

Tilburg University

Technological times

Keymolen, Esther

Publication date:
2024

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in Tilburg University Research Portal](#)

Citation for published version (APA):
Keymolen, E. (2024). *Technological times: Looking out for the human*. Tilburg University.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Technological Times: Looking out for the Human



Valedictory address, delivered by
Prof. dr. Esther Keymolen
on April 19, 2024

Esther Keymolen is Professor of Digital Technology Regulation at the Tilburg Institute for Law, Technology, and Society (TILT) of Tilburg University, the Netherlands. She graduated cum laude in Philosophy at the Erasmus University Rotterdam (2008), where she also obtained her PhD, which was published as a book, entitled *Trust on the Line: A Philosophical Exploration of Trust in the Networked Era* (2016). Her work focuses on philosophical and ethical questions in the domain of technology and regulation, particularly pertaining to issues concerning trust and trustworthiness, data ethics, and postphenomenology. In 2019, she was awarded a research grant from NWO together with Prof. Jurgen Goossens for their project “The Role and Responsibilities of Public Actors in Distributed Networks: Transparency, Trust and Legitimacy by Design”.

Before joining Tilburg Law School (2018), Esther worked as an assistant professor and director of education at Leiden University (eLaw, 2014) and as a research fellow at the Netherlands Scientific Council for Government Policy (WRR, 2008). Esther was the vice-dean for research at Tilburg Law School (2021-2023) and as of April 1, 2024, she is the head of the TILT department. Esther sits on different ethics committees in the public sector and is a member of the Royal Holland Society of Sciences and Humanities (KHMW).

Technological Times: Looking out for the Human

Prof. dr. Esther Keymolen

Inaugural lecture,
delivered in adapted form on the occasion of the public acceptance of the
appointment of Professor in Digital Technology Regulation at the Tilburg Law
School of Tilburg University on April 19th, 2024, by Esther Keymolen.

© Esther Keymolen, 2024

ISBN: 978-94-6167-533-0

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or made public in any form or by any means, electronic, mechanical, photocopying, recording or otherwise.

www.tilburguniversity.edu

Technological Times: Looking out for the Human

Part I:
Introduction

Dear Rector Magnificus,

Dear colleagues, friends, and family,

We get around on bikes, cars, trains, and planes; we communicate by mail, apps, phones, and sometimes still by letters. We rely on ChatGPT to write inaugural lectures (this is a joke, I did actually write it myself), on navigation systems to show us where to go, and on smart milking robots to milk cows. As humans, we are completely intertwined with these technologies. In the words of the philosopher Helmuth Plessner (2019), we are *artificial by nature*. With this interesting paradox, Plessner draws our attention to the fact that it is our nature to constantly build and rebuild our environment through technologies. To live our life, we must construct it first. Technology is what makes us human.

Even though humans create all these marvellous things, these artifacts eventually obtain their own momentum within our culture and society. They become more than just tools or objects: they become part of our collective existence. Consequently, we do not just use technology to go about our lives, but on a fundamental level, we are also shaped by the technology we use. This is a key insight from postphenomenology and mediation theory (Rosenberger and Verbeek 2015; Ihde 1990).

What we think is important in life, what we find beautiful, and what we believe to be safe, it is all partly determined by the opportunities offered to us by technology. At our universities, the meaning of good education is being redefined by the affordances of hybrid, online, and blended education tools. In the domain of art, the question arises if the images generated by the AI system Dall-e should be considered art. And if we can prevent mischief through ingenious data analytics, shouldn't we do so, despite possible privacy concerns?

This interconnectedness between humans and technology is one of the guiding principles of the work my colleagues and I engage in at the Tilburg Institute for Law, Technology, and Society (TILT). It is reflected in our common Signature Research Plan called "Regulating Socio-technical Change". It is also the starting-point for the research we do on the exercise of public authority in distributed

networks in the CHAIN project, funded by NWO, and co-led by Jurgen Goossens, our inspiring PI.

Technology does not operate in splendid isolation, but it is part of organizations, it is part of social interaction, and it is shaped by different modes of regulation: laws, markets, social norms, and architecture (Lessig 2006). We are looking at “a complex interplay between humans and technology that co-shapes sociotechnical contexts.” (Leenes forthcoming p.33) Thinking about technology in splendid isolation would — and I quote from Ronald Leenes’ upcoming book on regulation — “lead[s] to gross oversimplifications and dysfunctional analyses.” For me, as a philosopher of technology working in the domain of technology and regulation, this fundamental, ontological interconnectedness between humans and technology is always the starting-point for analysing regulatory issues.

When I look at current regulatory developments in the technology domain through this human-technology lens, it strikes me that all eyes are on the technology, while the human seems to be out of sight. Of course, human beings are there, implicitly. In the General Data Protection Regulation (or the GDPR), there is talk about empowering citizens through data subject rights; also at the EU level, we are bombarded by the rallying cry for human-centric and trustworthy AI. Yet a clear conceptualization and understanding of what it means to be human is lacking. Today, I will argue that to analyse, understand, and develop effective digital technology regulation, it is key that we look out for the human in our technological times.

I will embark on this quest for the human in two ways: conceptually, by sketching the contours of a positive view of the human, and more practically, by putting four humans into the spotlight. For the first two, we look at how the legislator portrays the data subject in the General Data Protection Regulation and the AI practitioner in the Trustworthy AI Guidelines and the AI Act. These are our two protagonists. Next, we will briefly get acquainted with civil servants who are tasked with implementing and deploying AI systems, and finally, we meet ourselves, researchers in the domain of technology regulation. And then, we all deserve a drink.

Part II:
The Data Subject
in the GDPR

Let's start our quest for the human by looking at the GDPR. This regulation was adopted in April 2016 and came into force in May 2018. You might recall the zillion e-mails you received around that time from companies you did not know existed, let alone that they knew you, but there they were, cluttering your mailbox, telling you that they valued your privacy (a lot) and would you, please please please, consent to them processing your personal data. Looking at your faces, I can tell this sounds familiar, and this means that we are all appearing in the GDPR, namely as data subjects.

Data subjects are the prominent humans in the GDPR. They are living human beings whose personal, identifying data are being processed. Based on the provisions and rights granted to data subjects, we can get an indirect idea of what they are like. First, the data subject has the right to access (Art. 15), rectify (Art. 16), and delete personal information (Art. 17), and the right to data portability, that is, to transfer his or her personal data to another service (Art. 20). These rights presuppose that the data subject is a pro-active and autonomous person: somebody in charge.

The data subject is also a rational human being who, when provided with the proper information, can make conscious decisions. For instance, he or she can give consent to the processing of their data by a social media company if this is in their best interest (Art. 6-7) (Schermer, Custers, and van der Hof 2014; Custers et al. 2013). The data subject is also a rather individualistic kind of person as he or she is only engaged with data that identify them, but not their co-workers or friends. As data subjects, in other words, we are all taken to be well-informed, rational, pro-active, individualistic, and autonomous living human beings.

I do not know how it is for you, but I rarely feel like such a well-informed, rational, proactive, and autonomous human being (WRR 2017). This data subject is an ideal-type human at best. An instrumental legal fiction, yet fiction (Boyte 2014). Research indicates that if you provide people with more control over their data, this does not necessarily make them more prudent. On the contrary, they are more willing to share personal data when they feel in control (Acquisti, Brandimarte, and Loewenstein 2015).

This implicit image of the rational, well-informed human that underpins the GDPR is not trivial as it steers the kind of regulation that is being developed. For instance, on the topic of the “representation of data subjects”, the GDPR states that the representative’s role is limited to judicial actions and receiving compensation. It does not state that data subject rights *“are ‘mandatable’ or exercisable by other persons apart from the data subject”* (Malgieri 2023: 39). While it might still be possible, based on national private law conditions, to mandate rights, the representative function as stated in the GDPR has a rather narrow scope. A different conceptualization of the data subject — a little less rational and well-informed, a bit lazier perhaps, and sometimes overwhelmed — would have provided the necessary scope for drafting a more encompassing representation of data subjects.

I started this inaugural lecture by establishing the intertwining of human beings and technology, and it is striking that the characteristics of the data subject that we were able to deduce from the rights and provisions of the GDPR — rational, pro-active, well-informed, autonomous — are all characteristics which seem to exist completely independent of any technological influence whatsoever. Lawmakers have truly missed the opportunity to explore how the legal fiction of the rational and autonomous human is challenged by current technological developments and how regulation could address this.

That such an endeavour can lead to new and innovative pathways for digital technology regulation is shown by the work of some of my esteemed colleagues. While the current legal regime focuses on providing data subjects with control over who can access what of their data, Bart van der Sloot has developed the idea of humans who, for their identity-building, should have the right to be left alone not only by others, but also by themselves (Sloot 2021). In doing so, he conceptualizes the human being as someone who is empowered by being uninformed rather than by being well-informed.

Together with Bart van der Sloot, other colleagues such as Anuj Puri (2021) and Linnet Taylor (2017) have also challenged the focus of the data protection paradigm on the data subject as an individual. Many data-gathering practices are not so much focused on getting to know your most detailed, personal information, but on being able to categorize you and put you in a certain group, for instance, the group of people that buy halal food in Albert Heijn. Policies and

decisions are made based on group profiles, and, consequently, they affect groups. These scholars, therefore, advocate a shift in focus from the interests of the individual to group interests, emphasizing their relational nature (Taylor, Floridi, and van der Sloot 2017).

Part III:
The AI Practitioner
in the Trustworthy AI
Guidelines and AI Act

One of the main goals of the GDPR is to empower us all by providing us with more control over our data. The basic rationale behind this is that if we have more control and less vulnerability vis-a-vis these data processing companies, we will be more willing and able to trust the growing digital and data-driven infrastructure that has become the backbone of our society.

But of course, it is not just up to us, the data subjects, to ensure the responsible use of data. This is first and foremost the responsibility of tech companies and other public and private actors who are processing our data and developing and deploying all kinds of AI systems. In the GDPR, but also in the Trustworthy AI Guidelines and the AI Act which we will look at next, many requirements and obligations have been formulated to ensure that these actors are trustworthy, including the second human we will soon encounter: the AI practitioner.

Before I proceed to probe these regulatory instruments on their implicit conceptions of this human, I would like to draw your attention to the introduction of the notion of trustworthiness here. When we shift our focus from enabling trust to ensuring trustworthiness, we shift the focus from those who are vulnerable to those who are in power and need to be responsive to this vulnerability (Potter 2002). A shift that I fully endorse. No matter how many rights data subjects have, they remain dependent on those public and private actors to operate responsibly. Trust is always a risky business (Luhmann 1973; 1990).

Trustworthiness refers to the characteristics these public and private actors should possess to be worthy of our trust. The standard view in the literature is that trustworthy agents should be competent in a certain domain and be committed to putting those competences to use for those who count on them (Jones 2012). In the most ideal situation, we would only trust those actors that truly are trustworthy (Baier 1986), but as we can witness every day, it is quite easy to develop trust in data-driven applications and services that are not worthy of our trust (Keymolen 2016). Let's first ensure, therefore, that AI applications and services are trustworthy instead of designing or regulating to nurture trust. I am sure that when we accomplish genuinely trustworthy AI, there will be a market for it. In situations where trustworthy technology is not feasible, let's, by all

means, actively nurture distrust, which can be a very healthy response to unsafe situations, also in democratic societies (Tamò-Larrieux et al. 2024).

The human in the Trustworthy AI Guidelines

In 2018, the European Commission announced “a series of measures to put artificial intelligence at the service of Europeans and boost Europe’s competitiveness in the field”. Both the Trustworthy AI Guidelines and the AI Act are part of this European strategy to develop human-centric and trustworthy Artificial Intelligence (AI). The Guidelines are a soft-law strategy. This means that stakeholders are strongly encouraged to adhere to the Guidelines but are not obliged to. The Guidelines set forth seven key requirements that AI systems should meet to be trustworthy. These requirements range from safeguarding human agency and oversight to transparency, fairness, and accountability.

The AI Act is a regulation that will apply to all EU member states. Compliance is mandatory. The Act has been introduced as “the first-ever legal framework on AI”. Taking a risk-based approach, it addresses risks specifically created by AI applications, sets clear requirements for AI systems, and defines specific obligations for AI providers and users².

The protagonist in the Guidelines is the AI practitioner — our second human — who develops and deploys the AI system. One of this expert’s tasks is to ensure that AI is human-centric. This means that AI should strengthen human competences and adhere to democratic values. AI practitioners should deal with ethical dilemmas and trade-offs “in a rational and methodological manner” (AI-HLEG 2019: 20) and “translate” legal and ethical requirements for trustworthy and human-centric AI into procedures that can be incorporated into the design and use of the AI system.

The human that appears here is a tech-savvy professional who is competent not only to develop top-notch AI technologies but also to do so ethically. While the intention to develop AI that respects public values and human rights is commendable, the level of authority AI practitioners are supposed to possess to

¹ https://ec.europa.eu/commission/presscorner/detail/en/IP_18_3362, accessed Feb 20, 2024.

² <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>, accessed Feb 20, 2024.

make difficult value-based decisions has been critiqued. After all, what do we mean by fairness? How do we ensure human dignity?

Such thorny legal and ethical challenges are increasingly being framed as technical questions to which the answer is computable (Hildebrandt 2019). In his PhD research in the Algosoc project, Donovan van der Haak is engaged in the empirically-informed philosophical analysis of how values are interpreted and sometimes clash in technological practices. Keep an eye on his exciting research!

The tendency to approach value-laden questions as technological ones is both an overvaluation and an undervaluation of human beings: it is an overvaluation to think that humans can design technology that will solve the openness and messiness of life; and it is an undervaluation to believe that human life is unequivocal and predictable enough to be fully captured in data (see e.g. Savcicens et al. 2024). Sometimes, therefore, a broader public deliberation or political decision might be more in place than a technical one (Rieder, Simon, and Wong 2021). Let me stress that I am not arguing that AI practitioners cannot be knowledgeable beyond their domain of technical expertise, on the contrary. I am arguing, though, that knowing where your competence lies and ends is an important professional virtue, which is key to being trustworthy.

This brings me to a second point for attention. AI experts often perceive the world through datasets and algorithms. Flesh-and-blood people, patients, families, communities, and neighbourhoods are all captured in proxies, labels, and profiles. The difficulty facing AI practitioners, therefore, is that they should remain aware of the difference between the dataset representing reality and the lived experience of those making that reality. To address this, AI practitioners will have to train themselves to look beyond their models and algorithms (Keymolen 2023: 3.1).

At the Jheronimus Academy for Data Science (JADS) and in the joint Data Science Bachelor's programme, my colleagues and I (Gert, Merel, Gijs, Paul, and all the others) aim to contribute to such training by creating an educational setting that will serve to nurture moral attention: "the ability to recognize the ethical relevance of a situation by imagining the way one's own actions will shape other people's actions and thoughts" (Ratti and Graves 2021: 1827). We undertake to develop moral imagination through role-play and debate, fostering the students'

ability to recognize the ethical relevance of technological practices. With reference to Iris Murdoch (1970), the point is not to escape reality, but to join it, by seeing others justly and by understanding their contexts (Driver 2020: 172).

The human in the AI Act

Turning to the AI Act, we find our AI practitioner in the crucial role of executing oversight over the AI system. Humans should be able to monitor the AI system, detect when it is malfunctioning, and accurately make sense of its outputs. To be competent to do this, the human who is keeping oversight should be AI literate. AI literacy entails that this person should possess the skills and knowledge to grasp the overall functioning of the AI system, deploy it in an informed way, and be aware of the opportunities and risks.

Through their oversight role, humans are an important building block of AI governance. Human involvement should make AI systems more trustworthy by putting them in charge of controlling the technology, steering away from the doom image of AI enslaving humankind; images painted by people like Elon Musk and other tech behemoths. The underlying assumption is that humans, if they are properly informed, if they have all the relevant information and training, and if systems allow for oversight, can keep the technology in check and make it trustworthy. Once more, we see a rational, in-control human being popping up.

This assumption, however, has also been questioned (Yeung 2018; Green 2022; Laux 2023). Research shows that humans are susceptible to automation bias: that is, they tend to follow the system in a docile manner, even if there is evidence that the system is incorrect (Skitka, Mosier, and Burdick 1999). The increasing independence of systems, moreover, may cause those with oversight tasks to have a diminished sense of control and moral responsibility. It is doubtful whether even the promotion and uptake of AI literacy campaigns and compliance-by-design strategies will make up for these shortcomings.

It has been argued, therefore, that rather than predominantly relying on human oversight, it would be more effective to focus on the governance environment in which humans operate and invest in institutional oversight, further standardization, and firm governance structures and procedures. In the public sector, for instance, Ben Green has proposed that agencies should provide empirical evidence that their human oversight scheme is effective and that they

should publicly report on their use of algorithmic decision-making systems (Green 2022: 12). Guillermo Lazcoz and Paul de Hert emphasize that human oversight can contribute to making providers and deployers (controllers) more accountable, if and only if, organizational oversight measures are set in place, such as Data Protection Impact Assessments, which “can provide a continuous evaluation of human intervention” (Lazcoz and de Hert 2023: 17).

In a similar vein, I have argued elsewhere that for tech companies to be genuinely trustworthy, it is not sufficient for them merely to attract tech-savvy, morally competent employees. No, the very company structures, in terms of their organization and their business model, should incentivize and promote trustworthy behaviour and choices (Keymolen 2023). This has ended up being a rather demanding trustworthiness requirement that not many tech companies can currently meet, I must admit.

Part IV:
A Positive Conception
of the Human

While I fully agree that it is essential to further bolster the governance of AI and be clear on where human competence ends, we cannot stop there. Our rightful criticism of the image of the rational human put forward by the legislator is itself based on an implicit, yet utterly negative conception of human beings: it predominantly defines humans by what they cannot do. Or, more specifically, it captures humans by what they cannot do in light of all the things that technology can do. This negative conception of humans reminds me of Arnold Gehlen's famous definition of the human being as a deficient being, a "*Mängelwesen*". With the twist that, in Gehlen's theory, technology served to compensate for this human deficit, whereas in our current time, technology seems to anchor this deficit even further (Gehlen 1988).

We are, therefore, in dire need of a positive conceptualization of the human, that redefines their productive, creative nature. Today, I would like to share with you some rough contours of this image of the human I am working on by revisiting my academic roots, namely, by going back to philosophical anthropology, and more specifically to the work of Helmuth Plessner.

A positive conception of the human, first and foremost, does not need to be anthropocentric. On the contrary, one of the key features of being human is that, like all living nature, humans are defined by their interaction with the environment. In my view, therefore, human-centric AI, should always account for the environment in which humans live and which they share with all living things.

On second thought, forget about human-*centric* AI. Following Plessner's lead, I will call it human excentric-AI. "Excentric" here should not be taken to mean "quirky" or "weird" — although human beings definitely are like that sometimes — but to refer to people's capacity to take a position outside their centre of experience. This detachment enables awareness and reflexivity. For instance, you are all sitting here in this auditorium listening to my inaugural lecture. You will have experienced different sensations, an inner dialogue, perhaps, on whether or not you agree with my views, or perhaps you are sweating because you forgot to take off your jacket when you put on your gown, or maybe being here is a bit of an ordeal and you are longing for the *bitterballen* afterward. Anyway, you underwent a lot of experiences and now that I am bringing these up, you might find yourself in the position where you become aware of the fact that you are the one having

all these experiences. You take a step back from yourself as it were, and with this distance, this detachment, you become aware that you are the one experiencing your experiences.

It might be a bit uncomfortable to reside in this excentric state of being. Most of the time, we live our lives without giving it a second thought, from a centric position, which is probably a good thing. We would not be able to get out of bed in the morning if we had to overthink everything we do, every decision we make. We lean heavily on the way society is structured and made predictable through social roles, culture, the law, and technology, of course. But we have to face it, our existence is fundamentally ambiguous. Historically and culturally, there is always some sort of competition going on between different possibilities of being human, and never have we been able and will we be able to fully capture who we are and what we want (Plessner 2018).

Let me give you a non-technological example. In Dutch academia, it has long been accepted that the right to supervise PhD students — *Ius Promovendi* — inherently belongs to the position of a full professor. It binds us as a hierarchy-based academic community. As excentric beings, however, we can imagine different worlds where this right belongs to all colleagues with a doctorate, acknowledging the work they collectively put in. We start questioning what is seemingly unquestionable, and suddenly a new possible future appears on the horizon.

Being aware of the contingency of human life is key to being human. We cannot simply go out and live our lives. No, we have to create it, build it, and furnish it through culture, through technology. Not once, not twice, but constantly. This is the positive force of being human. With reference to Hannah Arendt (1958), it is our ability for new beginnings, for plurality. This characterization has a huge impact on our appreciation of technology as such, as the option of excluding technology is simply not there (De Mul, 2021). The question that stands out, therefore, is a huge one and hard to answer: what kind of technology expresses our view of the good life and how can regulation steer it in the right direction? Going back to the right to supervise PhD students, it is not about denying the importance of tradition, on the contrary, it is about asking what tradition does justice to who we want to be.

Finally, while humans are defined by their excentric positionality, we have to acknowledge that they simultaneously also yearn for a home, for certainty, for control. Technology holds the promise of fulfilling this need. In spite of all the rightful critique we may have on how big tech is shaping our technological times, we cannot turn a blind eye to the fact that it can truly be empowering to find like-minded people online, to find confirmation for our beliefs in a never-ending string of YouTube videos, reels, and snaps. We must acknowledge that technology both appeals to this fundamental longing for contentment and constrains our perception of the world; alienating us from ourselves, from others, and from the world around us when it becomes too restrictive a corset, forcing us in directions we can no longer revise. Technology, therefore, should always allow for our excentric human nature to flourish, not merely for our centric deposition to be secured.

Big words! Let me share with you some first thoughts on what human-excentric AI could look like.

Excentric positionality implies accepting that human nature can never be fully captured by computational logic. Mireille Hildebrandt (2019) refers to this as the incomputable self, underscoring the human capacity for creation and relationality. She suggests that, when working with predictive AI systems, we should demand alternative ways of modelling the same person or event, averting monopolistic claims about humans and their actions. Another strategy is to invest more in publicly owned and democratically governed AI systems to ensure that we bind ourselves in an open manner, grounded in the rule of law. Little by little, these initiatives are getting off the ground. Recently, the Dutch government announced that, together with non-profit organizations such as SURF, TNO, and NFI, they will start working on their own open large language model, GPT-NL, rooted in Dutch and European values³.

³ <https://www.rijksoverheid.nl/actueel/nieuws/2024/01/18/kabinet-presenteert-visie-op-generatieve-ai>, accessed March 13, 2024.

PART V:
Civil Servants and Academics
in Technological Times

With this image of the excentric human in mind, I also would like to draw your attention to our “third human”: the civil servant. Civil servants operate in practice, in a time of transition where institutions and AI governance are “under construction”, with blurred roles and vaguely described responsibilities. The challenges posed by technological developments, however, are real and far from merely technical. Civil servants try hard to live up to being the rational, tech-savvy, and ethical professionals they are presupposed to be by the legislator. Some regulatory instruments prove to be very helpful for that, such as the Impact Assessment Human Rights and Algorithms and the Non-Discrimination by Design Handbook, yet in practice, many questions remain: how far do we have to go to check for bias? If we have the possibility of predicting what citizens are at risk, should we not use that data?

I see an enormous drive to get it right, but also a lot of uncertainty and fear of making mistakes. Sometimes I wonder if this is not also an unintended and probably unwanted consequence of the type of technological rationality that algorithmic systems bring along. If everything is computable, there must be an unambiguous, correct answer out there. Uncertainty and doubt become unacceptable. However, if we take the excentric nature of human life seriously, is this uncertainty and doubt not exactly what we should cherish and safeguard? Let’s by all means further invest in optimizing AI systems and at the same time wholeheartedly acknowledge that we are going to get it wrong. If anything, we can be certain about that. So maybe, with the same energy that we work on excellent AI, let’s invest in fallback options, alternatives, checks and balances, and exit strategies. Let’s make sure there is sufficient openness and flexibility in our algorithmic governance. let’s embrace a pluralistic approach.

A beautiful example of such an alternative is the Stella Teams at the Dutch Tax Authority. These teams guide and support individual citizens who are involved in complex fiscal situations that do not fit the prevailing algorithmic boxes and who are at risk of getting into trouble with their tax obligations. These Stella Teams are still making use of all kinds of data-driven tools and analyses, so this is not a strategy “against technology”. Rather it is a prime example of what I would call a human-excentric public service, acknowledging the strengths and weaknesses of both humans and technology.

And finally, what is our role as academics (the fourth human!) in all of this? AI literacy, as proposed by the AI Act, is not a panacea, but I do feel it is our obligation as experts in the field to proactively share our knowledge with the government and the humans working there. I would like to underscore that, in our advisory work, we should firmly resist the idea that AI literacy is about AI. Rather, it is about the socio-technical practices in which humans and AI interact, and these humans are not always rational. We deconstruct seemingly technical questions and bring forward the deeply normative and political aspects of these questions, redirecting them to the proper arenas, such as Parliament, the Minister, and/or the public. Particularly in the current geopolitical context, in which conflicts are becoming increasingly technological, this is of the utmost importance. We sketch not one, but a plurality of possible futures. Scenario thinking can be a fruitful methodology here,⁴ as it allows for a conceptual and strategic space in which policy and regulation can develop to account for an ever-evolving, excentric society.

I am proud that, in the years to come, together with Corien Prins and Mara Paun, we will be working hard on bringing together science and policy as part of the prestigious Stevin Prize that Corien was awarded last year. We provide the opportunity for scholars to work closely together with civil servants and policy advisers for a six-month period in The Hague through a fellowship programme. The first fellowships will start in September.

⁴ For the relevance of scenario thinking for policy, see the work of the WRR in collaboration with other Dutch Advisory Boards and councils: <https://www.wrr.nl/adviesprojecten/coronacrisis/documenten/publicaties/2022/09/05/coronascenarios-doordacht-handreiking-voor-noodzakelijke-keuzes>; accessed March 19 2024.

Part VI:
Acknowledgements

Now that I have come to the end of this lecture, it should have become obvious that there is no science without team science. While I am standing here by myself, I certainly could not have done this without all the marvellous humans that I have met and who have supported and inspired me along the way.

I would like to thank the Executive Board of Tilburg University, our Rector, and Dean of the Tilburg Law School for appointing me to this position. I would like to thank all Tilties and in particular Eleni, Corien, Ronald, Tineke, Kees, Linnet, Inge, Bart, Mara, Gert, Donovan, Anuj, and Petra. I am thrilled to be back at Tilt and honoured to lead our wonderful multidisciplinary and slightly excentric pack.

Ik schakel nu over naar het Nederlands, dank aan het voltallig faculteitsbestuur van TLS met wie ik de afgelopen tweeënhalf jaar onze faculteit mocht besturen. Dank voor jullie inzichten, gesprekken, en energie. Het was een eer en groot genoeg en ik wens Elies heel veel succes en wijsheid in haar rol als vice-decaan onderzoek. Het allermooiste aan vice-decaan zijn is dat je met heel veel mensen mag samenwerken, ik kan ze niet allemaal noemen maar ik dank in ieder geval Bob, Femke, het RST, Michiel, Paul, Renata, mijn oud-collega's vice decanen en alle anderen van het ELT.

Lieve Jantine, ik weet dat je niet graag in de belangstelling staat, maar je verdient het wel. Dank je wel voor je tomeloze energie, al je scherpe inzichten en steun in werk en daarbuiten.

Valerie en Jos, mijn oud-promotores. Jullie hebben twee grote intellectuele liefdes in mij aangewakkerd die mij nog steeds voortstuwten: wijsgerige antropologie en techniekfilosofie (Jos) en oog hebben voor technologische praktijken en impact (Valerie). Dank daarvoor!

Mijnheer Van Nieuwenhuyse, mijn leraar Nederlands en filosofie op de middelbare school die voor mij de wondere wereld van de filosofie toegankelijk maakte, dank!

Ik dank het Chain team (Jurgen, Charlotte, Antonia en alle anderen die doorheen de tijd betrokken waren) en het Algosoc team dat alleen maar groeit en groeit.

Ik heb ook ontzettend geboft met de fantastische collega's en vrienden die ik heb mogen ontmoeten op de verschillende plekken waar ik heb gewerkt, bij de Erasmus Universiteit, de WRR, aan de Universiteit Leiden bij eLaw, in de verschillende commissies waarin ik zetel. Ik noem Mireille, Dennis, Anne-Greet, Simone, Francien, Emile en alle anderen.

Lieve vrienden en familie,

Dat ik hier sta is, zoals jullie weten, verre van vanzelfsprekend. Bibi, Fleur, Jona, Anna, Marta, en Sem, te weten dat jullie er zijn, hier maar vooral ook buiten deze aula, is me zoveel waard.

Ik dank ook de Naaborg clan en Fred, Zoë en Marnix voor hun voortdurende interesse en steun.

Mama, Ellen en Kristof, ik weet dat jullie dit hele gebeuren minstens zo spannend vinden als ik. Jullie bewondering en aanmoedigingen voel ik over landsgrenzen heen en dat doet altijd deugd.

Lieve Hannah en Nina, toen ik 8 jaar geleden mijn proefschrift verdedigde, zat jij Hannah braaf te luisteren naar iets wat je vrees ik niet echt goed kon volgen en jij Nina herinnert je vooral dat je midden op de dag frietjes mocht eten met de oppas. Nu ben jij, Hannah, zelf filosofie aan het lezen en kaap je soms de gesprekken aan tafel met ingewikkelde vragen, en is jouw Engels, Nina, intussen beter dan het mijne en sta je zelf geregeld op het podium met je zangkunsten ons tot tranen toe te roeren. Ik was acht jaar geleden al trots op jullie en nu nog meer. Niet per se omdat jullie zo creatief zijn en leuke hobby's oppakken, maar om de mooie mensen die jullie nu al zijn geworden. Ik kan niet wachten om te zien hoe jullie toekomst zich verder ontplooit.

Last but not least, liefje, Rogier.

Toen we elkaar zo een dikke 20 jaar geleden tegenkwamen op het conservatorium in Rotterdam wilde jij graag muzikant en producer worden. Dat is je aardig gelukt. Ik wilde graag in een leuke jurk op het podium staan en volle zalen trekken. Met een beetje goede wil zouden we kunnen zeggen dat die droom vandaag ook is uitgekomen, allicht in iets andere vorm dan wat we

20 jaar geleden voor ogen hadden. Zonder al je liefde, zorgzaamheid, steun en gekkigheid die mij juist in balans houdt was dat nooit gelukt. Jij bent de enige die mijn zeer excentrische geest liefdevol in toom weet te houden. Wij weten wel wie de wijste is van ons twee. Het lijkt me dan ook alleen maar gepast dat mijn laatste woorden hier op dit podium jouw woorden zijn. Beste mensen luister goed en doe er u voordeel mee (dat doe ik ook altijd):

“Alles komt altijd weer goed” en “Ik — Rogier dus — heb altijd gelijk”.

Ik heb gezegd

References

- Acquisti, Alessandro, Laura Brandimarte, and George Loewenstein. 2015. 'Privacy and human behavior in the age of information', *science*, 347: 509-14.
- AI-HLEG. 2019. "Ethics Guidelines for Trustworthy AI." In, <https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai>. Brussels: High-Level Expert Group on Artificial Intelligence.
- Arendt, Hannah. 1958. *The human condition* (University of Chicago: Chicago).
- Baier, Annette. 1986. 'Trust and antitrust', *Ethics*, 96: 231-60.
- Boyte, Alina Ng. 2014. 'The conceits of our legal imagination: legal fictions and the concept of deemed authorship', *NYUJ Legis. & Pub. Pol'y*, 17: 707.
- Custers, Bart, Simone van Der Hof, Bart Schermer, Sandra Appleby-Arnold, and Noellie Brockdorff. 2013. 'Informed Consent in Social Media Use-The Gap between User Expectations and EU Personal Data Protection law', *SCRIPTed*, 10: 435.
- De Mul, Jos. 2021. 'The Political Task of Philosophical Anthropology in the Age of Converging Technologies.' 305-328, in Erik Norman Dzwiza-Ohlsen and Andreas Speer (eds.), *Philosophical Anthropology as an Interdisciplinary Praxis. Max Scheler, Helmuth Plessner, and Nicolai Hartmann in Cologne - Historical and Systematic Perspectives* (Brill - Mentis: Leiden, The Netherlands).
- Driver, Julia. 2020. 'Love and Unselfing in Iris Murdoch', *Royal Institute of Philosophy Supplements*, 87: 169-80.
- Gehlen, Arnold. 1988. *Man, his nature and place in the world* (Columbia University Press: New York).
- Green, Ben. 2022. 'The flaws of policies requiring human oversight of government algorithms', *Computer Law & Security Review*, 45: 105681.

- Hildebrandt, Mireille. 2019. 'Privacy as Protection of the Incomputable Self: From Agnostic to Agonistic Machine Learning', *Theoretical Inquiries in Law*, 20: 83-121.
- Ihde, Don. 1990. *Technology and the lifeworld: From garden to earth*. (Indiana University Press: Bloomington).
- Jones, Karen. 2012. 'Trustworthiness', *Ethics*, 123: 61-85.
- Keymolen, Esther. 2016. *Trust on the line. A philosophical exploration of trust in the networked era*. (Wolf Legal Publisher: Amsterdam).
- . 2023. 'Trustworthy tech companies: talking the talk or walking the walk?', *AI and Ethics*.
- Laux, Johann. 2023. 'Institutionalised distrust and human oversight of artificial intelligence: towards a democratic design of AI governance under the European Union AI Act', *AI & SOCIETY*.
- Lazcoz, Guillermo, and Paul de Hert. 2023. 'Humans in the GDPR and AIA governance of automated and algorithmic systems. Essential pre-requisites against abdicating responsibilities', *Computer Law & Security Review*, 50: 105833.
- Lessig, Lawrence. 2006. *Code: Version 2.0*. (Basic Books: New York).
- Leenes, Ronald (forthcoming). The REAL Book. *Text and materials on regulating technologies*.
- Luhmann, Niklas. 1990. 'Technology, environment and social risk: A systems perspective', *Industrial Crisis Quarterly*, 4: 223-31.
- . 1973. *Vertrauen. Ein Mechanismus der Reduktion sozialer Komplexität* (Ferdinand Enke Verlag: Stuttgart).
- Malgieri, Gianclaudio. 2023. *Vulnerability and Data Protection Law* (Oxford University Press).

- Murdoch, Iris. 1970. *The Sovereignty of Good* (Routledge & Kegan Paul: London).
- Plessner, Helmuth. 2018. *Political Anthropology* (Northwestern University Press: Evanston, Illinois).
- . 2019. 'Levels of Organic Life and the Human.' in, *Levels of Organic Life and the Human* (Fordham University Press).
- Potter, Nancy Nyquist. 2002. *How can I be trusted?: a virtue theory of trustworthiness* (Rowman & Littlefield).
- Puri, Anuj. 2021. 'A Theory of Group Privacy', *Cornell J. L. & Pub. Pol'y*, 30: 477.
- Ratti, E., and M. Graves. 2021. 'Cultivating Moral Attention: a Virtue-Oriented Approach to Responsible Data Science in Healthcare.' *Philosophy & Technology*, 34: 1819–46.
- Rieder, Gernot, Judith Simon, and Pak-Hang Wong. 2021. 'Mapping the Stony Road toward Trustworthy AI: Expectations, Problems, Conundrums.' in Marcello Pelillo and Teresa Scantamburlo (eds.), *Machines We Trust: Perspectives on Dependable AI* (The MIT Press).
- Rosenberger, R., and P.-P. Verbeek (eds.). 2015. *Postphenomenological investigations. Essays on human-technology relations* (Lexington Books: Lanham).
- Savcicens, Germans, Tina Eliassi-Rad, Lars Kai Hansen, Laust Hvas Mortensen, Lau Lilleholt, Anna Rogers, Ingo Zettler, and Sune Lehmann. 2024. 'Using sequences of life-events to predict human lives', *Nature Computational Science*, 4: 43-56.
- Schermer, Bart Willem, Bart Custers, and Simone van der Hof. 2014. 'The crisis of consent: How stronger legal protection may lead to weaker consent in data protection', *Ethics and Information Technology*, 16: 171-82.
- Skitka, Linda J., Kathleen L. Mosier, and Mark Burdick. 1999. 'Does automation bias decision-making?', *International Journal of Human-Computer Studies*, 51: 991-1006.

Sloot, Bart van der. 2021. 'The right to be let alone by oneself: narrative and identity in a data-driven environment', *Law, Innovation and Technology*, 13: 223-55.

Tamò-Larrieux, Aurelia, Clement Guitton, Simon Mayer, and Christoph Lutz. 2024. 'Regulating for trust: Can law establish trust in artificial intelligence?', *Regulation & Governance*, n/a.

Taylor, Linnet, Luciano Floridi, and Baxt van der Sloot (eds.). 2017. *Group Privacy* (Springer).

WRR. 2017. "Weten is nog geen doen. Een realistisch perspectief op redzaamheid." In. Den Hague: WRR.

Yeung, Karen. 2018. 'Algorithmic regulation: A critical interrogation', *Regulation & Governance*, 12: 505-23.

Colophon

design

Beelenkamp ontwerpers, Tilburg

photography cover

Maurice van den Bosch

layout and printing

Studio | powered by Canon

