



We Must Leave Our Comfort Zone

Speech of the President of the Max-Planck-Gesellschaft

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– Check against delivery –

Do you remember *Ex machina*? One of the best-rated science fiction movies of all time? There is a powerful scene in this film. A young man named Caleb meets – for the very first time – an intelligent robot called Ava. Their conversation goes like this:

Ava : I've never met anyone new before.

Caleb : Then I guess we're both in a similar position.

Ava : Haven't you met lots of new people before?

Caleb : None like you.

Ava : Do you want to be my friend?

Caleb : Of course.

Ava : Will it be possible?

Caleb : Why would it not be?

Sehr geehrter Herr Minister Hoch,
sehr geehrter Herr Präsident Drescher,
sehr geehrter Herr Präsident Santen,
Sehr geehrter Herr Dekan Garth,
Dear Derek, dear colleagues
Dear friends and guests,

Can you believe it? This movie is from 2014! By now, ten years later, you can really have a meaningful conversation with a machine. At least it can feel like that. In any case: For the first time in history, humans created “something” that is capable of complex language. From sci-fi to reality – in only ten



years! So what are we doing here today? Launching a new AI initiative? Isn't it far too late? And anyway, we all know AI is dominated by big companies. So what are we up to here in academia? And also we know that the US and China are investing much more than we do in Europe.

This is true, certainly. But: We cannot bury our heads in the sand. No, we must strengthen AI research in Europe. It is high time, but it is not too late. Just two months ago, *Nature* magazine published the top ten academic institutions that are advancing most quickly in AI. Amongst these, six are Chinese, two are in the US and two are in Europe. I probably wouldn't tell you if it wasn't the Max Planck Society. But in this top group ranks also Helmholtz.

And although Germany lost ground in the "Global AI Vibrancy Ranking," it still stands out in the development of machine learning models and in responsible AI. This position we owe primarily to our strength in research. But to remain competitive, we need targeted support programs. I am certain: The initiative we are kicking off today is exactly such a program. And it is still timely.

Clearly, AI and computing have already changed society. By now, we humans have entered an era of coevolution with machines. Let's face it: The internet has become a place that is more about *probabilities* than about *facts*. According to the leading cybersecurity company Imperva, the bots are already responsible for half of the total web traffic. I still hope that number is wrong. But independent of this, the challenges AI poses for society are enormous. Human creativity is sometimes now just focused on finding the right prompts for generative AIs! Some already wonder how we can preserve our cognitive capabilities at all.

Really, „AI, Computing and Society“ is the right topic at the right time. So how can we move forward to strengthen such an emerging research field? On the one hand we need excellent researchers in various areas, including Machine Learning, Sociology, Engineering, Law, Neurobiology, Economics and Education, and likely others. On the other hand, we need openness, we need to seriously attempt cross-disciplinarity, not just inter-disciplinarity, and we must teach and train the next generation. But we also need a good framework to conduct our work. I am happy that our senate just passed a white paper describing how we wish to develop AI. Briefly, we work for the good of society.

Dear guests,

Now you may ask: why here in Kaiserslautern? Well, there are at least three strong reasons. First, Max Planck researchers at our Institute for Software Systems are already here, in this great new building. Now we will establish two additional research groups and three fellow groups. I wish to thank all colleagues for their support! The second reason: We are in good company here. The Tech-



nical University has established research and teaching in relevant fields, just take the Center for Ethics and the Digital Society. And third, the State of Rheinland-Pfalz is funding two additional professorships next door. I am grateful to Minister Hoch for strongly supporting this initiative.

But all of this is not enough. When you tackle complex questions, you better join forces with colleagues who can provide complementary and synergistic contributions. This is why we want to build a research network connecting the top researchers at our institutes in Bochum, Bonn, Berlin and Freiburg, amongst others. By the way, what we do here is only part of a strong effort to strengthen AI research within the Max Planck Society and with our partners. Half a year ago, we opened the ELLIS Institute in Tübingen. Last week, we started an initiative on AI and biomedicine in Dresden. And soon we will bring AI to the materials sciences in Stuttgart. There is actually a pattern: New money is required, and it often now comes from private sources, and there is more to come!

But back to Kaiserslautern. In the end it always needs a person who is taking the lead. I am very happy that we have such a person: Krishna Gummadi. He is someone who brings people together, who is visionary, flexible and generous, and who leads by example. Dear Krishna, thank you very much for all your work on this exciting project!

Dear guests,

I want to end with a quote that can give us courage. It is a quote of the wonderful Swedish actor Alicia Vikander – the actor who played Ava. Remember? This intelligent robot in *Ex Machina*. Alicia Vikander once said: „I love when I am outside my comfort zone.“ This is certainly important for actors. But it is also true for us. This is the mindset we need. Only if the involved researchers dare to leave their comfort zone, will we be able to understand how AI transforms society, and how society transforms AI. With this spirit, we cannot fail. Instead, we will be rewarded by exciting insights and may even discover whole new worlds out there.

Maybe we get a glimpse of this when listening to the talks by Krishna Gummadi, Alan Mislove and Mia Cha that will follow now. Best of luck to all of you. And let's move quickly, for the good of society!