TrustTalk Interview Robert Lepenies

Voice-Over: Welcome to TrustTalk. Today's guest is Robert Lepenies. He is the President of Karlshochschule International University in Karlsruhe, Germany, and a member of Young Academics and a professor of Pluralist and Heterodox Economics. He believes that there are major economic and political interests that fuel the denial of science. We should focus not only on the symptoms but also on the deeper underlying structures that allow denialism to thrive. To maintain trust in science, scientists should actively address issues like science publications that become more focused on ranking and commercialization rather than the content of the research or industry-sponsored research. He is a frequent user of social media platforms such as TIKTOK, Twitter and LinkedIn to disseminate scientific insights. When talking about ChatGPT, he advocates soul searching about the purpose of the texts we produce in science, asking ourselves why do we produce it in the way that we produce it? Why is it valuable to write, understand, read, to critically reflect? And what is it that the machine can do and what is it that it can't do? As to AI-generated output, he believes that traditional methods of evaluating research are not enough to establish trust, suggesting the need of an extended peer community involving a broader range of people and stakeholders in the evaluation process. Your host today, Severin de Wit.

Podcast Host: Robert, although I didn't do a factual check, I would not be surprised if you would be the youngest president of a university in the world

Robert Lepenies: I'm not too sure about that, there are many younger institutional leaders, hopefully, but yes, I'm relatively young for that position. That's true.

Podcast Host: I know that you had an experience about students mistaking you for a fellow student. Tell me about it.

Robert Lepenies: That's true. That happens from time to time. When I became professor one and a half years ago, I was in the introduction seminar and a student came up to me and asked me whatever I wanted to do after finishing my Bachelor in International Relations, if I had any career plans. And while I was thinking about what to answer to this, she was already continuing on and so I didn't get a chance to tell her that I was actually her instructor for that class. And we laughed about it afterwards when we had the class together. But that happens from time to time.

Podcast Host: Today we are talking about trust in science. If we say trust in science, then we say in teachers we trust. At least that's what we would like to see as a desired situation. But the anti-vaccine movement, denial of the human causes of climate change, the rejection of evolution and outright hostility towards certain forms of scientific research are among the most visible signs of increasing scepticism toward science. What are we going to do against denialism?

Robert Lepenies: Yeah, that's one of the key questions, what we do about denialism, precisely because there are major economic and political interests connected to spreading denialism. So it's not just the symptoms that people deny science, but also that there are corporations for profit reasons or let's say, authoritarian politicians for political reasons that supercharge science denial. I think it's always important to focus not just on the symptoms and not just look at the most extreme cases and also lose our temper and lose our minds by focusing on the most extreme versions. But think about the deeper underlying structures. So a quick answer would be, of course education is important, but then as a social scientist, we need to look at structures and how societies are structured such that denialism can thrive. So that means, for example, regulating big tech and the attention economy, curbing authoritarian leaders and all these kinds of things. So it's structural answers rather than individual ones. I would give to this question.

Podcast Host: If I were to say that the scientific community is in part to blame itself for a decreasing trust in science, publications that are driven by ego, producing surprising conclusions, which is a lot more fun than for your status than boring conclusions, the drive to get research published, tunnel visions, research results must fit the scientist's vision, and if it is

not, then tweak it. And last but not least, the influence by industry in exchange for sponsorship for research. So how do you look at that?

Robert Lepenies: I think these are super relevant and valid critiques, and I think the best scientists are very aware of those, and the best scientists are actively engaging and pushing back on the, let's say, mistakes that scientists are making. And you mentioned several of those. Let's take publications. We have to ask ourselves, the scientists, when did publications cease to become a mere mode of communicating research insights and processes of science and become more an instance of ranking people, commercializing oneself and institutions and not really looking at the content of the publications and more in the ranking and the impact and how that's being aided by publishers that are very interested in the profit that it generates. So this is only for publications and it's true for many other instances. You also mentioned, for instance, industry-sponsored research, which is hugely ambivalent, of course. Many of the public-private partnerships and research have led to tremendous progress, like the COVID-19 vaccines and so on. But we see that in surveys about trust and scientists over and over again that the general public is very critical of interest-sponsored research. So we have to be very, very careful here. And I guess that's something that the best scientists are already thinking about.

Podcast Host: You said you wanted to be a little self-critical, right, because you're using the attention economy and I think you're called the TikTok professor, is that right?

Robert Lepenies: Yes, that's nearly right. I'm the "TikTok Scientist", and I think we should be self-critical and I don't exempt myself from that. And I have a hard time actually to navigate a legitimate, yet effective path here, meaning a legitimate, yet effective ways of communicating what it's like to be scientist and how to do science and how to do science properly hopefully. Because the way that I reach most people is through TikTok, Twitter, LinkedIn, all platforms that are private, that are corporate, that don't necessarily align perfectly with scientific values and interests. If I were just to publish my research in academic journals, they would have a couple of views at best a couple of hundred, if I'm a superstar, a couple of thousand, but I can quickly disseminate scientific insights and the value of science through these social media platforms. So it's actually a tightrope act on how to balance legitimacy and effectiveness here. And I don't have a clear answer other than that I would wish that there were more public

platforms such as, for example, Mastodon instead of corporate platforms, that it's such as Twitter, yet I'm using Twitter more than Mastodon.

Podcast Host: Let's talk to the latest techno hype, ChatGPT. It has the potential to both enhance and at the same time undermine trust in science. On the one hand, AI models can assist in analysing large datasets and identifying patterns that may have been missed by human analysts, and this can lead to new discoveries and insights in various fields, but on the other hand, the use of AI in science also raises concerns about the transparency and the interpretability of the results.

Robert Lepenies: Definitely. Maybe we can separate a little bit the issue of research and teaching here. So first and foremost, universities and institutes of higher education that are involved in teaching, they will face an issue of students handing in AI-improved texts and materials. And there's a real soul searching about what is the purpose of the texts we produce in science if we have such tools. I think that's actually a good debate. We should be asking ourselves, why do we produce it in the way that we produce it? Why is it valuable to write, understand, to read, to critically reflect? And what is it that the machine can do and what is it that it can't do? So that's a good discussion. But that's going to hit scientists more from the teaching side. From the research side, there have been some studies done that at least if you give people abstracts and small summaries of papers, then you can fool some people even in their fields of expertise. But then it becomes pretty clear quite soon onwards that there is no real knowledge behind it, it's just the prediction of what would be probably a good paper. So I do see, however, the speed at which these "stochastic parrots", as they have been called, produce any type of output as potentially dangerous. So put simply, the speed at which fake science can be produced is enhancing, and if this speed comes to a system that prioritizes people having lots of output so people get rewards for writing lots of papers, here you have a tool that helps people write lots of papers. You put these two dynamics together, that's a recipe for a lot of problems.

Podcast Host: I put it on the test because I asked an AI robot what it thinks of AI-generated scientific results. And this is what AI replied: "If the public is not able to understand how the AI model arrived at its conclusions, they may have difficulty trusting the results. Additionally, there is a risk that AI-generated results may be accepted without proper critical evaluation, which

could lead to false conclusions. Ultimately, the scientific community has to be very transparent about the use of AI in research and to ensure that the results are subject to the same rigorous evaluation as traditional research methods". That sounds pretty self-critical, don't you think? And politically correct, by the way.

Robert Lepenies: Yeah, that's surprisingly good. I think there is a need to speak about trust in GPT, and trust in artificial intelligence-created output more than ever before. In the answer that AI gave you, it compared it to traditional research methods, the same rigorous evaluation as traditional research. I'm more a fan of this concept of "extended peer community" that comes from the post-normal science theorists. Basically what it means is that we have problems today from digitalisation to climate change that even transcends our traditional research methods, because decisions are urgent, values are being debated, worldviews conflict, even traditional research methods are not enough. So we need broader communities, we need to increase the size of who counts as a relevant person of critique, of knowledge, involve all stakeholders, involve different people who hold different world views, and involve a broader community than just the scientific peer community. So it's interesting that the AI machine, they talk about the traditional research methods, but the AI machine hasn't yet grasped that actually we are in a situation where we need more interdisciplinary engagement, more transdisciplinary engagement, in order to really speak about trust in science.

Podcast Host: Earlier for the TrustTalk podcast, I had an interview with Jason Parry, he is the Senior Content R&D at Sapienship, a global organization by Yitzhak Yahav and Yuval Noah Harari. And when we talked about the influence of misinformation contradicting scientific research, he said, and I quote: "It seems slightly disingenuous to criticize people for going to conspiracy websites rather than reading scientific papers when the conspiracy websites are free and the scientific papers are often completely unaffordable. So I think one component of building trust, perhaps a good first step, would be to simply making sure that the fruits of scientific research are available to people". Would you feel the same?

Robert Lepenies: Yes, I think there is of course, many websites such as Sci-Hub, for instance, where you can get academic work for free in a sense, but nothing is for free, it's always someone's labor behind it. But there's a huge mismatch between the science that we need and we need to read accessibly and we also we need to publish it accessibly. It's not just about

reading, it's also usually authors have to pay in order to get their articles printed, even in the most prestigious journal especially that's a problem if you're from the Global South or if you're from an institution generally that doesn't have funds to publish research. So generally, of course, knowledge should be free, or at least it should be possible for everyone to participate and contribute to the global pursuit of science. But that's not possible, and we have to rely on these illegal sites like Sci-Hub and for instance, have to rely on the work of people like Alexandra Elbakyan, who founded it and who did a lot of good for science while doing illegal things, right? And that says more about how our global system of science is problematic and less about Sci-Hub or these illegal sites.

Podcast Host: Jason Parry published an article in Palladium a magazine on governance with what I found a very compelling story about a young scientist, I think it was around 2013. His name was Aaron Swartz, and he used his MIT computer to download too many scientific articles from the academic database JSTOR, ostensibly for the purpose of making them freely available to the public. After doing that, he was charged with 13 felony charges, which, if convicted, would get him more jail time for downloading academic papers than he would have if he had helped Al Qaeda build a nuclear weapon. And very tragically, on a winter day in 2013, he took his own life. Jason Parry says that Aaron's cause lived on, and he reminds us to the ten-year anniversary of what you mentioned, the Sci-Hub, which is the online shadow library that provides access to millions of research papers otherwise hidden behind prohibitive paywalls. So isn't it time to say that trust in science requires a complete overhaul of access to the publicly funded results of science free for all to access? Or is that too strong a statement?

Robert Lepenies: So I don't know the magazines that you cited or the people there, so I can't make comments on that, but I do agree with the sentiment that science needs a complete overhaul to be more inclusive in various dimensions of the people who do science and also the ideas that are being accepted in science, but also that good scientists are on it. Like this is something that all good scientists want and there are lots of good organizations and the self-organizing features of science, of being self-critical, I mean, it's all there, every good scientist does that already. So I don't see the problem with scientists. I see it more as the problem of other institutions in society that impact science too much.

Podcast Host: At the end of any interview, I always ask my interviewees the same question and I would like to ask the same question to you. What do you see as the most important trust challenges the science community faces for the next few years?

Robert Lepenies: I would say trust in oneself in the sense of how do we ensure that there's enough time to think and to reflect upon what we do as scientists and not follow the immediate incentives which are mostly economic, I guess. How do we enable scientists to trust their own critical thoughts and give them room to make their voices heard and then also to help other people act on the science, so yeah, trust in oneself I would say is good, as opposed to, for example, being decided by external things like an algorithm or the economic hype of the day or the technological hype of the day. How can we trust ourselves as scientists? That's the key issue.

Podcast Host: That's a good way of concluding our interview, Robert, thank you very much for being available and wish you good luck in your position as the president of the private university it is, right? Is a private university?

Robert Lepenies: Yeah, Yeah, it's a private non-profit. Thanks so much for the nice talk. Looking forward to seeing the interview published and to follow you than on all the different platforms.

Podcast Host: And I will follow you on TikTok. All right. Okay, Robert, thank you very much.

Robert Lepenies: Thanks so much. It was a pleasure. Bye.

Podcast Host: Take care.

Voice-Over: Thank you for joining us for another episode of TrustTalk. We hope that you found the conversation valuable and informative. At TrustTalk, we believe in the power of trust to create positive change in the world. If you believe in our mission, we would greatly appreciate your support. You can help keep TrustTalk going by making a donation on our website at trustalk.co/donate. Every contribution, no matter how small, helps us to continue bringing you thoughtful and engaging podcasts. Thank you for your support and for listening to TrustTalk. We look forward to meeting you again for future episodes.