where women can't even decide freely whether or not to have sex, which is extremely problematic. If we leave it up to these communities, maybe we'll get a bit closer... I'm exaggerating here, but it would be a hyperbole of that *The Handmaid's Tale* series that show women being used for reproduction. Brazil is a country in which perhaps these local decisions would work very badly because of our history as a colonized country with a very strong patriarchy.

Roger Brownsword: Sure. I understand. That's really important. The idea of pushing the decision down to the lowest level sounds as though it's in the interest of democracy, but it could be, as you say, where patriarchy is the order of the day, that you are just pushing control down to a group who have very regressive kind of views about things, which, if you were to retain the decision federally, you would then be able to counter it. But this question of the competence that law-making bodies have at federal or below state level, you find it in all these multi-level jurisdictions, where there's usually a quite a lot of nervousness about giving the center, the federal, too many powers. You know, historically will often be, I suppose, the smaller units that have got together and have then given power to the center for limited purposes, you know, for defense, national taxation or something. In Europe, too, this is a big question, because after all, you've got 27 nation states coming together in the European Union and giving all this power to Brussels, well, primarily economic power. Brussels wouldn't have the power to make decisions about sexual relations or about health, things like this.

Murilo Vilça/Murilo Karasinski/Léo Peruzzo Júnior: We have the feeling, Roger, that in your previous answer you contemplated the third question. And again, we thank you for having shared the basic idea of your new book³ and your proposal of governance clusters, both the legal and the technological cluster. It seems extremely innovative. You already said, whether we want, for example, the judiciary to deal with eBay decisions, which involves not delivering a product at a very low price, in short, if the judiciary will have to get involved with this or whether some technology could already make this decision. So, it seems to me that you already touched on this issue but we think it's relevant to rephrase it: How to balance technological innovation with the need to preserve certain ethical and legal principles of a humanistic nature in an increasingly automated world?

Roger Brownsword: Well, I think, as I say, I see this tension between governance by humans using rules with some technological support, with maybe some surveillance technologies or identifying technologies, against former governance, which is much more about risk management and technology doing the work. I see this as being the central issue that will divide communities in the coming decades. But at the same time, I see that insofar as these communities are all at least committed to civilized living and governance, that they have it in common that there are, beyond their borders, beyond their boundaries, there are forces at work, which seem to be quite reckless in the way that they can threaten the conditions that make all of this possible in the first place. So I think there are two conflicts going on. Well, we have two issues. One is within the realm of governance. Do we govern by humans with rules, or do we govern by technology and/or something that's a happy compromise? But at the same time, looking outside our own governance communities, are there threats? I don't just mean like asteroids that might smash into the Earth, but are there human created

³ The title of the book should be *Governance Projects, Governance Problems, and Governance Prospects*.

threats out there, including climate control, which are threatening the possibility of our going ahead with governance in the first place? And it's interesting that when I was saying that new technologies can change what the reservations we have about the law, I think for the first time with AI, it's the first time I've heard people say "well, we want the technology to be applied in ways which are human-centric".

In the European Union, they've recently agreed on a regulation on AI, the so-called AI Law [EU AI Act⁴], but the first step they took before they began the work on that was to convene a so-called expert group. They weren't really experts, but a group of people from all sorts of disciplines, including philosophy, who were to try to draw up a kind of an ethical code. And the main thing they said... well, some people said "we want AI which is compatible with human dignity". But they came up with this idea of "human centrality" as being the central... you know, AI's fine, so long as it's human-centric. And immediately you think: how can that be? Because the purpose of AI is really to take humans out of the equation! You know, take them out of the loop. AI will do this. AI can outperform humans. We don't need humans to do this. And yet we say "no, AI has to be human-centric". So I'm pretty sure that, as the years go by, the literature on human centrality, how it differs from human compatible or human enhancing... There will be a huge literature on this. And that on one side, you'll have people saying: "humans are a desirable feature, an asset, a resource. We want humans in the frame". And on the other side, people saying: "no, no, humans are a problem. Humans are corruptible. The machines can do it so much better". That's going to be part of this dialogue. Should we govern by humans in a traditional way? Should we govern in a more technological way? I mean, it's massive, Murilo. There is a whole language around human governance and human relations, ideas like "trust", for example, or even "compliance", you know, which have a certain sort of moral meaning. And that's all being stripped out. And people are redefining these terms like "responsibility", "explanation", even "justice", giving them a technical meaning. This is what it means in the technical world. To say "I trust you" is to say that I make a certain judgment about your character, that, if you promise me something, I don't need a bond. Your word is good enough. If I trust you, I think you're trustworthy. You promise you say you will do this, fine. If we talk, as they are all the time now, about trust in the machines, trust in AI, we're not saying that, for sure. What are we saying? "Oh, it's not going to harm you. It's safe, or it will operate in the way that we expect it to operate". It's reliable or something like this, you know, very different kind of meaning being given to "trust" and "trustworthiness". And it's refitting of the language so that it's prepared for a more technological world. And all these currents are going on. I have no idea how it will come out, as I say, in terms of my ideal picture of the world. Well, each community would make its own decision about this and what kind of governance it prefers, because... Well, I don't know whether you've come across an American writer called Lawrence Lessig? Lawrence Lessig, the Harvard Law...

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Yes.

Roger Brownsword: Ok. Lawrence Lessig. So, he stopped writing about these things many years ago, but he introduced the idea of two paradigms of governance. So West Coast governance, which is more technological, kind of California, I suppose. And then you've got the East Coast. Well, the East Coast is tech,

⁴ EU AI Act. Available at: <https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence>. Accessed on November 06, 2024.

too, but in his paradigm, the East Coast is more traditional. You know, humans would rule. And I wrote an article in 2005 called *"Code, control, and choice: why East is East and West is West"* and it was just elaborating these two paradigms. The thought experiment was: if you could choose, which would you choose as your mode of governance? Would you want the West Coast with the tech, where you are safe, you are secure, no one is going to hurt you, all risks are properly managed? Or do you prefer the East Coast, where you're dealing with fellow humans? It is messy, it is risky, but it's all too human. Which do you prefer? And I said at the end of the article that for my own... at that stage, I just didn't know what to think about that choice. I find that very, very difficult, indeed. I suppose I'd be looking for some compromise somewhere in the middle. But the funny thing was that I asked quite a lot of people that question, and there weren't many people who, like me, said: "I find that's too difficult. I don't know which way I'd go on that". They were clear that either the West Coast or the East was what they wanted. They were very clear about it! But they were divided, you know. There were as many 'west coasters' as there were 'east coasters'. The people I talked to just didn't know which. They knew what they liked, but they didn't like the same thing. So, if that's true, then maybe you need to get the same sort of people in a community making a decision that most of them like.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: And in the article the following year, you said that neither one nor the other, right? Neither west nor left, but perhaps a 'Middle West'...

Roger Brownsword: Yes. The middle is the best.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: You touched on another point that seems very central to us, and which we've been talking about with an Irish researcher, John Danaher. I don't know if you are familiar with his work⁵?

Roger Brownsword: Oh yeah, John! Yeah, I know John.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: And one of his papers talks precisely about the change in what trust and truth mean in a society that is increasingly impregnated by artificial intelligence. He inaugurated a field of research, Axiological Futurism, in which trust... I found what you said very interesting, because it's just like the fact that we scheduled this interview today, but we didn't sign any contract, and the two of us trusted that the other would be there at the scheduled time, so this level of trust between humans and this axiological and even lexical turn of trust. I trust the machine because it will work the way it's supposed to – that doesn't apply to human beings in the same way....

Roger Brownsword: I think that's right. It's quite interesting that, you know, where you say you trust a fellow human, it's not just that you can rely on them. I think it's that you don't feel you need any kind of independent guarantee that they will... it's enough. You just trust. So you don't need certification or guarantees. You don't need to keep an eye on what they're doing, either. And in Europe, we have a lot of

⁵ See, for example, Danaher and Sætra (2022).

discussion about retaining humans in the loop somewhere. I mean, it could be human oversight, as to the operation of the system, or it could be there's an appeal to a human, which implies we don't really trust. There's a backup. We want some sort of security... that gives us enough, then. It's very interesting, actually... When I was a contract lawyer, international contracts was something we often talked about. The problem there is that you've got an English company who are wanting to sell something to a Brazilian company, but they haven't dealt with one another before. They're not quite sure whether they can trust one another. And neither party really wants to go first with this. The buyers don't really want to pay before they've got the goods, and the sellers don't want [to ship the goods before they receive payment]... You've got a problem. And so we have mechanisms in international trade. I don't know whether you're familiar with this, but particularly the so-called letters of credit, which enable the English company to ship the goods out, and they will get paid by a bank in the UK that's part of an arrangement with a Brazilian bank, with the buyers. They get paid against the document. They present documents, too, and of course the buyers are happy with that because they know that they won't be paying the money until the goods are on the way. And that works well. And it could be that as the years go by, and you have regular dealings with one another, that you actually don't need any of that, because you now really do trust one another. You know, it may be that over the years you find that you can trust these people, and they can trust you, and you're just confident without any safety net or anything like that. But it starts going that way. But I don't know, I mean, it's very interesting the way, as John Danaher says, that these things are being well taken into a different context. I don't know quite what I make. I mean, I've written bits and pieces about it, but I still... I don't think it's a conspiracy. I don't think it's a conspiracy here. I don't think that someone's saying "oh, this will never work unless people trust the technology in the way they trust fellow humans". But, you know, my friends often say to me about, let's say, automated vehicles, they say: "oh, there's no way I'd ever get in a fully autonomous vehicle". "Why not?" "Well, I just wouldn't trust it". They say "I just wouldn't trust it". I say "well, what do you mean?" "Well, I wouldn't feel safe in it. It might crash". That's what they mean. They don't actually need to use the language of trust, but they do. And we use it now in such a multiple way that I think the core meaning of trust, which is, for me, the moral meaning of it in human relationships, you know, trusting someone to do the right thing, it just gets diluted and reduced to what I call prudential consideration to considerations of self-interest and whether it will harm you and your interests or not even that.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Thank you, Roger. We'd like to ask you something on human enhancement, if you'd like to comment on your proposal, and then two points: whether you think it's possible, in the face of such a culturally diverse world, to establish universal norms that have universal validity; and also whether you see a possibility that, through laws or certain norms, we can prevent there from being a kind of obligation to enhance, something authoritarian, that if the person isn't enhanced, they won't have a place in the world anymore. If you could comment on this, even briefly, that would be great. And then we move on to the last question, which is something you commented on your email about the need to train people in the field of law, even at undergraduate level, to deal with this technological scenario. That would be the last question.

Roger Brownsword: Right. Well, so to deal, first of all, with human enhancement... When I wrote originally about this, the debate was largely between people like Michael Sandel, who was saying "no" to perfection.

You know, “we have communitarian duties of solidarity”. And then there were people like John Harris on the other side saying “but the utility of these enhancements, the things we can do...”. His favorite example was, you know, spectacles. I just wanted to introduce into those debates the rights perspective, which I took to be the kind of the third perspective within modern bioethics or ethics. The three dominant ways of thinking about the ethics of new technologies would be: the duty-based view, which might be a dignitarian view, particularly where you've got, say, Catholic traditions, you know, that “no, there's no way, you can't do these things”, and human enhancement also potentially in that category. And then you've got the second bunch of people who are particularly promoting the technology and its benefits thinking in a utilitarian sort of way, and talking about the beneficial consequences. And so, for them, it's just a kind of “would there be a net benefit over harm here”? “We don't care too much about how it's distributed and that's the right thing to do”. And then the third view would be the view that “no, it's about individuals and their rights, and the question you have to ask is whether this proposal will respect the rights of individuals”. So there might be some sort of enhancements, which, you know, you would want to say “well, not unless people consent to this”, or you might say “well, not at all actually, because this would just be far too threatening to other people's rights”. If you had supervision of something which would, you know, well... I mean, I think in the rights way of thinking about this, privacy would often be the focal right that would show up as being an issue with an enhancement. I don't know what sort of enhancements you were thinking about, Murilo, when you were talking about the pressures that people would have to be enhanced. I mean, going back to those earlier debates, one of the issues was whether the enhancements in question would be so expensive that it would only be a privileged few who could afford to have these enhancements. So it wouldn't be a case of people being forced against their will to have enhancements, but rather that there would just be an elite class of people who would be enhanced in a particular way. But if you are talking about people being pressurized to have enhancements to make them more competitive or then this, from a rights perspective, will be problematic because you wouldn't want any of this to be happening without their consent. It might be, for example, in competitive sports, that there are pressures on people to take drugs, which will enhance their performance. They don't really want to do this, but they know that...

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: Just to answer you, for example, the use of nootropics for cognitive enhancement. There are professions in which people use substances such as caffeine and even off-label drugs, so maybe this...

Roger Brownsword: Oh, yeah. Yeah, that's right. I mean, students who take Ritalin or something that... because they see other students do it, or you know, pilots who... or lorry drivers who can work longer hours without falling asleep take drugs that are really designed for something else. Narcolepsy... Yeah. I went to a conference in Australia somewhere around 2005-2006, when cognition enhancers were very much in the spotlight. I mean, a lot of people were, and this particular person I went with was a Cambridge neuro person who did research with students on how much their performance was actually enhanced by using these kinds of drugs. But she said that for a very long-haul flight like that, yeah, she was quite happy to use those drugs just, you know, so she didn't fall asleep at an inappropriate time when you're in a completely different time zone. And yeah, I mean, and for someone doing that, you know, with a full informed consent, that's fine. But I was thinking, too, about the kind of... well, I'm not sure whether this will count as an enhancer,

actually. But you know how people who work in the gig economy, or the people who work like Uber or they are in call centers here in the UK, where their performance is being tracked and monitored every minute of the day... I mean, this isn't really an answer, but suppose that you had a chip. Your employer wanted you to have a chip implanted that would, well, I mean, suppose their intention is just so they can track where you are. But let's suppose the chip had some enhancing byproduct. You know, without that, you're not going to get the job, but you don't really fancy the idea of having a chip implanted. But, you know, it's either that or, yeah, I mean, from a rights point of view, that would be highly problematic, and I'd want to protect people against that. From a utilitarian point of view, it might or might not be, I mean, it might be that you can see so many benefits from whatever it is this chip does that you think "well, it's tough luck these people don't want it". And from a duty point of view, it might again be problematic. You just don't think that this is something that we should be doing to people. Yeah. So what I'm saying, Murilo, is at that stage, I was really just concerned to try to get the rights point of view into this debate and say: "look, there's a third point of view here". It's not just a dialogue between these people like Michael Sandel and John Harris. That's two thirds of it. But there's another view here. But now looking back on that, and in the light of what we've been saying here, well, you'll probably anticipate. I'm thinking: is this, again, something that we have to try to decide community by community? To what extent do we want enhancement? And I mean, a test case, let's suppose that they made a big breakthrough in genetic research such that they could tweak the genome so that people lived for a lot longer than they normally do now. I mean, let's suppose you were talking about people living to, say, 150 on average, rather than, you know, 70 or 80 or whatever it might be. There's a lot of investment going into some of our universities for this kind of research. I think the people in Silicon Valley are very interested in this. But it's expensive. So it's only the already millionaires who can afford to have this done. But let's suppose that over the years, the cost did come down, and it would be practicable for anyone to have this procedure if they wanted it. Well, it could be that, you know, you would leave the decision to communities to decide whether they wanted to be bioenhanced or to permit bioenhancement in this way. And I wouldn't have a problem with that. So, if a community wanted to say "no, you're not going to have that done here and that's not the kind of people we are", then the few people in that community who don't share that view, if they could afford to do it, they would no doubt go across the border to some other place where they could get it done. You know, pretty sure there would be a market for that. And it would be like other things where yeah, you'd have tourism to get the treatment you really want. But I don't see a kind of international standard on this, you know, community by community. Suppose that a community that decides to have bioenhancement becomes problematic for neighboring communities in some way. I don't know, maybe it just can't cope with the population it now has. And it's got too many old people, you know, and now it starts looking to neighbors for support. Well, there are externalities like that. Then I guess there has to be some international interest in this. But otherwise, in an ideal world, I think this should be something for the communities to make their own decisions about.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: If you could, we'd like to hear about one point: The need for technology to be addressed not only in postgraduate law courses, but also in undergraduate courses, and to include a kind of technological literacy as a fundamental point in the training and education for the next generations.

Roger Brownsword: Yeah, absolutely. So, when I started teaching Law and Technology on the London Master's program back in 2004, I think I started, just a handful of students, very... the literature, you know, there was hardly any. It wasn't like you could recommend books very much. They just didn't exist. Insofar as there was anything that you could find that was speaking to the kind of questions I was interested in, it was online, but again, the online world in those days was very different to what it is now. But now we have absolutely burgeoning... I mean, it's just gone mad! You know, pretty much every day of the week, I get emails particularly from China, students who want to do PhDs. But here, just in Europe generally, they're all interested in doing PhDs on some topic in the broad field of law, regulation, technology. I mean, of course it's a big... I mean, I almost think we're approaching a point where law, regulation and technology will swamp law itself, actually. You start with law, with sort of the core subjects of law, contracts, criminal law, property, and then you have competition law, intellectual property law, company law, stuff like that. And somewhere out there, right at the margins, there's law and technology. It is a kind of minor, very, very minority interest that becomes an expanding interest, but the objectives of law, technology and regulation, which I think are about finding ways of improving governance, that becomes kind of the mission for all law. I mean, you know, in other words, contracts or criminal law, intellectual – they're all subsumed within the law technology regulation project. That becomes a complete reconceptualization of legal education. It's not law and technology as an aspect of it, but that is it! Law becomes subsidiary to the larger project. I think that might be where we're going. And of course, that would mean the undergraduate law school would have to be prepared for this. And the book I've got coming up in a couple of months' time on the future of governance is offering a kind of radical introduction to a law degree that looks like that. But that's of course not the view that some people take. Some people, being very much impressed by, you know, data science and AI, they think that lawyers in the future will need to be competent in coding and just understand how it all works. I'm sure that the kids who are coming through into law schools now, late teens, I mean, they've been brought up in a digital environment. They are more naturally there. They're more familiar with that than the people who teach them, probably. So, it is perfectly natural. But it might not be the case that they are able to do coding, you know, but they're perfectly comfortable working. I mean, this is how they're going to be studying anyway, but I think that might be a possibility that there are some law degree programs that are about Law, but also are teaching programming skills and coding skills, you know, things like that, so that there can be a real conversation between those people and people working in informatics or other disciplines. But the thing that worries me about that is that although AI and big data has been in the spotlight for some time, it's not the only thing that's been in the spotlight. Blockchain and crypto has been there as well, in the spotlight. But looking back, where I started, biotech and genetics, that was the big issue back in the early nineties, and then with the development of the internet. But we've mentioned the neurosciences too, neuro technologies, nanotechnology had a bit of a burst... and you can't be an expert. I mean, if you've got to be a lawyer, think about governance. You can't do all these things. Now, it could be that, just to go back to the example I gave you a few minutes ago, that the biotech people come up with a dramatic breakthrough in the biosciences. It's got nothing to, I mean, it might have been enabled in some way by AI in the research, I don't know. But it's not really about AI, it's about genetics. Now, do you really need to be a geneticist, then, you know, because you can't be everything! And so my sense is that, I think the future is that law programs will sort of turn themselves inside out, so that law, regulation and technology become, well, regulation and technology becomes the hub, the absolute core of it, you know? And all the other stuff

is peripheral to that. So everybody will have a basic legal education that looks a bit like that. There will be some spinoffs which do deal with deep dive into a particular technology, not just understanding at a distance how it works, but like with data science being hands-on, you know, there will be like law labs where people do digital stuff as well. Or there might be that people from law are working in bio labs where they're getting really hands on with genetics and the stuff that goes on in those labs. I don't know. Or it could be a game, you know, that neuro is the field that you put with law and people are working with imaging machines and scanners. But the more I think about it, the more I see it as being that this is a takeover by law and tech that just completely redefines what the law and legal education is about. It's not going to happen overnight. That's my best prognosis.

Murilo Vilaça/Murilo Karasinski/Léo Peruzzo Júnior: And it's probably one of the best reflected on. Roger, thank you for those two hours, although I can't perhaps thank you enough. Undoubtedly, this had been one enjoyable interview. We won't be able to thank you for your generosity in answering all the questions and addressing all the possible points. An interview has never lasted two hours and never passed so quickly, so thank you very much!

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