

Of bytes, rights and rites: a constructivist's perspective on AI, data and rule of law

| | |
|------------------|---|
| Authors | Dechesne,Francien |
| Publication Date | 2026-03-20 |
| Document Version | publishersversion |
| Link | https://research.tilburguniversity.edu/en/publications/ebe83614-b46d-4d7d-b75a-bbe472b63e20 |
| Citation | Dechesne, F 2026, Of bytes, rights and rites : a constructivist's perspective on AI, data and rule of law. Tilburg University. |
| Download Date | 2026-04-12 17:51:30 |
| Rights | <p>General rights</p> <p>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.</p> <ul style="list-style-type: none"> - 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" <p>Take down policy</p> <p>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.</p> |

Of Bytes, Rights and Rites: A constructivist's perspective on AI, Data and the Rule of Law



Inaugural Address

Prof. dr. Francien Dechesne

Francien Dechesne is Professor of AI and Law at the Department of Intelligent Systems of the Tilburg School of Humanities and Social Sciences, and the Tilburg Institute for Law, Technology and Society of the Tilburg Law School. The chair “AI and Data for the Rule of Law” is endowed by the independent Wetenschappelijk Onderzoeks- en Data Centrum (WODC), located within the Dutch Ministry of Justice and Security. She holds an appointment as associate professor of Ethics and Digital Technologies at the eLaw Center for Law and Digital Technologies of the Leiden University Law School.

With a background in computer science, mathematics and philosophy, and ten years experience in the Leiden Law School, her current academic activities focus on bringing together different disciplinary perspectives on Artificial Intelligence and its interactions with society. This includes demystification of the technology, identifying and explaining societal impacts (to those affected as well as those involved in the development), and investigating different strategies towards so-called “Responsible AI”.

Since moving from computer science research to ethics and digital technologies in 2009, she has worked on projects around privacy by design, value sensitive design, socio-technical cybersecurity, agent-based modelling, data protection, responsible data-analytics, fairness in algorithmic systems, and ethics and regulation of AI.

Francien Dechesne holds a PhD in mathematical logic (Tilburg University and TU Eindhoven, 2005). She conducted research on formal methods for verification of security protocols (TU Eindhoven) and on Ethics and Information Technology (TU Delft). Before starting her PhD position, she worked as IT Management professional in mainframe environments for Pink Elephant. As a student of (intuitionistic) mathematics and philosophy at Radboud University Nijmegen, she obtained a VSB-scholarship to study descriptive set theory at the University of California at Los Angeles (1996).

Of Bytes, Rights and Rites: A constructivist's perspective on AI, Data and the Rule of Law

Prof. dr. Francien Dechesne

Inaugural address

Delivered in adapted form during the public acceptance of the appointment on the chair "AI and Data for the Rule of Law" endowed by the WODC, at the Tilburg School of Humanities and Digital Sciences, and the Tilburg Law School, at Tilburg University, on 20 March 2026 by Francien Dechesne.

© Francien Dechesne, 2026

ISBN: 978-94-6526-737-1

All rights reserved. This publication is protected by copyright, and permission must be obtained from the publisher prior to any reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording or otherwise.

www.tilburguniversity.edu

| | |
|---|-----------|
| Of Bytes, Rights and Rites: A constructivist’s perspective on AI, Data and the Rule of Law | 7 |
| Prélude – Rites in Spring | 7 |
| [Introduction; Rondes Printanières; Cortège du Sage] | |
| Part 1 – Bytes and Rights: The future is <i>not</i> “JUST AI” | 11 |
| [Les augures printaniers] | |
| Part 2 – Rites: Keeping heads together - constructing shared perspectives on elephants in the room | 21 |
| [Jeux des cités rivales] | |
| Part 3 –Bytes, Rights and Rites: On my constructivist perspective | 27 |
| [Cercles Mystérieux; Évocation des ancêtres] | |
| Coda – A co-rite for co-writers (and co-riders) | 31 |
| [Danse sacrale; <i>ad libitum</i>] | |
| Selected publications (co-)authored by Francien Dechesne | 37 |
| A peak onto my bookshelf | 45 |

Prélude – Rites in Spring

Of Bytes, Rights and Rites:

A constructivist's perspective on AI, Data and the Rule of Law

Prélude – Rites in Spring

[Introduction; Rondes Printanières; Cortège du Sage¹]

In der Beschränkung zeigt sich der Meister.² If there is one thing I have learned during the writing of this speech,³ or in making choices in my work, it is that I am not a "Meester" (Magister) in that sense. But then again, I also don't carry the title of "Mr." (LL.M.), so I hope I can get away with it.

Many darlings were killed in the making of this text. But I have hopefully managed to steer clear from what happens in Pascal Mercier's book *Perlmann's Silence*: the story of a renowned academic who loses confidence and grip on reality. That story has helped me, personally, deal with renowned academics for the long time I did not think I would ever be part of their circles. But here I am, being welcomed in the "Cortège des sages".

We are at the cusp of a new Spring. Several significant events in my life has taken place on or around today's date. In particular, my PhD-defense took place on March 21 in 2005, here in this same room. So, I planned the current academic "Rite of Passage" to be another Rite of Spring:⁴ to symbolize coming full circle, and to inaugurate the start of a new one.⁵

1 Strawinsky, *Le Sacre de Printemps/The Rite of Spring* (1913), Part 1.

2 From a sonnet by Johan Wolfgang von Goethe, dated back to 1800. The common saying is in fact a slight adaptation of the original line: "*In der Beschränkung zeigt sich erst der Meister*".

3 These times require us to make explicit declarations about our use of AI for the production of text. No text in this speech was generated using AI-tools. Only to the extent I did not manage to turn them off, have built-in spelling- and grammar-correction tools made me rephrase my words. All awkward formulations and grammar errors are fully mine - and as such an authentic reflection of my thoughts as far as I manage to express them in words.

4 This choice of words alludes to "The Rite of Spring", or "Le Sacre du Printemps," the ballet composed by Igor Strawinsky, which famously caused quite the stir at its first performance in Paris in 1913. The piece has never ceased to intrigue me since as a teenager I had decided to be "only interested in serious music".

5 It is a co-incidence that Floris Bex (as member of the advisory board of WODC) and I independently chose this exact date and time to hold our inaugural lectures for our new positions, in Utrecht and Tilburg respectively. This has created an unfortunate dilemma for those in the intersection of our circles - including ourselves. We hope to make up for the inconvenience by exchanging our speeches in print.

Although I am really happy to know that today brings back together, in this room, many who were part of my PhD-ceremony 21 years ago, we have to miss some important people, without whom I would not be standing here today.⁶ I hope that today's rite also serves to revive our common acknowledgement of what they have given us and what we have learned from them.

⁶ Dr. B.H.H. (Bart) Dechesne (1924-2009) and Emke Dechesne-Sijmons (1939-2021): our unique, infinitely wise, strong and caring parents, who have raised us to become independent in so many ways. Dr. W. H.M. (Wim) Veldman (1947-2024): intuitionistic mathematician, lecturer of my courses in foundations of mathematics and MSc-thesis supervisor, example for intellectual and personal aspiration and authenticity. Dr. T.M.V. (Theo) Janssen (1948-2018): co-author and sparring partner for my PhD-research in logic, whose complementary interests, sharply critical mind and personal kindness were essential in achieving its results, and in growing my confidence as a researcher.

Part 1 – Bytes and Rights: The future is not “JUST AI”

Part 1 – Bytes and Rights: The future is not “JUST AI”

[Les augures printaniers]

In 2021, Lighthouse reports⁷ started investigating a machine learning-based system used in Rotterdam for the selection of people receiving social welfare (bijstand) for re-examination. They used Dutch government transparency law⁸ to request information about the so-called “risk-assessment-model.”

People receiving benefits from the municipality are expected to report whatever changes to their lives that may impact their eligibility for the benefit. Failing to report them could originate from deliberate attempts to take advantage of the system, as witnessed by examples of systematic fraud that prominently (but not frequently) reach the news.⁹ But given that the intended pool of receivers are people in need of support, failure to report changes and comply with required steps, may be unintentional and a result of limited agency (“doenvermogen”), or challenges to specific groups in the way the process has been designed.

While being subject to re-examination is in principle a fair¹⁰ condition for receiving the benefits, the application and design of the selection mechanism come with additional questions: on what grounds are the selections made, and how does the selection mechanism interact with the examination? For example: what are the implications if the selection mechanism is understood to be “risk-profiling for fraud”?¹¹ How to reconcile a selection mechanism that has an adversarial narrative, with the governmental zorgplicht [duty of care] towards the citizens underlying the benefits?¹²

When the municipality of Rotterdam complied with the information request from Lighthouse Reports, they provided information about the machine learning algorithm they had used, but by mistake also provided the actual training data they used to train the risk assessment system.

7 The Rotterdam case was the centerpiece of a series of case investigations called “suspicion machines”. See <https://www.lighthousereports.com/investigation/suspicion-machines/> (last consulted 25 January 2026). Lighthouse reports works in partnership with other independent journalistic organizations, such as in this case with WIRED and Vers Beton (local newspaper). They also consult academics, such as in this case among others Cynthia Liem of TU Delft.

8 Wet Open Overheid (literally: the “Open Government Law”).

9 A prominent example is the so-called “Bulgarenfraude,” which was revealed by news media (RTL Nieuws and KRO Brandpunt) in 2013.

10 Following the Rawlsian *difference principle* differential treatment of people in a society is justified if it benefits the least well off. It justifies redistribution through taxation of the better off, and providing benefits to the least well off, to bring them into a position where they can participate in the liberal society. The re-examination can be framed as checking whether someone is still in the category of “least well off”. (John Rawls, *A Theory of Justice*, 1971)

11 As reflected in the name chosen for a campaign around the Dutch court case against the Dutch State for the use of the *Systeem Rysico Indicatie* (SyRI): “Bij Voorbaat Verdacht” (Suspect in Advance), see <https://www.bijvoorbataatverdacht.nl/>.

12 Fatma Çapkurt (Leiden University and former member of the Staatscommissie Rechtsstaat) is developing a strong strand of work on this. See for example: Çapkurt F. (2025), *Rechtsbescherming tegen risicoprofilering op basis van de AVG, het EVM en het Handvest, Nederlands Juristenblad* 100(14): 1047-1058 (NJB 2025/751).

The rare transparency¹³ and availability of these technical components allowed for a much more nuanced scrutiny, including the feedback loops between what is produced computationally, and the complex of human and social behaviors, intentions, projections, norms, expectations, values, judgments, around it that give it its meaning and societal function. In short: to scurtinize the re-examination selection system as socio-technical system.

The result of this scrutiny, I believe, is a close-to-home concrete illustration how an increasingly datafied and digitized state can create tension with the **Rule of Law**.¹⁴

Conceptualizations of this fundamental principle for liberal democracies often list formal features of the law, such as generality, accessibility, stability, non-arbitrariness, equality, fair and reasonable exercise of power, and also respect for the international legal order.¹⁵ But I prefer a teleological conceptualization of the Rule of Law. Such approach focuses on the purposes underlying these formal features: the Rule of Law "set[s] limits to the exercise of power to ensure legal accountability, and to safeguard human liberty, dignity and agency."¹⁶ A way of setting limits to the exercise of power is via the separation and balance between the legislative, judicial and executive powers of the state (the so-called trias politica).

Around the time I moved my research to societal implications of digitalization, a new epistemic paradigm was on the rise: "Big Data"¹⁷ claims that with the spread of digital sensors and networks, we have scaled-up velocity, variety, volume of data to the extent

¹³ See Jenna Burrell, "How the machine thinks: *Understanding opacity in machine learning algorithms*", *Big Data and Society*, 2016. She distinguishes three different sources of opacity: secrecy of companies or states (deliberate opacity); mathematical illiteracy (for the general audience), and inherent complexity of certain classes of deep-learning algorithms. Often, training data are withheld due to the first, but they can be useful to address the third.

¹⁴ Quite prominently these concerns play out in de Toeslagenaffaire in the Dutch national context. Concerns in the Dutch context are analyzed and articulated in a.o. the WRR-reports *iOverheid* (2012), *Big Data in een Vrije en Veilige Samenleving* (2016), *Systeemopgave AI* (2021). Also Çapkurt, F., & Prins, J. E. J. (2023). *Bouwen aan een dienstbare informatiehuishouding: hebben we met een Algemene Informatiewet het noodzakelijke instrument in handen?* *Nederlands Tijdschrift Voor Bestuursrecht*, 2023(4), 199-204.

¹⁵ Smuha N.A. *Algorithmic Rule By Law: How Algorithmic Regulation in the Public Sector Erodes the Rule of Law*. Cambridge University Press; 2024 - Section 3.1 A Theoretical Introduction to the rule of law. I selected here formal features from Subsection 3.1.1 relevant for the Rotterdam case, and a couple of features that indicate that the abidance by Rule of Law in current democracies by no means can be taken for granted. While this is not necessarily a consequence of digitalization, digital technologies (and AI in particular) provide affordances that challenge or erode such features (see e.g. the concerns articulated in Hartzog, Woodrow and Silbey, Jessica M., *How AI Destroys Institutions* (December 05, 2025). 77 *UC Law Journal* (forthcoming 2026), Boston Univ. School of Law Research Paper No. 5870623).

¹⁶ Section 3.1.2, p.99-100 of Smuha (2024), fn. 15.

¹⁷ Victor Meyer-Schönberger and Ken Cukier, *Big Data* (2013). Helen Nissenbaum's keynote at the Amsterdam Privacy Conference 2015, responding to Victor Meyer-Schönberger, stressed the paradigmatic character. See also Rob Kitchin, *Big Data, new epistemologies and paradigm shifts* *Big Data and Society* (2014).

that we also have veracity (in the slogan “N=all”).¹⁸ It is intuitively clear how datafication and digitalization give a significant boost to the executive branch¹⁹ – while arguably putting sand in the cogs of the legislative and judicial branches. Not only will the latter two have to deal with questions of legislation for, and jurisdiction in the new paradigm. They also have to assess first what it would mean to deploy the technology for less computational legislative and judicial activities: could and should normative questions be cast into computational ones, and what would that mean for the Rule of Law?²⁰

Let's go back to the Rotterdam case. The selection mechanism for re-examination for benefits was being executed via an "algorithmic decision system."²¹ The underlying data-paradigm, with its actuarial lens,²² frames (and reduces) people into profiles based on characteristics, behaviors and circumstances that are often not measurable per se, but being recorded via proxies - attributes we can measure that are assumed to be correlated with what we can't. A machine-learning algorithm can be trained to find significant numerical patterns in those representations of the cases. In an effective "algorithmic decision system", these patterns of correlation turn out to valid as "predictors" for cases most worthy of investigation.²³

However, the conclusions of the Lighthouse Report-consortium raised serious concerns around fairness, data protection, accountability and transparency.²⁴ It made the municipality of Rotterdam decide to stop using the system. Dutch NGO AlgorithmAudit

¹⁸ This claim (both “N=all” and implying *veracity*) characterizes Big Data as an *epistemic* paradigm, and the part that I disagree with most. While I see data as a computationally useful while offering only a very specific partial representation of reality, I don't see how sheer quantity could transcend the inherent limitations of quantification. My skepticism is particularly strong regarding claims on *veracity* when it concerns social reality, where a notion of objective *truth* is problematic.

¹⁹ See e.g. Passchier R. (2021). *Artificiële intelligentie en de rechtsstaat: Over verschuivende overheidsmacht, Big Tech en de noodzaak van constitutioneel onderhoud*. Den Haag: Boom Juridisch.

²⁰ The subtitle of Smuha's 2024 book *Algorithmic Rule By Law* (fn.15) implies a negative answer: *How Algorithmic Regulation in the Public Sector Erodes the Rule of Law*.

²¹ I use terms to align with the general discourse, but need to acknowledge that this is one of the terms prone to introduce cross-disciplinary confusions and disagreements in themselves. See part II.

²² For a critical take on the actuarial lens in the domain of Justice, see Bernard Harcourt, *Against Prediction: Profiling, Policing and Punishing in an Actuarial Age*, University of Chicago Press, 2007.

²³ As Virginia Dignum writes in her new book “The AI Paradox” (Princeton University Press, February 2026): “Correlations can suggest associations but do not establish cause and effect. AI can help identify patterns, but humans are needed for causal inference and abstraction.” (p.9)

²⁴ From the Lighthouse Reports website <https://www.lighthousereports.com/investigation/suspicion-machines/> (last consulted January 25, 2026): “It became clear that the system discriminates based on ethnicity, age, gender, and parenthood. It also revealed evidence of fundamental flaws that made the system both inaccurate and unfair. Rotterdam's algorithm judges people on many characteristics they cannot control, such as gender and language skills. What might appear to a caseworker to be a vulnerability, such as a person showing signs of low self-esteem, is treated by the machine as grounds for suspicion when the caseworker enters a comment into the system. The data fed into the algorithm ranges from invasive (the length of someone's last romantic relationship) and subjective (someone's ability to convince and influence others) to banal (how many times someone has emailed the city) and seemingly irrelevant (whether someone plays sports). Despite the scale of data used to calculate risk scores, experts say it performs little better than random selection.”

picked up on the case in the context of their AlgoPrudence-initiative:²⁵ a repository collecting guidance (prudence) on implementation requirements for AI and Data to be in line with the Rule of Law.

My involvement as a member of the expert committee convoked by AlgorithmAudit provided me with unique insights about how subtle the interaction is, in practice, between principles underlying a social service, the understanding and agency around this service for the civil servants and citizens involved, and the (often unrealistic) expectations from the datafied representation (reduction) of the actors, stakes, principles, intentions and norms.

In fact, the patterns found in the data did provide some actionable insights - not towards better fraud detection, but towards improving the process around the benefits. What I found striking, is how the problematic patterns served as heuristics for understanding correlations between certain "profiles" and specific barriers for compliance. One can imagine that single mothers might have high no-show rates for appointments scheduled around school drop-off or pick-up time. This makes it understandable how no-show can be a bad proxy is for non-eligibility for benefits, but also how appointments can be scheduled not to add extra challenges to those who need support.

Connecting to the WODC Kennislijn Digitale Rechtsstaat

In my appointment on this endowed chair on "AI and Data for the Rule of Law", these experiences with the Rotterdam case serves as inspiration for research, within the WODC-kennislijn "Digitale Rechtsstaat," on sound, fair and effective decision making around the development, deployment and evaluation of data- and AI intensive systems for justice and security.

The Rotterdam case has shown me that the utility of the AI and Data might work for the Rule of Law, not by introducing some "Algorithmic Rule by Law,"²⁶ but as a diagnostic tool for identifying how (datafied) processes may fail to uphold the principles of the Rule of Law. The systematic nature of these patterns can give pointers for the redesign of such processes (and not just, or not at all, for how to improve the "datafication" of the process).

²⁵ Cf. Algorithm Audit, AlgoPrudence Case Repository (<https://algorithmaudit.eu/algoprudence/case-repository/>). Case ALGO:AA:2023:02 - Risk Profiling for Social Welfare Reexamination (November 2023).

²⁶ Cf. Smuha (2024), fn. 15.

I will also be looking into possibilities and limitations of so-called "Responsible AI"²⁷ in the context of the Rule of Law. Another amazingly enlightening Lighthouse report came out last Summer, titled "The Limits of Ethical AI".²⁸ It reports on the laudable pilot by the municipality of Amsterdam to follow state-of-the-art insights on responsible design practices, when building a model with the goal "to have fewer welfare applicants investigated, but a higher share of those investigated rejected"; "to avoid bias against vulnerable groups, and outperform human caseworkers". Despite bias-mitigation techniques, incorporating legal requirements and multiple rounds of validation and feedback, the Lighthouse analysis shows how performance worsened during the pilot, on all of the performance measures.

I think pilots like this give us productive reality checks about inherent limitations of the idea of "Responsible AI": in methodology, in resources required "to do it right", in where the different aims of such endeavours might contradict.²⁹

With the WODC and my colleagues at TILT and the Department of Intelligent Systems, I plan to work together on a better understanding how to balance different interacting principles of the Rule of Law in a digitized society, and more generally, a better understanding of the interaction of legal, ethical and technical aspects around the adoption of AI in society. I see "Responsible AI" as navigating a series of paradoxes in context,³⁰ not about finding general solutions or optimization methods.³¹ We have made a start exploring two research strands that have a shared interest from all three parties involved in the chair.

27 The term "Responsible Artificial Intelligence," in current discourses about *agentic* AI, might be taken to refer systems that take responsibility (maybe even for their own design). I want to stay far away from suggesting this to even make sense. When I say "Responsible AI" I mean the effort and aspiration for human developers of AI-systems to *take* responsibility for the intended as well as implicated impacts of the deployment of the system, in particular for what can be anticipated from the technical design. With the initiative "Teaching Responsible AI" we are promoting such professional responsibility to be actively incorporated in AI and Data Science curricula. See the webpage of the initiative at UTwente: <https://www.utwente.nl/en/digital-society/research/data-science-artificial-intelligence/research-area/ai-education/teaching-responsible-ai/> (last consulted January 25, 2026), and the report of our inventory which was published via the AIC4NL: <https://aic4nl.nl/en/werkgebieden/talent-kennis-vaardigheden/verantwoorde-ai-in-opleidingen-inzichten-uit-een-nieuwe-verkenning/> (in Dutch).

28 <https://www.lighthousereports.com/methodology/amsterdam-fairness/>; Responsible AI – Lighthouse report with Trouw and MIT Technology Review: <https://www.lighthousereports.com/investigation/the-limits-of-ethical-ai/> (last consulted: 26 January 2026).

29 With my background in formal methods, I think that formal impossibility results can be enlightening to indicate that (and maybe where) formalization/codification inherently fails to capture something essential. Productive impossibility results I have in mind are Tarski's undefinability theorem, Gödel's Incompleteness theorem, but also more directly related: Arrow's impossibility theorem and the work on "the (Im)possibility of Fairness" by Sorelle Friedler, Carlos Scheidegger and Suresh Venkatasubramanian (2016, 2021).

30 See Virginia Dignum's latest book "The AI Paradox" (February 2026). Dignum distinguishes eight paradoxes, with the following most relevant here: (1) *The AI Paradox: The more AI can do, the more it highlights the irreplaceable nature of human intelligence.* (3) *The Intelligence Paradox: AI is what AI cannot do.* (4). *The Justice Paradox: Less bias is not always more justice.* (6) *The Power Paradox: The more AI you get, the less control you have.* (8) *The Solution Paradox: Solving problems with technology often creates more problems.*

31 The logics of optimization embedded in algorithmic "solutions" can be harmful per se, cf. Bogdan Kulynych, Rebekah Overdorf, Carmela Troncoso, and Seda Gürses. 2020. POTs: protective optimization technologies. In Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency (FAT* '20). Association for Computing Machinery, New York, NY, USA, 177–188.

The first theme is to investigate the current promise of synthetic data as a possible solution for extracting actionable knowledge about developments in sensitive contexts (such as the domain of justice and security), without handling sensitive data of natural persons.³² This would also create openings for data-sharing.³³ While this idea sounds really good (too good to be true?), I would be very much interested in two main questions: first, how does the synthesizing process depend on the information you want to extract from the data?³⁴ and second, if you start from a dataset consisting of sensitive personal data, how you can safely preserve patterns and information while removing all possible links to identifiable natural persons?

The second theme is to investigate what are domain specific characteristics of transparency requirements for AI systems in the government context, in light of principles of the Rule of Law. Transparency requirements are a staple of the AI Act,³⁵ but transparency is not an intrinsic value.

What ulterior value a transparency requirement supports (or should support) will vary across different contexts of deployment, and between different stakeholders involved. I am interested in articulating meaningful transparency in the justice and security domain.³⁶

A future with AI and the Rule of Law?

In the examples I mention above, and the proposed research themes, I want to deliberately stay clear from what is often implied in conversations about AI: that we must be talking about a future (and how close that future is), rather than the now.³⁷ This implication is connected to the so-called “AI Effect”: the paradoxical fact that whatever

32 Definition of the CBS: “Synthetic data simulate characteristics of the relationships between people and objects (e.g. a school or a neighbourhood) so that a real-life situation can be reconstructed without identifying the person or object involved.” <https://www.cbs.nl/en-gb/about-us/innovation/project/what-is-synthetic-data-> (last consulted: 25 January 2026).

33 Responsible data sharing” came up as a prominent challenge for stakeholders of the AI-MAPS project workpackage on Accountability, in which I collaborate with Klaus Heine, Evert Stamhuis and Nanou van Iersel.

34 This question includes attention to biases in two ways: how to deal with existing (undesirable) biases in the data used as basis for generating synthesized data? what is the type of bias (in the more neutral, general sense) that carries the information that needs to be preserved?

35 I will be studying the implementation of the legal frameworks for AI, including the AI Act, and what we can learn from this in terms of legislative quality, in the context of my appointment in Leiden, in a joint project led by Anne Meuwese (NWO Open Competition SSH Project AIAction, starts this Spring).

36 I aim to connect to work done in other domains by colleagues at DIS. This builds on the workshop series I co-organize with colleagues at the AI Policy Lab at Umeå University: CLEAR-AI. First edition was held at the European Conference on AI (ECAI) in October 2025 in Bologna.

37 As an anecdote, in the first version of my contract, the word “future” suddenly appeared in the title of the chair: “AI and Data for the future Rule of Law”. Several people, including myself, initially overlooked it, and indeed, it turned out to be a simple mistake. However, once I had noticed, I wondered if such mistake went unnoticed so easily because it only made explicit what to many, apparently, is implicit to the concept of AI. As I explain here: I think we should get rid of that implication. So, I requested “to take the ‘future’ out of the chair”.

we have been able to make computers do, we no longer consider “intelligent” – making AI inherently about future, and often speculative, capacities.³⁸

The “AI Safety”-discourse pervasive on the world stage is pushed by those privileged enough to consider (dystopian) science fiction as instruction manuals,³⁹ directing attention towards concerns of existential risks and the singularity. This discourse fails to treat AI as a “normal technology”.⁴⁰

It distracts from the actual fact that AI needs responsible practices around development and deployment – which is something I hope the chair will contribute to, but which requires us to focus on the now instead of the future.⁴¹

It was no one less than Thorbecke, the chair of the committee establishing the Dutch Constitution in 1848, who wrote in 1830 “a treatise on the influence of machines on the composition of societal and civil relations”. In this, he argues [and I paraphrase while translating the original Dutch text] that it makes no sense to speak of such influence as good or bad per se.⁴² However, he says, “it is of the highest importance to not let ourselves be blindly and idly drift away in the strong currents of such development. Instead, we should enlighten these developments with knowledge and insight, remain vigilant and on firm ground.”^{43 44}

38 Cf. the AI Effect on Wikipedia: https://en.wikipedia.org/wiki/AI_effect (last consulted Jan 27, 2026), and what Virginia Dignum (2026, fn. 30) calls The Intelligence Paradox: *AI is what AI cannot do* - I would argue the word “yet” is often implied (“AI is what AI cannot do yet”), making AI about implied future capacities.

39 Shout out to the CPDP Culture Club 2025 for the inspiring Workshop on this theme.

40 Narayanan and Kapoor, “AI Snake Oil” (2024), Chapters 5 (on Existential Risk) and 7 (on developing new cultures for machine learning research); and their “AI as normal technology”-newsletter <https://www.normaltech.ai/>.

41 Within the sphere of advocating for ethical reflection also in (theoretical) computer science, I would like to mention my work with Olga Gadyatskaya at Leiden University, and the work of Jeroen van der Ham in leading an effort to establish an ethics code for Computer Science. See also KNAW: *Ethische en juridische aspecten van informaticaonderzoek* (2016).

42 But neither is it neutral (see Melvin Kranzberg’s first law of technology, 1985). My own understanding of how technology has been shaped by my introduction to Don Ihde’s *Mediation Theory* (see e.g. Peter Paul Verbeek: <https://ppverbeek.org/mediation-theory/>) and -of course- Langdon Winner’s famous article *Do artifacts have politics?* (Daedalus, 1980).

43 Thorbecke, “*VERHANDELING OVER DEN INVLOED DER MACHINES OP HET ZAMENSTEL DER MAATSCHAPPELIJKE EN BURGERLIJKE BETREKKINGEN*” (1830) – “De vraag is niet, M.M.H.H. of wij de merkwaardige omwenteling, welke de nijvere wereld door de toepassing der machines ondergaan heeft, goed- dan afkeuren, of wij ze zullen aannemen dan verwerpen. De omwenteling is gebeurd; hare gevolgen werken voort, en zijn op lang na nog niet tot rijpheid gekomen. Zoo groote gebeurtenissen behoeven een verloop van eeuwen, om al hare uitwerkselen, in strijd en in gemeenschap met het geheele zamenstel der menschelijke zaken, te ontvouwen. **Dan is het van het hoogste belang, ons met den stroom van zulk eene gebeurtenis niet blindelings en werkeloos te laten afdrijven; maar haar met kennis en inzicht van den beginne af toe te lichten, en waakzaam gestadig op zijde te blijven.**” (p.469)

44 Another remarkably relevant piece is Pope Leo XIII’s *Rerum Novarum* (1891) which he wrote out of concern for shifting distributions of power and prosperity under technological developments. It was reported to be a deliberate choice of our recently appointed Pope to have chosen the name Leo, in reference to Leo XIII and *Rerum Novarum*.

The Rule of Law is an institutional fact of the social reality we construct as a human society,⁴⁵ that is there to safeguard human liberty, dignity and agency. I also see the project of AI, not as a natural fact, but a socially constructed endeavor of humanity. This means it is us who can, and must, set limits to the general exercise of power by means of AI as far as it challenges our liberty, dignity and agency. I hope the research in the chair contributes to that.

⁴⁵ John Searle, *The Construction of Social Reality* (Simon & Schuster, 1997). Chapter 2 - Creating Institutional Facts: "the apparatus of agentive functions, collective intentionality and constitutive rules" (p.31).

Part 2 – Rites:
Keeping heads together -
constructing shared
perspectives on elephants
in the room

Part 2 – Rites: Keeping heads together - constructing shared perspectives on elephants in the room

[Jeux des cités rivales]

This chair is a small chair (only one day per week), with three main "supporting" legs: the Department of Intelligent Systems (DIS),⁴⁶ the Tilburg Institute for Law, Technology and Society (TILT) and of course, the independent Wetenschappelijk Onderzoeks- en Documentatiecentrum (WODC).

I see as my work in this initial phase, to position the chair with these three legs resting on, and thereby connecting the wider infrastructures provided by the faculties,⁴⁷ Tilburg University,⁴⁸ the WODC,⁴⁹ located within the Ministry of Justice and Security, and the (research) networks each of them are connected to.

I should also mention the extra, fourth leg of the Tilburg-Leiden connection, as I will continue my interdisciplinary work in education and research at the eLaw Center for Law and Digital Technologies in Leiden. My dual affiliation will hopefully strengthen the exchange already there in many existing personal links.⁵⁰

But how to keep the balance on a chair with such different legs?

The organizational challenge (of form) is, in my view, not disconnected the challenges of substance of the chair. In this part I would like to reflect on epistemological, methodological and cultural infrastructures for combining disciplinary perspectives, such as I deem to be necessary for meaningful research on AI and Data for the Rule of Law.

⁴⁶ Personal acknowledgments go to heads of department Drew Hendrickson (DIS) and Esther Keymolen (TILT), and to director of research at the WODC, Ronald van der Graaf.

⁴⁷ Personal acknowledgments go to vice-dean Marie Safar (TSHD), and Deans Stéphanie van Gulijk (TLS) and Martin van Hees (TSHD), for establishing and hosting the chair.

⁴⁸ A personal acknowledgment goes to Rector Wim van der Donk, for the warm and personal welcome.

⁴⁹ A personal acknowledgment goes to Ivo Giesen, director general of the WODC, for welcoming me as affiliate to the WODC.

⁵⁰ To name just a few people who have worked in Tilburg and Leiden and with a direct connection to my work in my respective appointments: Corien Prins, Simone van der Hof, Esther Keymolen, Bart Custers, Anne Meuwese, Marc van der Ham, Aviva de Groot. There are also former students of the Leiden Law and Digital Technologies Adv.LL.M who go on to do a PhD at TILT (currently: Taner Kuru and Pratham Ajmera). eLaw and TILT have recently started an active exchange, and I am very happy that today's event could serve as the occasion for the eLaw visit to TILT this year (thank you Gianclaudio Malgieri and Irene Kamara for organizing it).

Recently I participated in a consultation about a new AI policy document at the ministry of Justice and Security. It struck me once again how productively defining the scope of the term AI in the context of policy, is a recurring challenge.⁵¹

Because the range of applications and techniques that are being labeled as AI moves along with developments and discourses,⁵² there is a real risk of any AI Policy initiative to strand in discussions on how to define AI (for instance, as a range of applications or a set of techniques, and if so: which current ones to include?). Similar challenges exist for relevant normative terms, such as fairness⁵³ or transparency. Starting with explicit definitions of the relevant concepts will almost always evoke resistance, potentially avoiding the discourse (or policy) getting off the ground. But not establishing scope at all, will render a policy ineffective, or inefficient if misunderstandings and conflicting interpretations need to be resolved time and again at the implementation level.

Many people in the room (and especially my students) are probably familiar with the parable of the six blind men and the elephant.⁵⁴ This story, which first appears in ancient Buddhist texts, makes intuitively clear how differently situated (and limited) perceptions of one and the same subject can all be accurate within their frame, and at the same time mutually disconnected or seemingly contradictory. The story illustrates for me that it is virtually impossible to transcend the set individual frames to come to an objective, complete, and commonly shared⁵⁵ understanding.

As I recently learned,⁵⁶ Werner Heisenberg jokingly inverted the story into six blind elephants touching a man with their heavy feet, to come to the unanimous conclusion... that men are flat. The moral of his version of the story is that any act of observation per se alters the subject of investigation.

⁵¹ See also Dignum (2026, fn. 30), *The Agreement Paradox* (Chapter 2): "The more we explore AI, the harder it becomes to agree on its definition."

⁵² See fn. 38 above.

⁵³ See e.g. Mulligan, D.K., Kroll, J.A., Kohli, N., & Wong, R.Y. (2019). *This Thing Called Fairness*. Proceedings of the ACM on Human-Computer Interaction, 3, 1 - 36 or Selbst, A. D., Boyd, D., Friedler, S. A., Venkatasubramanian, S., & Vertesi, J. (2019). Fairness and abstraction in sociotechnical systems. In *FAT* 2019 - Proceedings of the 2019 Conference on Fairness, Accountability, and Transparency* (pp. 59-68).

⁵⁴ Or my course adaptation: "the exercise of the brave students who volunteer to step forward and keep their eyes closed, and the eLawphant".

⁵⁵ Even if it would be possible for one person to combine all of the frames into "the" transcending, objective understanding, it would still be a challenge for everybody to share that exact understanding (and then to know that the others share it, and to know that they know, etc.).

⁵⁶ Werner Heisenberg (1901-1976) was a theoretical physicist (and, of course, the alias of Walter White in *Breaking Bad*). According to the Wikipedia page for *Blind Men and an Elephant* (last consulted 27 January 2026), Heisenberg presented this inverted version in *Physics and Philosophy: the revolution in modern science* (Harper, 1958), as follows: "Six blind elephants were discussing what men were like. After arguing they decided to find one and determine what it was like by direct experience. The first blind elephant felt the man and declared, 'Men are flat.' After the other blind elephants felt the man, they agreed. *Moral*: We have to remember that what we observe is not nature in itself, but nature exposed to our method of questioning." (p.58)

Both versions of the story are relevant for our aspirations of getting a collective understanding of, and agenda for, the complex interactions between Data, AI and society. To make collective progress requires virtues like humility, patience, tolerance, perseverance and generosity.⁵⁷ I consider these virtues to be core academic virtues. I am mindful that these virtues are not necessarily the ones cultivated in the current discourse around AI, nor within this machine of an institution that materializes the ideal of the ivory⁵⁸ tower.

Hard is not impossible, but it requires another virtue: courage. The clear invitation for me to try to prove "possibility" by making it exist.⁵⁹ I did by co-organizing several workshops and events, where we also experimented with different "rites" (formats for interaction). These experiences have made me understand myself as a translator on normative questions around AI.

As such, I have also contributed to active research in navigating the interdisciplinarity around "AI Ethics". The workshops and the friendships with others in the space have also given me the confidence to transcend disciplinary boundaries in the education I developed around AI and Society.⁶⁰

Coming from my PhD research in logic, where there was a both a separation and an interaction between studying matters at the level of form (syntax) versus at the level of meaning, substance (semantics), I look at the challenges of interdisciplinarity in a similar way: there is an interaction between the organizational ("form") and substantive aspects of "disciplining" academia.

Today, some of that interaction is being materialized in the ceremonial "uni-form" I wear to

⁵⁷ Shannon Vallor, in *Technology and the Virtues: A Philosophical Guide to a future worth wanting* (2016), makes the point that we should not (just) focus on "better technology", but even more on *better humans*, to be able to flourish "in our increasingly uncertain and risky technomoral condition" (from the book's abstract). This point often gets pushed to the side in the discourses around Data and AI, which are being steered to serve the interests of maintaining, concentrating and expanding powers, as observed in several works over the past decade: Cathy O'Neil, *Weapons of Math Destruction* (2016); Shoshana Zuboff, *The Age of Surveillance Capitalism* (2019); Kate Crawford, *Atlas of AI* (2021); Marietje Schaake, *The Tech Coup* (2024), Emily Bender and Alex Hanna, *The AI Con* (2025), Karen Hao, *Empire of AI* (2025).

⁵⁸ Speaking of which: the elephant in the room wants its tusks back!

⁵⁹ Showing possible existence by constructing a "proof of concept" reveals my intuitionistic streak. See Part III. I live by: "I don't think I am able to do that, so I should definitely give it a try." as an alternative to Astrid Lindgren's Pippi Longstocking-quote: "I have never tried that before, so I think I should definitely be able to do that." The often-used original really does not suit me.

⁶⁰ Lorentz-Center Workshops *Formal Methods for the Informal World* 2013 (with a.o. Virginia and Frank Dignum), *Intersectionality and Algorithmic Discrimination* 2017 (with a.o. Seda Gürses and Linnet Taylor, and an incredible group of participants), *Cybersecurity Justice: The Ethics of Exclusion* (productive preparatory activities with a.o. Wolter Pieters and Jeroen van der Ham; workshop ultimately cancelled due to the pandemic). Also: with Maya Indira Ganesh and Zeerak Waseem: *Two computer scientists and a cultural scientist get hit by a driver-less car: a method for situating knowledge in the cross-disciplinary study of F-A-T in machine learning*. Translation tutorial at FAT* 2020 (Barcelona). I want to add two of the (many) Lorentz Center workshops I attended as participant: First, Bert-Jaap Koops' NIAS-Lorentz fellowship workshop *Privacy-by-Design beyond The Screen* (2017), which led to one of my favorite writing projects and another transatlantic friendship - I am deeply sad that Mike is no longer with us. [Katell, M., Dechesne, F., Koops, B.-J., & Meessen, P. (2019). Seeing the whole picture: Visualising socio-spatial power shifts through augmented reality. *Law, Innovation and Technology*, 11(2), 279-310.] Second, the workshop *Fundamental interdisciplinary questions between CS and SSH*, organized by a group of people situated in the close environment of the chair. The exchanges on interdisciplinarity specifically relevant to the chair, will give me a head start in making the local connections. Some of my experiences in these settings have become part of: Moats, D., Holtrop, T. J., Eck, N. J. P. van, Waltman, L. R., & Dechesne, F. (2025). Making problems: interdisciplinary collaboration and AI Ethics. *Science As Culture*, 1-26.

perform my appointment to this chair with legs in multiple institutes. "Uniform" is in this case however a contradictio in terminis: it is in fact unique in form. I am very proud to reveal my own as well as the chair's ambi-dexterity: one sleeve referring to the digital "links" (lined with the color of TSHD), and the Rechter-sleeve to the right(s) (lined with the color of TLS),

My head is in the middle, and my heart connects it all.

Part 3 –Bytes,
Rights and Rites:
On my constructivist
perspective

Part 3 –Bytes, Rights and Rites: On my constructivist perspective

[Cercles Mystérieux; Évocation des ancêtres]

My heart is in fact full today with all those people who have had profound impact on the intellectual and personal development that brought me here. I am really happy to see many of you here in the room with me today.

One of the important people, both in shaping my lens on the matters I study and in performing the academic values I personally aspire to, is one of the people not here with us today. Wim Veldman passed away the day before the deadline to apply for this position - and he was very much in my mind when I decided to take this leap. While I was going through the further stages around my appointment here, Franka Waaldijk and I wrote an In Memoriam for him, in which we tried to capture his unique intellect, curiosity, humor, dedication, deep and broad interest and care, for the beauty of mathematics, the human mind and creativity, and the transcendental.⁶¹

The other former students of Wim here in the room will probably confirm the profound impact of his teaching, throughout their often-colorful life trajectories.

I think of intuitionistic mathematics as a prism for the mind, which forces it towards more precise and careful thinking.⁶² And as esoteric as musings about the nature of mathematics may sound, constructive mathematics has real applications, most notably in provably correct algorithms.

Intuitionistic mathematics⁶³ opposes mathematical realism by looking at mathematical objects as the products of mental construction in the mind of the mathematician. Intuitionism does not tolerate unwarranted epistemic audacity ("vermetel!"), implying stronger proofs are needed than in classical mathematics. For example, to prove that there is an infinite set of numbers

61 Franka Waaldijk and Francien Dechesne, In Memoriam Wim Veldman (1947-2024), *Nieuw Archief voor Wiskunde NAW* 5/26 nr.3 september 2025.

62 For example, in my MSc-thesis *Alles op een rijtje - een intuitionistische verkenning van totale ordeningen* (1996) [Everything in order - an intuitionistic exploration of total orderings], as in the MSc-theses of other students of Wim, we would explore how different formal articulations of a mathematical property, which were classically equivalent, would intuitionistically form a spectrum of subtly different versions (certainties) of that property.

63 Joan Rand Moschovakis, in the lemma on *Intuitionistic Logic* in the *The Stanford Encyclopedia of Philosophy* (Summer 2024 edition) recommends, as the best approach to intuitionistic mathematics, Wim Veldman. *Intuitionism: an inspiration?* Jahresbericht der Deutschen Mathematiker-Vereinigung, 123(4):221–284, 2021. My visit to UCLA in 1996, to study Descriptive Set Theory with Yannis Moschovakis and Tony Martin, included also several encounters with Joan Moschovakis, who was one of the very few scholars in the world active in intuitionistic *mathematics* (next to her work in intuitionistic logic, for which there is a slightly wider active community).

with a certain property, the mathematician will have to come up with a constructive procedure that shows how, for an arbitrary finite set of such numbers, an additional such number can be produced.⁶⁴

While this is not the place for a lecture on the wonders of intuitionistic mathematics, I hope to give a little glimpse of how it has shaped my approach to what I do these days. I believe it has given me an inclination to look for implicit assumptions, in models and methods, which could correspond to unacknowledged commitments to contingencies.

Minimizing such commitments, and making them explicit for further analysis, also strengthens our understanding whether certain issues are inherent, or how they can be fixed. Such approach leaves maximal openness for constructive conclusions from correlations, as they are not in themselves saying anything about cause or effect. Think of the Rotterdam case: a specific pattern of no-shows might point at an understandable issue with the process for certain people, for which we have to let go of the fraud-frame.⁶⁵

This relates to reverse mathematics, one of Wim Veldman's interests: for a given theorem, what are the axioms essential to proving it? This gives some measure for the (meta-mathematical) claim it relies on - and thereby (inversely) of its generality.⁶⁶

Those who have witnessed me getting triggered in conceptually imprecise debates about AI (in particular around AGI and how the next GPT will solve -rather than add to- humanity's big problems) may now understand my reflex: "vermetel!"

I refuse to understand (the term) "Artificial Intelligence" as "a technology," let alone an inevitable, autonomous force. The most consistent (and persistent⁶⁷) to me, is to understand AI as a collective

64 Differences between *classical* (platonistic) and intuitionistic mathematics show clearly in the sphere of the infinite. Cantor's diagonal argument gives a construction method that proves that there are essentially more *real numbers* than *integers*. Intuitionism sees with real numbers as finite construction processes, producing a series of narrowing and converging intervals. This gives rise to many subtleties in proving, for example, whether a real number equals 0, if at any point in time the construction method leaves room for it to be a number very close, but not equal to 0.

65 It was suggested to me there could be a link here to De Bruijn's Automath Restaurant: the Automath proof checking system minimized commitment to axioms to avoid conflict and leave maximal openness to all "flavors" of mathematics. On the Automath Archive, I found a reference to the Restaurant on a set of slides reflecting on Automath (2003) by De Bruijn: https://automath.win.tue.nl/about_automath/mkm-compleet-klein.pdf.

66 In my work, I often try to look at provable limitations of formal argumentation systems, as it sheds light on that which transcends the formal. This is where, for me, it links with music (and it is no coincidence that Wim was deeply dedicated to music): a musical piece is so much more than the addition of the notes written in the score.

67 See https://en.wikipedia.org/wiki/Extensional_and_intensional_definitions: This is an intensional definition; it is the extensional definition -which are the techniques that we tend to classify as AI-techniques?- that radically changes over time. In the general discourse since November 2022, the extension of "AI" will often be equated with Chatbots based on Large Language Models, such as ChatGPT; this is significantly narrower than the range of current techniques and applications that would fall under my intensional definition.

construction: the project (or aspirational projection) of humanity to build and understand artifacts that can perform tasks that in humans we would say requires intelligence.⁶⁸

Understood this way, AI actually shares characteristics with the field of Law, which can also be perceived as a socially constructive project of humanity, with its rites similar to this one, producing institutional facts.

Assuming the title of Professor feels particularly *vermetel* to me: my identity is being socially reconstructed, while in my mind I have not changed. The "flipping of the bit" on the title implies the attribution of certain qualities and expectations that I still find "*vermetel*" to attribute to myself. This discomfort also comes from transcending -in title at least- an academic example of the caliber of Wim Veldman.

⁶⁸ See also Russell, S. J., & Norvig, P. (2021). *Artificial Intelligence: A Modern Approach* (4th ed.). Pearson. (p. 19).

Coda – A co-rite
for co-writers
(and co-riders)

Coda – A co-rite for co-writers (and co-riders)

[Danse sacrale⁶⁹; ad libitum]

Now comes maybe the hardest part of today's rite, because to me it is the most meaningful.

First of all, I want to thank all for being here with me today, in the room, online, and in my thoughts. I would have wanted to name all of you. But I would always fail to be complete, and this form, this rite, also requires me to demonstrate some Beschränkung - and remember I am not a Meester. Please don't take your name not appearing here as an indication you were not in my mind when I wrote these words. It may just mean I am looking for other (more personal?) ways of expressing my appreciation.⁷⁰

Having said that, if I would have to pick one person to address today, it would be Esther. I was very sad to see you go at the time. Little did I realize that with your move from eLaw to TILT, you would provide me with two of my most significant career steps.⁷¹ Today I thank you (TLS), with Marie Safar (TSHD) and Ivo Giesen (WODC), for creating a chair that strangely fits me so well.

Others who have provided me with a work environment and examples of how one can navigate between the binary and society, within and across disciplinary siloes: Jos Baeten, Bart Jacobs, Jeroen van den Hoven and Peter Kroes, Virginia Dignum, Anthonie Meijers, Bibi van den Berg, Simone van der Hof, and Bart Custers. Special thanks to Hans Franken for continuing to be an inspiration for the field of Law and Digital Technologies, and for his warm interest in, and support for, my work.

A special mention goes to Bert-Jaap: thank you for actively challenging the norms on academic careers and practices - and for being that person at privacy conferences for whom none of my atypical discussion topics seemed to be atypical.⁷²

⁶⁹ Danse Sacrale is the final, climactic part of the Sacre du Printemps - which is terminal for the chosen one. This text is also meant to be "terminally climactic" (albeit hopefully not terminal for me) - like many of Radiohead's compositions according to Osborn, Brad, *Everything in its Right Place: Analyzing Radiohead* (New York, 2017). This form may be something *Le Sacre du Printemps* has in common with *Paranoid Android*. Tip: Brad Mehldau emphasizes the terminal climax of the latter very clearly in his jazz-take on the album *Largo* (2002).

⁷⁰ And do check the footnotes of this printed version of the text.

⁷¹ I never considered my existence as a serial post-doc to qualify as a "career", and I felt comfortable and free in having a non-career.

⁷² See for example Koops, B.-J. (2022). Goodbye to publications, or confessions of a privacy law scholar. *surveillance and society*, 20(3), 312-316. I had misprofiled Bert-Jaap as a hard-core lawyer when I introduced myself to him, at one of my first CPDPs. Within minutes we were talking hard-core intuitionism. And the true dessert of the APC2018 conference dinner was finding out we had tickets for the same 3-day performance of a Stockhausen Opera project seven months later (a unique experience we indeed got to share).

I also want to express gratitude to our parents for offering opportunity and fully supporting us in all curiosities, talents and inclinations we displayed. When I chose to study mathematics, it was completely new to me that reactions often seemed to be about my gender in relation to this choice. I want to publicly acknowledge here the fabulous other women in science whose paths intersected with mine. Some of them⁷³ have been instrumental in inspiring, or even actively encouraging me to play a role in "challenging the face of science."⁷⁴ I am therefore particularly excited that this position makes me and my work "count" again as within the Digital Sciences.

I have a very long list of collaborators, co-authors and colleagues, in the colorful collection of teams and projects I have been active in since defending my PhD. You have afforded me to pursue what I found important to do and to let me do it in the way that I wanted to do it. With you I have learned that a sense of community and connection is possible across a wide diversity of viewpoints, experiences and personalities. I am deeply touched to see so many of you here in the room with me, for me today.⁷⁵

While today marks the start of a new position, I am very happy to remain fully part of eLaw, Leiden Law School and the Leiden University-wide AI-network SAILS. Eduard, I feel the need to acknowledge you for bringing the Elawphant into my room. Regina, thank you for being my friend through everything life has thrown on our paths in the past eight years, and for keeping it real in the ivory tower.

Today's rite marks for me the passage to a role with (even) more explicit responsibility for creating opportunity and community for others. But I seem to have achieved some of that already without this title. It means a lot to me to see little flocks of (former) students of mine here in the room, together.⁷⁶

One of the most "material" changes of today's rite of passage is that I have acquired a new right: ius promovendi. I hope Jenneke, Friso and Nanou won't notice anything substantially changing about me. I am immensely proud of being part of your journey towards finding yourself as a researcher.

⁷³ I hope those who I imply here know that this is for them. It has given me hope for change to accelerate that many of my own role-models in this respect are younger than me.

⁷⁴ This is a reference to the subtitle of "The Bearded Lady Project," portraying a team of (female) earth scientists including my sister Marieke Dechesne, geologist. See Vance, K., & White, D. (2020). *The Bearded Lady Project: Challenging the Face of Science* (L. J. Marsh & E. Currano, Eds.). Columbia University Press.

⁷⁵ I have tried to mention many of you somewhere in the booklet to this speech, or in the slides to this presentation. See for example the selection of my co-authored publications included in the booklet. I am listing my series of postdoctoral projects that funded my positions: Automath Archive (TU/e), VEMPS (TU/e, CWI), STARS, SESAME, KID, NeGOM (TUDelft), SCALES (Leiden). Current project collaborations are the ELSA-Lab AI-MAPS with EUR (Evert Stamhuis and Klaus Heine as direct workpackage colleagues, Gabriëlle Jacobs as PI), and the new NWO-Open Competition SSH project AIAction (with Anne Meuwese in Leiden). I also want to acknowledge my national collaborations in TRAI and the IPN Code of Ethics initiative, and my international collaboration with Virginia Dignum's AI Policy Lab @ Umeå (a.o. in the CLEAR-AI workshop series).

⁷⁶ In the audience and in the cortège: from the very first master course I taught in Eindhoven, to alumni from my current programs: the SAILS-minor AI & Society and the Adv.LL.M. Law and Digital Technologies in Leiden.

Lexo somehow made it through his own academic rite of passage with me before I had the right.⁷⁷ I am particularly proud of you for reading all the way through Andrew Hodges' biography of Alan Turing, which I gave you to understand mathematics (and my mumblings) better. I am also grateful to you for guiding me through Orwell's *Animal Farm*, which made me understand the real world better.

Yanjing, while I was not your promotor, I was part of your PhD-journey as a your companion-postdoc in the VEMPS-project. I will never forget being allowed to ask the first question at your defense. It is very special that you could actually be here today in this ceremony, welcoming me into the cortège that you have already been part of for a while. Let's resume our rite with Hans, of the international pancake meetings. (Hans, I will address you in our next ride.)

We are getting to those who accompanied me when I was a student of sorts myself. Several members of the illustrious society of the graduates of Wim Veldman are here, including Jeroen, who assisted Tijn and me as master of ceremonies in another impactful rite that happened 23 years ago, around this exact date.

Adriaan and Twan, you stood here next to me here 21 years ago, in that other Rite of Passage. Saskia, you stood here once too. While we keep choosing different routes, we always seem to end up in the same place. Mandy and Roland, I really wanted you to be here today, as we this is where we shared lunch conversations, about theories of duties (Kant) and justice (Rawls), but first and foremost about how to understand these in our local practice of academia.

Let me move to rites connected to rides

My introduction to policy in real life comes through my activism for and within the *Fietsersbond*.⁷⁸

I am grateful to the kerngroep Eindhoven for still treating me as part of their circles despite my gradual disappearance from the Eindhoven bike paths.

To WTC Café Wilhelmina, I do miss the our Sunday morning rides as well as the many hours I spent on the Sunday afternoon rite of "afdrinken" at the Café. It is in my relatively short "reign" (compared to the first and current president) that I have been able to practice delivering speeches, as a club-specific rite to unite this bunch of self-proclaimed anarchists. Thank you

⁷⁷ As some of you may remember, on that occasion, I took my one shot-one opportunity to take the stage as a rapper. I decided to keep the day-job.

⁷⁸ As member of the controlecommissie of the *Fietsersbond* 2016-2018, I even got a first hand experience with the managerial skills of two later relevant *bewindspersonen*: not many people may be aware that Alexandra van Huffelen (*staatssecretaris Koninkrijksrelaties en Digitalisering* in Rutte IV, and *portefeuillehouder Toeslagen* in Rutte III), and Franc Weerwind (*minister voor Rechtsbescherming*) were consecutive chairs of the board of the *Fietsersbond* (2015-2017 and 2017-2022), until their respective appointments in The Hague.

Kim, for setting the example for me in many ways. Thank you Ben, for letting me and Tijn assist you in the Wetenschappelijk Bureau. Thank you Frank, for your persistence on me joining the Wilhelminafanfare, and for supporting my more structural move to Leiden despite it meaning I would leave NAF.⁷⁹ But first and foremost, thanks to the Idijotun/Noordkapers for making me realize pushing through challenges, on the road or in life, goes better when done together.⁸⁰

Another incredible example of how one can take riding "the cycle of life" together literally, is my friendship with Virginia Parks, here with us today all the way from California, where we met, on the UCLA Cycling Team. We both remember that Piuma ride, how that ended, what it started, and how it's going. It means a lot to us to have you here, Ian.

I believe it is today 25 years ago that Floor received a call from her brother, announcing my introduction into the Borghuis family. Floor, Frank, Daan, Job and Anna, thank you for returning⁸¹ to the origins of the La Trappe family to continue bringing so much music to my life.

And then, my dear brother Mark and sister Marieke. Our father made a radical decision of free will, and implicated our mother, who was open to the adventure of a radical change to her life. No logic of profiling their lives would have predicted us coming into existence, yet here we are.⁸² Thank you so much for being here in this moment, which to me is strongly connected to where we come from, and to our joint journey in life.

My funny Valentine, can a good thing last forever? You are the humble stoker on what continues to be the ride of my life: thank you for always having my back. These 25 years of "WVTTK" could definitely not have been an email.⁸³

79 I am specifically grateful for the fantastic player bio you published for me, making "Kadaverzangers" a "Google-whack" for the time my musical cv was posted at wilhelminafanfare.nl. (Now, "kadaverzangers" no longer gives any hits...)

80 I once tried to articulate for a Blog how my life on the bike can be connected with my academic quests, but I feel I need to work on it a bit more: see "Getrapt Begrip" on beste-id.nl, <https://www.beste-id.nl/jaarlijkse-vragen/wat-is-uw-droomproject/getrapt-begrip>.

81 $2^9 + 2^8 + 2^7 + 2^5 + 2^3 + 2^4$ days later...

82 I also want to personally acknowledge the two people in the room who have known our parents prior to our existence: my mother's sister and dear aunt, Diet Sijmons, and my father's former student Prof.em. Herman van Erp, who I got to know first as the father of Pepijn, one of my best friends during my studies, and later as a senior colleague when I did my PhD in the Philosophy Faculty at this university. Anita, thank you for not only having been such special friend to our parents, but also to us.

83 I did not use LLMs to write or edit this text (fn. 3), but the phrase "this meeting could have been an email" would not have occurred here had I not played around with ChatGPT at another occasion. In the Summer of 2025, after GPT5 had just been released, I wanted to challenge my cynicism and find a useful application in the preparation for my course "Philosophy, Ethics and Politics of AI". I decided to generate personalized Bingo Cards for each student for during the course, with terminology and concepts relevant to the course (based on the syllabus text). This was one of generated phrases that turned out not to occur during the course - it was both irrelevant to the materials and apparently not applicable to the lectures- with the effect that none of the students scored BINGO... (also, I did not cure my cynicism about the usefulness of using LLMs in course preparation).

You always seem to find the right words to make me laugh about the absurdities of life, while you don't need words to get me. Aldous Huxley said it: Music, after silence, comes closest to expressing the inexpressible.⁸⁴

Ik heb gezegd.

⁸⁴ By the way: my next point for WVTK is Malbik Endar.

Selected publications
(co-)authored by
Francien Dechesne

Selected publications (co-)authored by Francien Dechesne

Theses

Francien Dechesne, Game, Set, Maths: formal investigations into logic with imperfect information, Ph.D. thesis, Universiteit van Tilburg, 2005.

Francien Dechesne, Alles op een rijtje: een intuïtionistische verkenning van totale ordeningen, MSc thesis, Radboud Universiteit Nijmegen, 1996.

Journal publications

David Moats, Tjitske Holtrop, Nees Jan van Eck, Judit Varga, Francien Dechesne, and Ludo Waltman (2025), Making Problems: Interdisciplinary Collaboration and AI Ethics. *Science As Culture*, 1-26.

Nanou van Iersel and Francien Dechesne (2025), Changing lenses on lenses: Function creep with public camera surveillance in the Netherlands? *Computer Law and Security Review* 59:106221.

Nezhad Nisi T.H., Daly S. & Dechesne F. (2025), Ethics in AI use for tax administration: guidelines for the future, *Intertax* 53(11): 724-746.

Zardiashvili, L. , Bieger, J. , Dechesne, F. , and Dignum, V. (2020) AI Ethics for Law Enforcement, *Delphi Interdisciplinary Review of Emerging Technologies*, Volume 2, Issue 4, pp. 179 - 185.

Leiser M.R. Dechesne F. (2020), Governing machine-learning models: challenging the personal data presumption, *International Data Privacy Law* 10(3): 187-200.

Michael Katell, Francien Dechesne, Bert-Jaap Koops & Paulus Meessen (2019) Seeing the whole picture: visualising socio-spatial power through augmented reality, *Law, Innovation and Technology*, 11:2, 279-310.

Custers B.H.M., Dechesne F., Sears A.M., Tani T. & Hof S. van der (2018), A comparison of data protection legislation and policies across the EU, *Computer Law & Security Review* 34(2): 234-243.

Wolter Pieters, Dina Hadžiosmanović, and Francien Dechesne. (2016). Security-by-experiment: Lessons from Responsible Deployment in Cyberspace. *Science and Engineering Ethics* 22, 831–850.

Dechesne F., Ghorbani A. & Yorke-Smith N. (2015). Introduction to the special issue on agent-based modelling for policy engineering. *AI and Society* 30 (3):311-313.

Wolter Pieters, Julian Padget, Francien Dechesne, Huib Aldewereld, and Virginia Dignum (2015) Effectiveness of qualitative and quantitative security obligations. *Journal of Information Security and Applications*, 22, pp. 3-16.

Dechesne, F.; Hadžiosmanović, D.; Pieters, W., (2014) Experimenting with Incentives: Security in Pilots for Future Grids, *IEEE Security & Privacy Magazine*, vol.12, no.6, pp.59-66, Nov.-Dec. 2014.

Amineh Ghorbani, Francien Dechesne, Virginia Dignum, and Catholijn Jonker, (2014) Enhancing ABM into an inevitable tool for policy analysis, *Journal of Policy and Complex Systems*, Volume 1, Issue 1, Spring 2014. Policy Studies Organization. pp. 61-76 .

Francien Dechesne, Martijn Warnier, and Jeroen van den Hoven, Ethical requirements for reconfigurable sensor technology – a challenge for value sensitive design, *Ethics and Information Technology* 15 (2013), no. 3, 173–181.

Francien Dechesne, Gennaro di Tosto, Virginia Dignum, and Frank Dignum, No smoking here: values, norms and culture in multi-agent systems, *Artificial Intelligence and Law* 21(1), (2013), pp. 79-107.

Francien Dechesne and Yanjing Wang, To know or not to know: epistemic approaches to security protocol verification, *Synthese* 177 (2010), Supplement-1, 51–76.

Xavier Caicedo, Francien Dechesne, and Theo M.V. Janssen, Equivalence and quantifier rules for logic with imperfect information, *Logic Journal of the IGPL* 17 (2009), no. 1, 91–129.

F. Dechesne, Thompson transformations for IF-logic?, *Synthese* 149 (2006), 285–309, special section Knowledge, Rationality and Action.

In Conference proceedings

- F. Dechesne, Requirements engineering for moral considerations in algorithmic systems : RE'20 Conference Keynote, extended abstract. In: 2020 IEEE 28th International Requirements Engineering Conference (RE), 2020, pp. 1-2.
- Maya Indira Ganesh, Francien Dechesne, and Zeerak Waseem. 2020. Two computer scientists and a cultural scientist get hit by a driverless car: a method for situating knowledge in the cross-disciplinary study of F-A-T in machine learning - translation tutorial. In: Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency (FAT* 20). Association for Computing Machinery, New York, NY, USA, 707.
- Dechesne F. (2020), Fair Enough? On (Avoiding) Bias in Data, Algorithms and Decisions. In: Friedewald, M.; Onen, M.; Lievens, E.; Krenn, S.; Fricker, S. (red.) Privacy and Identity Management. Data for Better Living: AI and Privacy. IFIP Advances in Information and Communication Technology nr. 576 Cham: Springer. 17-26.
- Wolter Pieters, Dina Hadžiosmanović, and Francien Dechesne, 2014. Cyber Security as Social Experiment. In Proceedings of the 2014 New Security Paradigms Workshop (NSPW '14). ACM, New York, NY, USA, 15-24.
- Wolter Pieters, Julian Padget, Francien Dechesne, Huib Aldewereld, and Virginia Dignum, Obligations to enforce prohibitions: On the adequacy of security policies. In: proceedings of the Security of Information and Networks conference, Turkey, November 2013.
- Francien Dechesne and Mohammad Reza Mousavi, Interpreted systems semantics for process algebra with identity annotations, Proceedings of the Ninth International Tbilisi Symposium on Language, Logic and Computation (TbilLLC), Kutaisi 2011, LNCS, no. 7758, Springer, 2013, pp. 182–205.
- R.H.A. Verhoeven and Francien Dechesne, Verifying multi-party authentication using rank functions and PVS, Proceedings of FAST 2008, LNCS, no. 5491, Springer-Verlag, 2009, pp. 226–241.
- Francien Dechesne, Simona Orzan, and Yanjing Wang, Refinement of Kripke models for dynamics, Proceedings of ICTAC2008, LNCS, vol. 5160, Springer, 2008, pp. 111–125.

F. Dechesne and Y. Wang, Dynamic epistemic verification of security protocols: framework and case study, *A Meeting of the minds: Proceedings LORI workshop, Texts in Computer Science*, 2007, pp. 129–144.

Francien Dechesne, Mohammad Reza Mousavi, and Simona Orzan, Operational and epistemic approaches to protocol analysis: Bridging the gap, *Proceedings of LPAR, LNAI*, vol. 4790, 2007, pp. 226–241.

Book chapters

Francien Dechesne and Tijn Borghuis (2020). Verification and Validation, In: Michelfelder D.P. & Doorn N. (red.) *The Routledge Handbook of the Philosophy of Engineering*, 2021. Routledge Handbooks in Philosophy New York-London: Routledge. 435-446.

Francien Dechesne and Albrecht Fritzsche (2020). The virtuality of future engineering, Contribution to the final chapter 'Reimagining the future of engineering'. In: Michelfelder D.P. & Doorn N. (red.) *The Routledge Handbook of the Philosophy of Engineering*. Routledge Handbooks in Philosophy New York-London: Routledge. 736-744.

Custers B.H.M., Dechesne F., Pieters W., Schermer B. & Hof S. van der (2018), Consent and Privacy. In: Müller A., Schaber P. (red.) *The Routledge Handbook of the Ethics of Consent*. London: Routledge. 247-258.

Pieters W. & Dechesne F. (2017), Adversarial Risks in Social Experiments with New Technologies. In: Poel I. van de, Asveld L. & Mehos D.C. (red.) *New Perspectives on Technology in Society: Experimentation Beyond the Laboratory*. Emerging technologies, ethics and international affairs. Oxford: Routledge. 222-239.

Martijn Warnier, Francien Dechesne, and Frances Brazier. Design for the Value of Privacy. In: *Handbook of Ethics, Values, and Technological Design*, Jeroen van den Hoven, Vermaas, Pieter E. and van de Poel, Ibo (eds). pp 431-445. Springer Netherlands, 2015.

Christian A. Detweiler, Francien Dechesne, Koen V. Hindriks, and Catholijn Jonker, Ambient intelligence implies responsibility, *Agents and Ambient Intelligence* (Tibor Bosse, ed.), *Ambient Intelligence and Smart Environments*, vol. 12, IOS Press, 2012, pp. 33–61.

- Francien Dechesne, Jan van Eijck, Wouter Teepe, and Yanjing Wang, What is protocol analysis? and Protocol analysis and dynamic epistemic logic, *Discourses on Social Software* (Jan van Eijck and Rineke Verbrugge, eds.), *Texts in Logic and Games*, vol. 5, Amsterdam University Press, 2009.
- F. Dechesne, Declarations of dependence, *New perspectives on Games and Interaction* (Krzysztof R. Apt and Robert van Rooij, eds.), *Texts in Logic and Games*, vol. 4, Amsterdam University Press, 2008, pp. 255–263.
- T. M. V. Janssen and F. Dechesne, Signalling in IF-games: a tricky business, *The age of alternative logics: Assessing the Philosophy of Logic and Mathematics Today* (J. van Benthem et al., ed.), Kluwer, 2006, pp. 223–242.

Miscellaneous (reports, tributes)

- Waldijk F. & Dechesne F. (2025), In Memoriam Wim Veldman (1947-2024): an inspiring intuitionistic mathematician, *Nieuw Archief voor Wiskunde 26 (Serie 5) (3)*: 164-166.
- Dechesne F., Harbers M., Peeters M., Riemsdijk B. van & Wiggers P. (2025), TRAI-Rapport: Verantwoorde AI in AI-opleidingen in Nederland: Uitdagingen en kansen. Den Haag: Stichting AI Coalitie 4 NL (AIC4NL).
- Francien Dechesne, Virginia Dignum, Lexo Zardiashvili, Jordi Bieger: AI and Ethics at the Dutch Police (whitepaper, March 2019), and Research strategy for AI & Ethics at the Dutch Police (June 2019).
- Zardiashvili L. & Dechesne F. (2019), Consumer Control of Energy Data: The Need for the Consent Management Mechanism in the Energy Sector of the Netherlands and Roadblocks Related to its Implementation. Leiden: SCALES-project valorisation report.
- Leiser M.R., Zardiashvili L. & Dechesne F. (2019), Realizing the Full Potential of the Right to Data Portability: Using data protection for healthcare innovation. Leiden: SCALES-project valorisation report.

- Custers B.H.M., Dechesne F., Georgieva I.N. & Hof S. van der (2017), De bescherming van persoonsgegevens: acht Europese landen vergeleken. Den Haag: SDU. Report of WODC study.-
- Francien Dechesne and Zofia Lukszo, Smart grid practice 2013: vulnerabilities and (cyber)security, Report for the KID project in the Empowering Networks Programme NGI/Alliander, December 2013.
- Francien Dechesne and Rob Nederpelt, N.G. de Bruijn (1918–2012) and his road to AUTOMATH, the earliest proof checker, *The Mathematical Intelligencer* 34 (2012), no. 4, 4–11.
- Yanjing Wang and Francien Dechesne, On expressive power and class invariance, Tech. report, arXiv:0905.4332 [cs.LO], 2009.

A peak onto my bookshelf

A peak onto my bookshelf



I profess the activity of reading to students and colleagues, and have been organizing book discussions with both. Here is a (somewhat arbitrary) selection of those books relevant to this lecture:

- Virginia Dignum, *The AI Paradox* (2026)
- Karen Hao, *Empire of AI* (2025)
- Emily Bender and Alex Hanna, *The AI Con* (2025)
- Sierra Greer, *Annie Bot* (2024)⁸⁵
- Arvind Narayanan and Anish Kapoor, *AI Snake Oil* (2024)
- Shannon Vallor, *The AI Mirror* (2024)
- Nathalie Smuha, *Algorithmic Rule by Law* (2024)
- Reijer Passchier, *De Vloek van Big Tech* (2024)
- Marietje Schaake, *The Tech Coup* (2024)
- Maxim Februari, *Doe zelf normaal* (2023)
- Cory Doctorow, *Enshittification* (2022)
- Kate Crawford, *Atlas of AI* (2021)
- Kazuo Ishiguro, *Klara and the Sun* (2021)
- Dave Eggers, *The Circle* (2013) and *The Every* (2021)
- Melanie Mitchell, *Artificial Intelligence - A Guide for Thinking Humans* (2020)
- Shoshana Zuboff, *The Age of Surveillance Capitalism* (2019)
- Stuart Russell, *Human Compatible* (2019)
- Ian McEwan, *Machines Like Me* (2019)
- Judea Pearl and Dana Mackenzie, *The Book of Why* (2018)
- Cathy O’Neil, *Weapons of Math Destruction* (2016)
- Evgeni Morozov, *To Save Everything, Click Here* (2014)
- Peter-Paul Verbeek, *Moralizing Technology: Understanding and Designing the Morality of Things* (2011)
- Bernard Harcourt, *Against Prediction* (2007)

⁸⁵ Ronald, bedankt voor de tip en je had gelijk. [“Never underestimate a woman on a bike.” p.111]

- Pascal Mercier, *Perlmanns Zwijgen* (1995)
- John Searle, *The Construction of Social Reality* (1995)
- Andrew Hodges, *Alan Turing: The Enigma* (1983)
- Douglas Hofstadter, *Gödel Escher Bach* (1979)
- Philip K. Dick, *The Minority Report - and other classic short stories* (1954-1964)
- Hannah Arendt, *The Human Condition* (1958)
- George Orwell, *Animal Farm* (1945)
- Aldous Huxley, *Brave New World* (1932)
- A.A. Milne, *Winnie-the-Pooh* (1926)

Colofon

Vormgeving

De Bondt grafimedia

Fotografie omslag

Maurice van den Bosch

Opmaak en drukwerk

Studio | De Bondt grafimedia

