# Reflections on AI

## Q&A with
## Thomas Hildebrandt &
## Henrik Olsen

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The TUM IEAI had the pleasure of speaking with Prof. Hildebrandt & Prof. Olsen. Prof. Hildebrandt is head of the research section for software, data, people & society at the University of Copenhagen. His research contributes to Process languages and techniques for the development of workflow and business process management systems supporting flexible, adaptive, distributed and mobile processes.

Prof. Olsen is a Professor of Jurisprudence at the University of Copenhagen (UCPH). As co-founder of the Center of Excellence for International Courts (iCourts) he has contributed to the development of a foundational science research agenda in law, and has pioneered research in the new field of computational law.

## 1. What is the biggest misconception about AI?

Thomas: I think that one of the biggest misconceptions is that AI is one thing. That we actually know what it is. There are so many definitions of AI and no agreement, so people easily get confused and debate different things.

Henrik: Yes, I agree very much with Thomas. I think AI is often talked about as if it is one thing and one technology, but in fact, it is many different things. It also fits into the many misconceptions about how widely AI is used and where it is used.

## 2. What is the most important question in AI ethics right now?

Thomas: I think from a technology perspective, the most important question is (how) to develop methods for trustworthy development of AI systems. Because, right now, we are at a stage where we can do a lot with the technology, but the development techniques have not evolved with the same speed. There is a huge demand for developing truly ethical and trustworthy development methods

Henrik: I think that the most important question and this is actually a question that overlaps between ethics and law, is how we can best regulate the use of AI in our society. I don´t think there is a right answer to that. Still, I think it is really important that we find the right balance between technological development, which can actually improve our society by not only making it more efficient but also, to some extent more fair, but then on the other hand also trying to prevent misuse of AI.

## 3. What are the major potential challenges and opportunities that AI-powered legal technology may bring to traditional legal practice?

Henrik: If we look at the opportunities first, I think that AI-powered legal technology can be used to create more equality in front of the law in our society. It can be used to handle large-scale numbers of legal

cases in a more similar manner and thereby bringing about more justice in our society. I think the biggest challenge is that these technologies can also introduce new and ethically negative or bad results in terms of various biases and in terms of not allowing sufficient flexibility in terms of the law. It´s a balancing act.

Thomas: From the technological side, I will support this and say that right now we have a great opportunity in making more machine-readable and machine-executable legislation …, thereby creating more equal access to what does law say and what are our rights and application. But of course, on the challenge side, if you have unequal access to this new technology, you can also create a technology race. So, some people have a better weapon in legal questions than others. We have a challenge there in making equal access. Then, of course, if people start using immature technologies, then we have the problems of biased algorithms or biased models that could be used wrongly.

**4. How much can or should lawyers rely on AI technology?**

Henrik: I would say presently not very much. I think the technology in this field is still somewhat immature and I think lawyers also really don´t use AI technology that much…, at least not for legal work, but it is more for administrative tasks. How much should lawyers rely on AI technology? That depends really much on what kind of lawyers and what kind of context. Suppose you talk about the lawyers who work in public administration, where they have perhaps to deal with many cases that are repetitive and similar. In that case, I think there would be great advantages to relying on AI technology. On

the other hand, if you have a really wide portfolio of legal cases that you handle… and where there are also bigger issues at stake, such as human rights and so on, you should be more careful about using this technology.

Thomas: We are right now at the huge potential time of AI and right now the understanding and the maturity of the technology is not ready for actually using it on a big scale. But, there are areas where, if you can easily check that the outcome of an algorithm makes sense or not, for searching or otherwise simple tasks, then you can already start using it. If it is in complex problem areas, where you can´t decide whether this is a sensible outcome or not, where you really have to trust the AI model, then the technology is not ready yet.

**5. What is the role of academia, research institutions and other centers when it comes to the ethics and governance of AI?**

Thomas: I would say that something that we have done a lot in our own research section at the Department of Computer Science at the Copenhagen University is to have a constructive and critical view on AI technology at the same place. We can contribute to standards and methods for developing AI, critical data studies, studies that combine workplace with technological studies that are often not combined in an industrial setting. So, this is really the role of academia, and the independent cross-disciplinary peer-reviewed open development of methods.

Henrik: I agree very much with that. I think it´s important that academia and research institutions participate in public debate in regard to these issues and point out the shortcomings of some of the opportunities

in using AI to raise awareness generally in society and also to heighten the level of the debate. Especially important is also this critical approach because, to some extent, there could be tech companies who have an interest in painting a nicer picture of what they can do that perhaps cannot always stand up to reality. We had in Denmark our  portion of tech scandals in various places in the public sector, so I think it is important that academia takes part in this overarching debate and also creates a more realistic sense of what AI can do with the present state of the art, and what it cannot do.

**6. We often say that AI is changing or transforming the world. To what extent is AI changing us as humans?**

Thomas: I don´t think it will change us as humans, but it will change how we interact and understand the world, for the better or worse. AI can be used to better understand biases in real-world human settings or complex situations, digital models of workplaces, hospitals, and society. But of course, it is already right now changing how information flows to us and how we communicate because we have AI models that we don´t really comprehend that select which measures we will see in our daily information feed.

Henrik: I think it does, to some extent, change us as humans. I can see it from my own children for example, that they play in a very different way that I played when I was a child... I think that lays the foundation for generally changing the way that we interact with each other as humans. I also think that AI is challenging us as humans; it challenges our self-perception and the way in which we receive information about the world and also how we receive information about ourselves.

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## Meet the Experts

**Prof. Henrik Olsen**

Henrik Palmer Olsen is an internationally leading legal scholar and a Professor of Jurisprudence at the University of Copenhagen (UCPH), Faculty of Law. He has contributed actively to introducing computational law approaches in active litigation before the Supreme Court of Denmark. He has had several top 10 publications and is continuously in the top 10% most downloaded scholars on, SSRN. Overall, HPO has a track-record of academic excellence in his field including 100+ publications, many of which is published by leading international journals and publishers. He currently also serves as Associate Dean for Research and head of the PhD school.

**Prof. Thomas Hildebrandt**

Thomas Hildebrandt is Professor in software engineering and head of the research section for software, data, people & society. With a background in formal process models, he has in more than 10 years been leading inter-disciplinary research and innovation projects with focus on methods and technologies for developing reliable and flexible software systems suited for the people who use them, including digitalisation of law, workflows and business processes information systems. His vision is to develop the foundation for reliable digital systems that can continuously be adapted to changing user needs and legislation, also after the systems have been taken into use. He is a member of several advisory boards and committees for digitalisation and artificial intelligence.