The Impact of AI Ecosystems on the Law, Lawyers and Courts

Professor Fred Lederer – Professor Nicolas Vermeys
AI Ecosystems?

Finding:

To the extent legal professionals know anything – and most don’t – we usually concentrate on a single technology…
AI Ecosystems?

Finding:

It’s the *combination* of all of these and more that constitutes the genie: the *AI ecosystem*
AI Ecosystems?

IoT

DATA

Smart Contracts

#CTC2019
[...] the artificial intelligence problem is taken to be that of making a machine behave in ways that would be called intelligent if a human were so behaving.

Artificial intelligence vs. Lawyers

For example, we find that paralegals and legal assistants – for which computers already substitute – in the high risk category. At the same time, lawyers, which rely on labour input from legal assistants, are in the low risk category. Thus, for the work of lawyers to be fully automated, engineering bottlenecks to creative and social intelligence will need to be overcome, implying that the computerisation of legal research will complement the work of lawyers in the medium term.

2013

Probability of replacing lawyers with AI: 3.5%

Artificial intelligence vs. Lawyers

Luminance is the world’s most advanced artificial intelligence platform for the legal profession. Luminance’s groundbreaking AI technology reads, understands and learns from the interaction between lawyers and documents, offering a faster and more comprehensive platform for review. Sophisticated machine learning algorithms provide a unique, intuitive visual representation of the results, allowing lawyers to gain a new understanding of the scope of a project before the review even begins.

As the only artificial intelligence platform that informs the lawyer remotely at the heart of the process, Luminance means substantial time savings from day one, whilst ensuring legal teams have more control and confidence than ever before.

Request a demo to see why Luminance is trusted by Elite law firms on five continents.
Artificial intelligence vs. Lawyers

The AI achieved an accuracy level of 94%, compared to an average accuracy level of 85% across 20 human lawyers.

Performance:
- LawGeex AI: 94%
- Highest performing lawyer: 94%
- Lowest performing lawyer: 67%

Time taken:
- AI: 26 sec
- Lawyer: 92 minutes

It took an average of 92 minutes for the lawyers to review all 5 NDAs. In contrast, it took the LawGeex AI a total time of 26 seconds to review all 5 NDAs.

COFFEE DRUNK:
- 12
- Lawyers don’t need coffee!
The AI machine, powered by IBM’s Watson technology, will serve as a legal researcher for the firm. It will be responsible for sifting through thousands of legal documents to bolster the firm’s cases. These legal researcher jobs are typically filled by fresh-out-of-school lawyers early on in their careers.
Artificial intelligence vs. Lawyers

Do not pay will have succeeded if the word “lawyer” is completely removed from the dictionary for average people…

https://www.youtube.com/watch?v=xbXM-aNRNIY
A professor in computing science at the University of Alberta, Goebel has partnered with scientists in Japan to develop artificial intelligence programs designed for the legal world. His team has already designed an algorithm capable of passing the Japanese bar exam. Now the computer scientists are taking their research one step further.
Since the legal process can be abstractly viewed as a computation, imputing information about evidence and laws and outputting a decision, some scholars dream of fully automating it with robojudges: AI systems that tirelessly apply the same high legal standards to every judgement without succumbing to human errors such as bias, fatigue or lack of the latest knowledge.
A 'robot mediator' has been used to settle a dispute in the court system, for what is believed to be the first time.

The online tool, which uses artificial intelligence (AI) algorithms in place of a human mediator, settled the three-month dispute in less than an hour.

Graham Ross, mediator and online dispute resolution expert, said the breakthrough came when he introduced two litigants from the government's online civil money claims system to the Canadian dispute resolution tool Smartsettle ONE.

Mr Ross told Legal Futures that the dispute concerned around £2,000 in unpaid fees claimed by a trainer from a client following a personal counselling course.

He said the parties, who he referred to as E and D, had opted to use the online money claims court, which is in its public beta phase.

Despite an attempt at telephone mediation with a court official, they had failed to settle their case and a hearing date had been fixed.

"It so happens that this is the first case issued in the courts that has been settled in this way," Mr Ross said.

"One of the parties knew about my work, and I had been working with the Smartsettle team. I arranged for both sides to use it and they did."

Smartsettle ONE was developed in British Columbia by ICAN Systems, headed by its president, chief executive and "inventor" Dr Ernest Thiessen.

It allows parties to make offers and counter-offers by moving flags along sliders – a green one seen by the other side and a yellow flag which is not. Mr Ross described the yellow flag as "effectively a blind bid".
MARCH 25TH 19__VICTOR TANGERMANN__FILED UNDER: FUTURE SOCIETY

**Robo-Judge**

The Estonian Ministry of Justice has officially asked Ott Velsberg, the country’s chief data officer, to design a “robot judge” to take care of a backlog of small claims court disputes, *Wired* reports.

The artificial intelligence-powered “judge” is supposed to analyze legal documents and other relevant information and come to a decision. Though a human judge will have an opportunity to revise those decisions, the project is a striking example of justice by artificial
Artificial intelligence vs. Judges
Artificial intelligence vs. Judges

State v Loomis / Correctional Offender Management Profiling for Alternative Sanctions (COMPAS)
¶ 34 Specifically, Loomis asserts that the circuit court's use of a COMPAS risk assessment at sentencing violates a defendant's right to due process for three reasons: (1) it violates a defendant's right to be sentenced based upon accurate information, in part because the proprietary nature of COMPAS prevents him from assessing its accuracy; (2) it violates a defendant's right to an individualized sentence; and (3) it improperly uses gendered assessments in sentencing.

*State v Loomis, 2016 WI 68*
What we know

• Data points obtained from each individual

What we don’t know…

• Size of the data set

• Provenance of the data subjects

• Weight attributed to each data point

...
Any Presentence Investigation Report ("PSI") containing a COMPAS risk assessment filed with the court must contain a written advisement listing the limitations. Additionally, this written advisement should inform sentencing courts of the following cautions as discussed throughout this opinion:

- The proprietary nature of COMPAS has been invoked to prevent disclosure of information relating to how factors are weighed or how risk scores are determined.
- Because COMPAS risk assessment scores are based on group data, they are able to identify groups of high-risk offenders—not a particular high-risk individual.
- Some studies of COMPAS risk assessment scores have raised questions about whether they disproportionately classify minority offenders as having a higher risk of recidivism.
- A COMPAS risk assessment compares defendants to a national sample, but no cross-validation study for a Wisconsin population has yet been completed. Risk assessment tools must be constantly monitored and re-normed for accuracy due to changing populations and subpopulations.
- COMPAS was not developed for use at sentencing, but was intended for use by the Department of Corrections in making determinations regarding treatment, supervision, and parole.

State v Loomis, 2016 WI 68
¶ 92 Thus, a COMPAS risk assessment may be used to “enhance a judge's evaluation, weighing, and application of the other sentencing evidence in the formulation of an individualized sentencing program appropriate for each defendant.” See Malenchick, 928 N.E.2d at 573. As the court of appeals explained in Samsa, “COMPAS is merely one tool available to a court at the time of sentencing and a court is free to rely on portions of the assessment while rejecting other portions.” 359 Wis.2d 580, ¶ 13, 859 N.W.2d 149.

State v Loomis, 2016 WI 68
Getting back to the ecosystems...
Take the quiz: Can you spot the deepfake?

Below are four pairs of videos; in each pair, one of the videos is a deepfake. Click on the video that you believe has been manipulated.
Everything You Need To Know About Sophia, The World's First Robot Citizen

Zara Stone  Contributor

I write about the intersection of technology and culture
A robot that bought illegal drugs, a passport and a spy camera online has been freed by Swiss authorities after three months in captivity.

The robot, named Random Darknet Shopper, went on a ‘crime’ spree after being given $100 worth of bitcoins every week as part of an art show in Switzerland.
Smart Contracts
The basic idea of smart contracts is that many kinds of contractual clauses (such as liens, bonding, delineation of property rights, etc.) can be embedded in the hardware and software we deal with, in such a way as to make breach of contract expensive (if desired, sometimes prohibitively so) for the breacher.


Source: https://bitcoinmagazine.com/articles/smart-contracts-described-by-nick-szabo-years-ago-now-becoming-reality-1461693751/
Smart Contracts

- No universal definition
- Usually associated with blockchains
- General principles:
  1. The proposed transaction involves **two or more parties**
  2. The proposed transaction is something **other than** the simple transfer of virtual currency from one party to another (otherwise, it would be an exchange of cryptocurrencies)
  3. The implementation of the proposed transaction is **autonomous** and does not require human intervention
A digital system for recording the transaction of assets in which the transactions and their details are recorded in multiple places at the same time. Unlike traditional databases, distributed ledgers have no central data store or administration functionality.

A form of distributed ledger which reflects in many different locations the same critical data (e.g. who has what account balances).
Why Smart Contracts

✓ Irreversible
✓ Distributed (if associated with a distributed ledger)
✓ Savings
✓ Transparency
✓ Risk management
✓ Etc.
Smart Contracts

Are “smart contracts” smart?
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The use of ‘smart’ in smart contracts refers to the fact that some element of the smart contract is automatic and self-executing in accordance with pre-defined conditions.

ISDA Linklaters, “Smart Contracts and Distributed Ledger – A Legal Perspective”, p. 6
Are “smart contracts” contracts?

§ 1. Contract Defined

A contract is a promise or a set of promises for the breach of which the law gives a remedy, or the performance of which the law in some way recognizes as a duty.

✔ Offer
✔ Acceptance
✔ Consideration
✔ Capacity
✔ Mutual Assent
✔ Legality / Lawful Object
✔ (Writing)
Smart Contracts
IoT
Internet of Things

Things communicating with each other and interacting with the environment around them…

The IoT involves the movement of data to enable processes from across the room or somewhere on the other side of the world

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…a new device category layer that exists as the connective tissue between the formerly static non-connected world, and the world of PCs, tablets, and smartphones…

““The Internet Of Things’ Will Change Everything About The Global Consumer Economy,” Business Insider, May 18, 2014

The networked connection of people, data, process and things. The benefit of IoE is derived from the compound impact of connecting people, process, data, and things, and the value this increased connectedness creates as “everything” comes online.”

Internet of Things

Layers of IoT

Devices
Network
Platform
Applications
Analytics
Internet of Things

IoT product has become an inseparable mixture of hardware, software and service...

Source: Guido Noto la Diega, and Ian Walden, “Contracting for the ‘Internet of Things’: Looking into the Nest” (February 1, 2016). Queen Mary School of Law Legal Studies Research Paper No. 219/2016, at p. 12
Notwithstanding anything to the contrary and to the maximum extent permitted by applicable law, Nest Labs provides the product software “as-is” and disclaims all warranties and conditions, whether express, implied, or statutory, including the warranties of merchantability, fitness for a particular purpose, title, quiet enjoyment, accuracy, and non-infringement of third-party rights. Nest Labs does not guarantee any specific results from the use of the product software. Nest Labs makes no warranty that the product software will be uninterrupted, free of viruses or other harmful code, timely, secure, or error-free…”
Internet of Things

Source: “How Will The Cambridge Analytica Scandal Impact Open Banking?,” Finance Monthly, April 30, 2018

Source: “Amazon reportedly employs thousands of people to listen to your Alexa conversations,” CNN Business, April 11, 2019

Alexa is listening…

… and so are thousands of Amazon’s employees.
AI Ecosystems
Approaches to Liability

- Leave AI Alone
- Give AI legal personhood (to use existing legal rules)
- “Robot Common Sense”
- New (non-legal?) rules specifically-created for AI
Do we need a new theory of liability for the AI Ecosystem?
AI Ecosystems

What is the purpose of liability (in tort)?

• Redressing (within boundaries of reasonableness) wrongful acts causing losses by providing a remedy (mostly, damages, but not only)
• Putting the Plaintiff victim in the same state it was before the tort was committed
• Acting as a deterrent of unsafe conduct
AI Ecosystems

How should the law deal with the AI Ecosystem, then?
Questions / Comments?

filede@wm.edu

igiuffrida@wm.edu

nicolas.vermeys@umontreal.ca