



Interview with Tobias Lindner on the Relationship Between Academia and Politics: Digital Transformation, Participation, and Mitigating Disinformation

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Minister of State at the German Federal Foreign Office, Dr. Tobias Lindner

We are very pleased to currently have an alumnus from KIT as Minister of State in the German Federal Foreign Office. We got to know each other during his time as a PhD student in Economics with Clemens Puppe. The interview took place on 16 October 2024 at the Federal Foreign Office.

BISE You chose an interdisciplinary academic education. To what extent do you see your studies as preparation for your work as a political decision-maker? Which aspects of your education have proved useful for your political work?

Lindner I often notice that politics is not the same as science. I now rarely delve into topics and issues as deeply as when I was still doing my PhD. What I took away from

my studies was primarily the ability to think abstractly. The thematic range of my studies, as well as the technical understanding that I have gained, allow me, to understand and contextualize issues of security or digitalization within their broader fields. What I particularly appreciate is the ability to identify the “key drivers” of problems and to assess which determinants of a problem are irrelevant.

BISE This kind of academic background is very different from the many political science and law degrees we often see in politics: What skills, which also stem from your courses in information systems, do you use now in your work as Minister of State at the Federal Foreign Office?

Lindner Especially in today’s world, computer science is invaluable, as we are currently experiencing a new ‘industrial revolution’ through digitalization which continues to progress. With the addition of ‘Artificial Intelligence,’ it is now evident in politics that data has become a new form of currency. The economic significance of this and the connection between the topics of digitalization, AI, and democracy are essential.

BISE What skills, gained in your studies and subsequent doctorate, are particularly important to address current political challenges?

Lindner The most important skill I was able to acquire has been, as mentioned, abstract thinking. Knowledge of the technical side of processes can be very helpful in quickly identifying important factors in problems. While this can also be self-taught if necessary, it gives me more confidence to have a basic understanding of, for example, technical computer science, and from this foundation I can more easily classify and understand new challenges.

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BISE What competencies should be added to the curriculum? And why?

Lindner I would like to see a basic course in programming. When I studied statistics, for example, we did a lot on paper – I only taught myself statistical programs like R, W, or Matlab during my diploma. A basic introduction to programming for everyone could provide people with the tools they will need for their future careers.

BISE You used to study “Technical Economics” – this program has been significantly restructured and is now called “Digital Economics”. What do you think about that? Have you noticed what has changed?

Lindner Definitely. We see today that digitalization is increasing in almost every product, even in industrial manufacturing, which also raises the value of the products. The main value of many of these products is largely the availability of regular software updates – which is why I think the new focus of the program is right and important. Also, the fact that you are taught elements of computer science, statistics, and mathematics, regardless of which program you choose, creates a common foundation within the faculty that I really appreciate.

BISE How are other countries dealing with the challenges of digitalization in general and Artificial Intelligence in particular – in your view, are there specific differences between systems or other boundaries? (In terms of education, STEM skills, etc.)

Lindner There are always differences, both on a small and large scale, such as the question of how work phones are set up. I often hear that ‘you Germans are so backward.’ This is not meant in a derogatory way – I believe we are currently catching up a lot in terms of digitalization. However, it is noticeable that other countries, like the Baltic states or some countries in the Arab world, are much more digitized than we are. But one must also keep in mind that some countries were able to take advantage of opportunities, such as the wave of state formation during and after the collapse of the Soviet Union, to build systems ‘from scratch’ that we cannot so easily implement in our federal system.

BISE Information Systems has been dealing with online participation for a long time – especially from the perspective of platform and mechanism design – a classic topic in our field. Your party, Bündnis90/Die Grünen, has been focusing on participation for a long time – are you satisfied with how citizens are being involved?

Lindner The central aspect of participation is that citizens can contribute their perspectives and knowledge. It’s less about the decision itself, and much more about

integrating knowledge and perspectives that have previously been overlooked. In Berlin, there are currently about seven lobbyists for each member of parliament. To be clear: I have no problem with this kind of advocacy, but the opinions of individual citizens cannot be represented this way. While they can share their views through things like petitions, I see a gap when it comes to the regular legislative process.

I would also like to see more interest in the internal foundations of decisions. In the German political debate, I sometimes sense a lack of understanding that civil rights come with responsibilities, including the responsibility to inform oneself. Here, too, I see room for improvement. Looking at Switzerland, I would hope for a cultural shift that would bring more initiative, interest, and access to decisions into society.

BISE Elections and voting procedures are very important mechanisms that are considered in economics through the lens of Social Choice Theory – what are the best procedures when it comes to elections? This is the field of your doctoral supervisor, Clemens Puppe, who is one of the world’s leading experts in this field. What do you think about online voting in modern democracies?

Lindner There are two hearts beating in my chest. One heart says: ‘An election and voting is something very traditional. To feel like a citizen, it’s part of the experience to go to the polling station on Sunday and feel that you’re participating in a solemn act of democracy.’ If I took this attitude to the Baltics, people there would laugh at it. Even in the face of frequent cyber-attacks, particularly from Russia, these countries are confident in the security of their systems. I think it is ultimately a generational issue. For state elections, I don’t see a major shift to digital formats in the near future – but in academia or among associations, there is a growing trend toward ‘online voting’. I think this trend is moving in the right direction.

BISE Dealing with digital information systems and their impact is increasingly becoming a challenge for our democracy, particularly concerning the issue of “disinformation.” You are familiar with our research field, “Digital Democracy.” The Federal Foreign Office is also working on the topic. What role could information systems play in addressing this in a positive way, in terms of countermeasures?

Lindner Information systems can contribute in many ways, especially by providing a deeper technical understanding of processes that affect our society. Take the issue of disinformation: At the Federal Foreign Office, we are responsible for combating disinformation, especially when it comes from abroad. For this purpose, we have set up a special working unit. But we cannot view disinformation in

isolation – we need to understand and analyze the technical characteristics of the platforms on which it spreads. For example, as the Federal Foreign Office, we operate the IT network of the German government abroad and have our own cyber forensics to detect anomalies in our IT systems. Another example is digital sovereignty. We deliberately rely on technologies that we understand and can control. Our red phone, which we use for classified communications, is an example: it is based entirely on German technology to ensure that our communications remain truly secure. Information systems can help decision-makers understand the significance of such technical aspects in order to make informed decisions. Whether it's disinformation, trust in digital systems, or privacy – the ability to assess digital processes and their impact is critical. A solid education and technical understanding are indispensable for this. It helps me evaluate things to be able to make decisions.

BISE The Foreign Minister recently proposed the creation of an agency to mitigate disinformation. What role should the state and businesses play in these matters?

Lindner Since this is a globally unlimited market, what we can do is set clear boundaries and rules of the game. Even though most people get goosebumps when they hear the word 'regulation', I still believe that precise regulation helps to show what rights and responsibilities come with market participation. On the one hand, of course, we must build trust in the state and its institutions and make things public when in doubt. Our job is not to be a truth agency telling citizens what is true and what is false. But our strategies are essentially debunking and pre-bunking. By debunking, we mean exposing disinformation campaigns by simply describing the campaign so that citizens can decide for themselves which sources and information they want to trust. On the other hand, we, as the Foreign

Ministry, must communicate globally, and today we are using more strategic communication as opposed to traditional press or public relations. We have developed 'lines to take' here, where we consciously try to set core messages early on. From companies, I primarily expect basic responsibility and accountability.

BISE As a field and with our association, "Die Wirtschaftsinformatik", what global challenges in digital transformation should we particularly focus on, and what role can information systems professionals play in this?

Lindner We live in a world where companies can only exist if they make a profit. I don't want to discredit this economic thinking. But if I were to give young graduates some advice, it would always be: consider the social impact of your business model, your actions, your work. It doesn't have to be just about social issues – it could be questions of justice, access, equal rights for people. It is important to think about these things and to have a balanced discussion about opportunities and risks. I think that we often either completely ignore the risks because they bother us, or we only talk about the risks, and neither option is good.

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