

TYPOLOGISING LEGAL TECHS

A METHOD

Mireille Hildebrandt, FBA
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TYPOLOGISING LEGAL TECHS

A MINDSET

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TYPOLOGISING LEGAL TECHS

A RESOURCE

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Prefatory remarks

- Legal Informatics and AI & Law: a **niche domain** in law and CS
- Community **awareness: potential, pitfalls and limitations**
- ‘Law and AI’ **overtaken by providers of so-called ‘legal techs’**
- This keynote: **the potential reconfiguration of the domain of law**
 - proposing a method and a mindset (and a resource)
 - to map, compare and assess
 - technologies that claim to support, replace or enhance
 - legal research and legal practice: <https://publications.cohubicol.com/typology/>

- Why legal ‘technologies’?
- Why ‘typologising’?
- Mapping, comparing, assessing
- The political economy of legal technologies
- The acquis of legal informatics
- CRCL conviviality: accessing effect on legal effect

- Why legal 'technologies'?
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Why ‘technologies’

- Focus on real world applications that affect legal practice
 - But also academic papers and datasets
- Keen attention to the affordances of specific technological articulations
 - E.g. computer code depends on the logic gates
- Based on philosophy of technology: the material embedding of law
 - Modern positive law is text-driven, shares the *affordances* of printed text

Why ‘technologies’

- Modern positive law ‘as-we-know-it’ is itself technologically embedded
 - Walter Ong: ‘the technologies of the word’
 - Eisenstein: ‘printing revolution in early modern Europe’
- Script and printing press have specific *affordances* (Gibson)
 - these affordances are key to the checks and balances of the rule of law

Why ‘technologies’

- These affordances are:
 - Distantiation between author and text (legislature)
 - Distantiation between author and reader (those subject to law)
 - Distantiation between text and meaning (reconstructive interpretation)

Why ‘technologies’

- These affordances have reinforced and/or generated:
 - the ambiguity of legal concepts and legal norms
 - the open texture of legal concepts
 - the ***inherent contestability of legal concepts and norms***

Why ‘technologies’

- These affordances have reinforced and/or generated:
 - the relative autonomy of law in constitutional democracies
 - the institutionalisation of checks and balances
 - Sustaining the argumentative nature of modern positive law
 - Sustaining legal certainty in the context of contestation

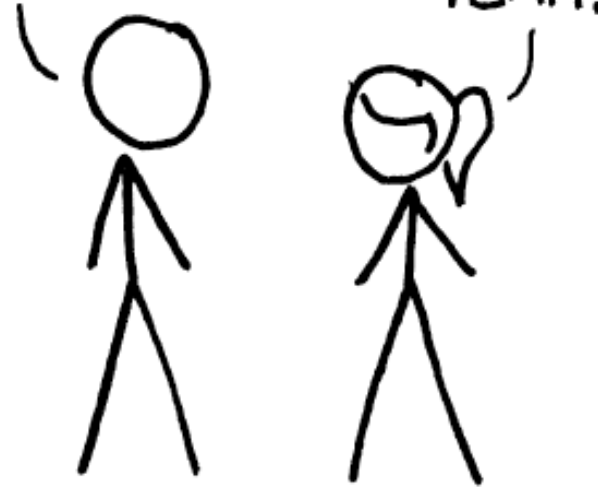
- Why legal 'technologies'?
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- The acquis of legal informatics
- CRCL23 conviviality

HOW STANDARDS PROLIFERATE:

(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)

SITUATION:
THERE ARE
14 COMPETING
STANDARDS.

14?! RIDICULOUS!
WE NEED TO DEVELOP
ONE UNIVERSAL STANDARD
THAT COVERS EVERYONE'S
USE CASES.



SOON:

SITUATION:
THERE ARE
15 COMPETING
STANDARDS.

Typologising

- We don't do lists or taxonomies
- This is not a knowledge-based or logic-based system – not an ontology
- We need typical instantiations that allow typologising:
 - Mapping of relevant types of legal technologies
 - Comparing specific examples and different types
 - Navigating types, tokens and the computational systems they build on
 - Assessing technical issues and potential legal impact

Typologising

- Being exhaustive is boring and not helpful
 - We do **types** (connotation) and **tokens** (denotation), that mutually define each other
- The point is **not** to do the work for those concerned
 - The point is to contribute to them **developing a dedicated mindset**:
 - To what extent can these systems contribute to law and the rule of law?
 - If so, which design decisions will make the difference?
 - To what extent could they negatively affect law and the rule of law?


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<https://www.cohubicol.com>

Typology of Legal Technologies










A Method – A Mindset

The Typology is a curated set of legal technologies (applications, scientific papers, and datasets) that we handpicked to demonstrate the potential impact on *legal effect* of different types of 'legal tech'. To understand how and why we created this, see the [FAQs & methodology](#) page.

- Use the filters below to find legal techs you are interested in. Click a system to view its full profile.
- Compare systems by clicking  on one or more systems (view the comparison at the bottom of this page).

SHOWING 30 TECHS RESET FILTERS

END-USERS	FUNCTIONALITY	CODE/DATA-DRIVEN	TYPE OF SYSTEM
<input type="text" value="Any"/>	<input type="text" value="Any"/>	<input type="text" value="Either"/>	<input checked="" type="radio"/> Any <input type="radio"/> App <input type="radio"/> Dataset <input type="radio"/> Paper

Akoma Ntoso Legislation Search 	Automatic Catchphrase Identification from Legal Court Case Documents (Mandal et al. 2017) Litigation Search 	Blawx Legislation 
Casetext Litigation Search 	Catala ADM Legislation 	Chinese AI and Law dataset (CAIL2018) Litigation 
Contract Understanding Atticus Dataset (CUAD) Contract 	DataLex LES Contract Legislation 	Della Compliance Contract 

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navigating
assessing

Compare legal techs

↺ RESET COMPARISON

	Predicting Brazilian court decisions (Lage-Freitas et al. 2019) 🔍	Jus Mundi 🔍	JURI SAYS 🔍
Intended users	<ul style="list-style-type: none"> Courts General law firms In-house lawyers Academics Litigators 	<ul style="list-style-type: none"> Courts General law firms In-house lawyers Academics Legislators Litigators Policy makers Public administration 	<ul style="list-style-type: none"> Academics
Code- or data-driven	Data-driven <ul style="list-style-type: none"> <u>NLP</u>: meta & content data 	Data-driven <ul style="list-style-type: none"> <u>NLP</u>: meta & content data 	Data-driven <ul style="list-style-type: none"> <u>NLP</u>: meta & content data
Form	<ul style="list-style-type: none"> Proof-of-concept (off-the-shelf) 	<ul style="list-style-type: none"> Platform (off-the-shelf) 	<ul style="list-style-type: none"> Application Proof-of-concept (off-the-shelf)
Automation or support	<ul style="list-style-type: none"> Legal decision support Legal research strategy 	<ul style="list-style-type: none"> Legal strategy support Legal research strategy 	<ul style="list-style-type: none"> Legal strategy support
In use?	Unknown	In current use	In current use
Creators	<ul style="list-style-type: none"> Academics 	<ul style="list-style-type: none"> Legal tech company 	<ul style="list-style-type: none"> Academics
Access	—	<ul style="list-style-type: none"> Subscription license Software/Platform as a Service 	<ul style="list-style-type: none"> Software/Platform as a Service

See our [methodology](#) for field definitions.

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SHOWING 30 TECHS RESET FILTERS


END-USERS	FUNCTIONALITY	CODE/DATA-DRIVEN	TYPE OF SYSTEM			
<div>Any</div>	<div>Any</div>	<div>Either</div>	<div><input checked="" type="radio"/> Any</div>	<div><input type="radio"/> App</div>	<div><input type="radio"/> Dataset</div>	<div><input type="radio"/> Paper</div>



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Computer Science vocabulary

This vocabulary presents the working definitions of a set of computer science concepts that are foundational for legal technologies. It complements and is integrated with the Typology of Legal Technologies.

In line with [other parts of the project](#) , we have grouped the concepts into 'code-driven' and 'data-driven' categories, though we are aware that these are not mutually exclusive.

THIS SECTION'S CONTENTS

- [Code-driven](#)
- [Data-driven](#)

This page was last updated on 4 October 2022.



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LEGAL VOCABULARY CONTENTS

- [Jurisdiction](#)
- [Legal effect](#)
- [Legal norm](#)
- [Legal powers](#)
- [Legal reasoning and interpretation](#)
- [Legal subject](#)
- [Positive Law](#)
- [Rule of Law](#)
- [Sources of law](#)
- [Subjective rights](#)

This page was last updated on 4 October 2022.



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Legislation Editing Open Software (LEOS)

Legislation: drafting

joinup.ec.europa.eu/collection/justice-law-and-...

Main research: December 2021

CONTENTS

- [What does it claim to do?](#)
- [Substantiation of claims & potential issues](#)
- [How might the end-user assess effectiveness?](#)
- [What form does it take?](#)
- [Is it currently in use?](#)
- [The creators](#)
- [Jurisdiction](#)
- [License](#)

▼ What does it claim to do?

Legislation Editing Open Software (LEOS) is a browser-based application for drafting legislation. It is designed to allow collaboration between drafters and reviewers, and to facilitate interoperability with other systems through use of the [Akoma Ntoso](#) standard for legislative documents.

▼ AT A GLANCE ?	
Intended users	<ul style="list-style-type: none">▪ Legislators▪ Policy makers▪ Public administration
Code- or data-driven	Code-driven <ul style="list-style-type: none">▪ Rules as Code
Form	Application (combination) Details ↕
Automation or support	–
In use?	In current use
Creators	<ul style="list-style-type: none">▪ In-house developers▪ Independent developers▪ Legal practitioners Details ↕
Access	<ul style="list-style-type: none">▪ Free download/web application

See our [methodology](#) for field definitions.

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Claimed essential features

- Enables collaborative drafting of legislation.
- Adapted to the EU's Ordinary Legislative Procedure.
- Aims to implement user-centric design in legislative drafting.

► RELEVANT QUOTES

Claimed rationale and benefits

- To enable best practice in legislative drafting.
- Helps deliver several goals: cost efficiency, transparency, interoperability, automation.
- Interconnects legal databases and improves search and cross-referencing between legislative instruments.
- Provides a platform that caters for practices in different jurisdictions.

► RELEVANT QUOTES

Claimed design choices

- Represents legislative documents using the Akoma Ntoso XML schema.
- Restricts document structure to prevent drafting mistakes.

► RELEVANT QUOTES

- Built around core generic 'building blocks' of legislative workflows, that can be customised for particular jurisdictions.

► RELEVANT QUOTES




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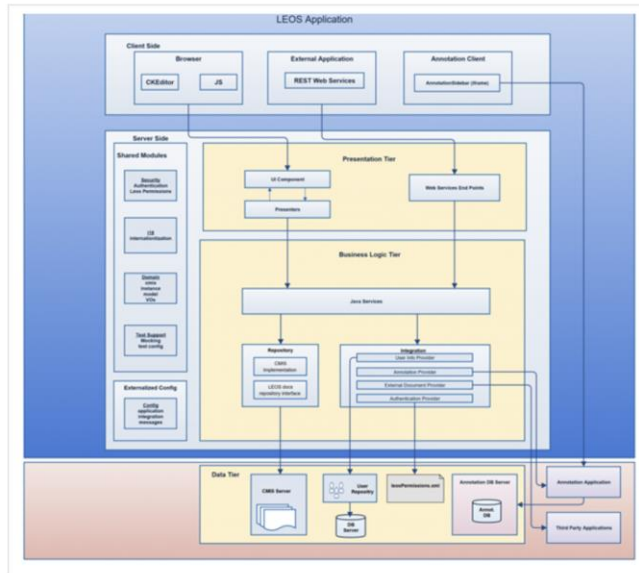
- ▼ Substantiation of claims & potential issues

POTENTIAL LEGAL IMPACT

- Inherits the same risk as its underlying technology **Akoma Ntoso**: AKN's core ontology of concepts may encourage the use of inappropriate definitional tagging in documents. This may have implications if these are relied upon by other computational law systems.


The [Application Architecture](#) page (archived Dec '21) provides a detailed description of how the system works. It covers the relationship between its front-end user interface ('presentation tier'), back-end 'business logic' ('business logic tier'), and sources of data ('data tier'). It also sets out the external application programming interface (API) for integration with other systems, the deployment strategy, and the dependencies of the system's various modules.

- The system is written in Java.
- LEOS brings together **various third-party open-source libraries** for e.g. **text editing and annotation** on the front-end, for **managing data** on the back-end, and for **serving the application to the user's web browser**.
- The Application Architecture page includes a useful infographic demonstrating the Model-View-Presenter ('Data side'- 'Client side'- 'Server side') design pattern (more on [Wikipedia](#) ), which facilitates 'separation of concerns', i.e. modularity:



undefined

Further infographics are provided, including (i) a more detailed version of the MVP Web Component Architecture, (ii) the relationships between user devices, the application server, and the data sources when the application is deployed, and (iii) the dependencies between the application's various modules.

This video of the most recent release gives a useful overview of the application: <https://www.youtube.com/watch?v=SwQDVxtwmUs> 

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POTENTIAL LEGAL IMPACT

- Inherits the same risk as its underlying technology [Akoma Ntoso](#): AKN's default set of concepts may be inappropriate or insufficient for a specific [jurisdiction](#) or context of application. If left untailored, this could have implications if these are relied upon by other computational law systems that rely on document structure for their functionality (e.g. search).

POTENTIAL LEGAL IMPACT

- Depending on the quality of the translation of [legal provisions](#) into Blawx representations, the output might not be legally sound (but note that the author of Blawx explicitly states that it is a proof-of-concept and should not be used for real-world purposes).
- Those coding Blawx interpretations of the law may not have the legal authority to conclusively determine the meaning of the rules (since they will usually not be working in a judicial capacity). This could be problematic if they are relied upon as authoritative statements of the law and are assumed to have [legal effect](#).
- Maintaining Blawx representations of legal provisions may impose significant overhead due to changing judicial [interpretations](#) of (i) the original legal provisions, and (ii) [fundamental rights](#) that impact their application.
- There may be a risk that Blawx is used to formalise areas of law that are necessarily too complex or ambiguous for the kind of [deductive reasoning](#) the system is capable of.

POTENTIAL LEGAL IMPACT

- Depending on the quality of the translation of [legal provisions](#) into Catala code, the output might not be legally sound.
- Those coding Catala interpretations of the law may not have the legal authority to conclusively determine the meaning of the rules (since they will usually not be working in a judicial capacity). This could be problematic if they are relied upon as authoritative statements of the law and are assumed to have [legal effect](#).
- Maintaining Catala representations of legal provisions may impose significant overhead due to changing judicial [interpretations](#) of (i) the original legal provisions, and (ii) [fundamental rights](#) that impact their application.
- The claimed goal of achieving “semantic equivalence with law” assumes all relevant legal meaning can be derived from a single document, which is not the case (see [Sources of law](#)).
- There may be a risk that Catala is used to formalise areas of law that are necessarily too complex or ambiguous for the kind of [deductive reasoning](#) the system is capable of.

POTENTIAL LEGAL IMPACT

- Iubenda's FULLGLOBAL toolbox offers to help with privacy and data protection laws in the EU, US and Brazilian [jurisdictions](#). Users might fail to appreciate that the laws applicable to their own contracts and policies may impose standards that differ from these laws.
- True compliance with the relevant [legal provisions](#) may require more than the system is capable of; there is a risk clients consider their compliance obligations to be met simply by using Iubenda's system.

Iubenda provides little information about the back-end of the system. It appears to be a web application that relies on an [API](#), [HTML](#), [PHP](#), JavaScript and widgets to integrate content and solutions into a user's websites or apps.

POTENTIAL TECHNICAL ISSUES

- It is not clear how the Internal Privacy Management solution is integrated into a customer's website or app.
- Iubenda has 26 repositories on github. Some of these, such as `iubenda-cookie-class`, `cookie-law-solution-codesnippets` and `libraries` are obviously associated with iubenda's services.
- The first two are described as a "PHP class for the cookie law solution" and "[c]ode snippets regarding the cookie law solution" respectively.
- No description is provided for "libraries" but the filenames `android/com/iubenda/mobile-sdk` and `ios/IubendaMobileSDK` suggest that these are the software development kits referred to in iubenda's [CS for mobile Developer's Guide](#) (archived Mar '22).

POTENTIAL LEGAL IMPACT

- The Act is treated as a single instrument, independent of other legal provisions that could in practice have a bearing on its [legal interpretation](#) or [legal effects](#), particularly over time.
- As the authors acknowledge, the “complicating influence of case law” is not represented, meaning judicial interpretations are not reflected in the coded rules.
- The system requires input from the end-user regarding “vague concepts”. The meaning of concepts can only be authoritatively decided by the courts or relevant tribunals. Outputs based on end-user interpretations might not reflect those authoritative interpretations, which could have an impact on any [legal effects](#) that result from the output.
- Despite the authors’ acknowledgement of the system’s limitations, there may be a risk that this kind of approach is used to formalise areas of law that are necessarily too complex or ambiguous for the kind of [deductive reasoning](#) the system is capable of.

POTENTIAL LEGAL IMPACT

- It is difficult to assess the performance of search systems. Lawyers may not appreciate that the results returned will vary according to the design of the system. ML-based models calculate relevance based on statistical correlation rather than legal relevance, which has implications for the quality of the results.
- If a single provider's legal search platform becomes the de facto standard within a [jurisdiction](#), any design decisions they have made may have a disproportionate impact on legal practice within that jurisdiction.
- In legal search systems, the design choices, expert annotations, and any errors in the sources, collection, or processing of data will have an impact at scale.
- Litigation analytics systems may encourage lawyers to base their litigation strategy on factors other than the legal merits of the case.

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- Mapping, comparing, navigating and assessing
- The political economy of legal technologies
- The acquis of legal informatics
- CRCL conviviality: accessing effect on legal effect

The political economy of legal technologies

- What is driving the market of this type of 'legal services'?
 - Efficiency: cheaper, faster
 - Solving law and the universe
 - Extracting value to feed business models
- Law is meant to **sustain** checks and balances, *not resolve them*
 - Montesquieu: the complexity of law offers legal protection
 - Delay and hesitation, suspension of judgment and legal protection (Diver, Latour)
 - But, law can be instrumentalised (Pistor, Johns, Cohen)

The political economy of legal technologies

- Those developing 'legal technologies' should foresee their affordances
 - Upfront resolving of interpretation issues reduces:
 - law's adaptiveness
 - legal contestability
 - prioritises order over protection
- Law in a constitutional democracy
 - creates order *in a way that*
 - offers legal protection: countervailing powers
 - attribution of legal powers is both constitutive and limitative of those powers

The political economy of legal technologies

- Law is about legal effect:
 - Which is a performative effect
 - Not caused (perlocutionary effect)
 - Not logically deduced (all is logic, but logic is not all)
- Even if the justification of any decision takes the form of a syllogism
 - The choice of the major is not a matter of logic
 - The **interpretation of the major is a speech act**, in light of facts of the case (minor)
 - The **interpretation of the facts of the case is a speech act**, in light of the applicable legal norm (major)

What's next?

- Why legal 'technologies'?
- Why 'typologising'?
- Mapping, comparing, navigating and assessing
- The political economy of legal technologies
- The **acquis of legal informatics**
- CRCL conviviality: effect on legal effect



JURIX

The Foundation for Legal Knowledge Based Systems

Conferences

Jurix organises yearly conferences on the topic of Legal Knowledge and Information Systems, the first one in 1988. The proceedings of the conferences are published in the Frontiers of Artificial Intelligence and Applications series of IOS Press.

The Jurix conference attracts a wide variety of participants, coming from government, academia and business. It is accompanied by workshops on topics ranging from eGovernment, legal ontologies, legal XML, alternative dispute resolution (ADR), argumentation, deontic logics, etc.

[Link to Jurix conferences](#)

Subscribe to **JURIX mailing list**

Jurix 2022 – Saarbrücken
Jurix 2021 – Vilnius (hybrid)
Jurix 2020 – Brno/Prague (online)
Jurix 2019 – Madrid
Jurix 2018 – Groningen
Jurix 2017 – Luxembourg
Jurix 2016 – Nice
Jurix 2015 – Braga
Jurix 2014 – Kraków

A history of AI and Law in 50 papers: 25 years of the international conference on AI and Law

**Trevor Bench-Capon • Michał Araszkiewicz • Kevin Ashley •
Katie Atkinson • Floris Bex • Filipe Borges • Daniele Bourcier •
Paul Bourgine • Jack G. Conrad • Enrico Francesconi •
Thomas F. Gordon • Guido Governatori • Jochen L. Leidner •
David D. Lewis • Ronald P. Loui • L. Thorne McCarty •
Henry Prakken • Frank Schilder • Erich Schweighofer •
Paul Thompson • Alex Tyrrell • Bart Verheij • Douglas N. Walton •
Adam Z. Wyner**

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Thirty years of *Artificial Intelligence and Law*: Editor's Introduction

Trevor Bench-Capon¹ 

Accepted: 18 July 2022 / Published online: 8 August 2022
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Abstract

The first issue of *Artificial Intelligence and Law* journal was published in 1992. This special issue marks the 30th anniversary of the journal by reviewing the progress of the field through thirty commentaries on landmark papers and groups of papers from that journal.

ICAIL

The acquis of legal informatics

■ Logic

- Logic is about relationships, not content, syntax not semantics
- Doesn't syntax define content in the final instance?
 - No, it co-defines content as it refers to snippets of the real world
 - The real world consists of both brute and institutional facts

The acquis of legal informatics

- What types of logic are at stake here
 - **Propositional:** ~~all men are mortal, Socrates was mortal, Socrates was a man~~
 - The common fallacy: most a are b, not b, so not a (double nonsense)
 - **Predicate:** mathematical logic, introducing quantifiers (variables)
 - The issue of proxies, quantification requires qualification
 - **Defeasible:** non-monotonic logic, foundational uncertainty
 - Double negations and the burden of proof
 - **Predatory:** sealioning, stealmanning and strawmanning
 - Imposing logic where other matters count

The **acquis** of legal informatics

Isomorphism

- Efficient operation of public administration
- Allocation of burden of proof
- The expression of a legal norm *IS NOT* the norm (but a proxy)
 - The norm is relational and embedded in an embodied real world practice
 - Its expression, however, has the affordances of its technological articulation
 - Natural language, written language, print and computer code have very different affordances with different real life consequences

The acquis of legal informatics

■ Case based reasoning

- Inferring rules (ratio decidendi)
- Applying them to a similar case (analogical reasoning: what case is similar?)

■ Practical wisdom is not based on formal models

- The jump from facts to norm and vice versa is an action not a description
- Speech act theory of law is not the same as an institutional theory of law

The **acquis** of legal informatics

- Application of legal norms requires **knowledge of the world**
 - Interpretation of real world events/states of affairs/actions is key
 - The meaning of the norm is decided when
 - The norm is interpreted in light of the ‘facts’
 - The facts are interpreted in light of the norm
 - Modelling the world can only offer a proxy
 - No, VLOLMs will not solve that problem
 - ‘the internet’ is not the world, though it contains many different kinds of traces of the world



Law and Philosophy Library

Informatics and the Foundations of Legal Reasoning

Edited by
Zenon Bankowski, Ian White and Ulrike Hahn

Springer-Science+Business Media, B.V.

The acquis of legal informatics

- “nothing as practical as good theory”

The **acquis** of legal informatics

- “To determine the extent to which the **law is amenable to formal modelling**, and the extent to which the **formal models are amenable to computation**”
- **Confronting modern positive law’s ‘mode of existence’ with the ‘legal ontologies’** and the primacy of syntax that is key to computational systems

The acquis of legal informatics

- Bell: formalisation implies interpretation
- McCormick: explicit and implicit defeasibility
- Sartor: proving or not disproving that a legal condition applies (incomplete information, non-monotonic reasoning); monological reasoning and dialectical argumentation
- Hilgendorf: logic and coherence/consistency; the force of an argument

The acquis of legal informatics

- Bankowski: reasoning by analogy, the identification of sameness (**creative leap**, domesticated by local tradition and discourse)
- Samuel: "As the knowledge relevant to the establishment of these patterns is outside the rule itself, rules are only 'an imperfect means of storing legal knowledge'."
- Pipe: facts are defined by legal labels, the *labelling is a practice* not a logical subsumption (the latter is the ex post justification)

The acquis of legal informatics

■ Rules

- Defeasibility and non-monotonic logic
- Epistemology of legal doctrine (incompleteness of any particular legal rule)
- Epistemology of adjudication (burden of proof as to the defeasibility of a condition)
- Legal ontology (constitutive convention underlying institutional facts)
- Relational and dynamic nature of the legal ontology (mode of existence of law)

The acquis of legal informatics

- Formalising defeasibility
 - Role of (rebuttable or non-rebuttable) presumptions
- The perfect conditional norm (not realizable)
 - “the practical question would be whether the amount of human labour saved by the use of such a system would be greater than the amount of human labour needed to construct it”
 - “the law cannot be thought of as composed of discrete normative atoms”

The acquis of legal informatics

- Decision and change
 - “law is an artificial system continually in the course of construction”
 - Decisionary nature of legal reasoning

- Ontology and patterns
 - Wittgenstein
 - Different patterns can be detected but not any pattern
 - Any pattern may be relevant but not every pattern

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- **Cross-disciplinary Research** in Computational ‘Law’

- Journal CRCL (Circle) Diamond OA
- Conference CRCL22, preparing for CRCL23
 - *Main text* if accepted after double blind peer review
 - *Reply* by someone from the ‘other’ discipline
 - *Response* by the author



BROWSE

Categories

[Computer science](#)[Legal theory](#)[Philosophy](#)

CURRENT ISSUE

RTOM 1.0

RS 2.0

RS 1.0

USAGE STATISTICS INFORMATION

We log anonymous usage statistics

About the Journal

The *Journal of Cross-disciplinary Research in Computational Law (CRCL)* invites excellence in law, computer science and other relevant disciplines with a focus on two types of 'legal technologies': (1) **data-driven** (e.g. predictive analytics, 'intelligent' search) and (2) **code-driven** (e.g. smart contracts, algorithmic decision-making (ADM), legal expert systems), and (3) their hybrids (e.g. **code-driven decision-making based on data-driven research**).

CRCL22 conference programme

CROSS-DISCIPLINARY RESEARCH IN
COMPUTATIONAL LAW

COMPUTATIONAL 'LAW' ON EDGE

CONFERENCE PROGRAMME

U-Residence, Vrije Universiteit Brussel, Boulevard Général Jacques 271, Brussels 1050
and online

All times are CET

Recordings are embedded in the programme below.

 [Map & directions](#)

[Thursday 3 Nov](#) ↓

[Friday 4 Nov](#) ↓

 [Conference home](#)

Thursday 3 November 2022

8.30 – 9.00 **Registration**

9.00 – 9.05 **Welcome to the Edge**

9.05 – 10.00

KEYNOTE

Mireille Hildebrandt: Computational 'law' on edge

► [Speaker bio](#)



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Coffee (30 mins)

CRCCL Conviviality: effect on legal effect

perlocutionary effects on law's *performative* effect

CRCCL Conviviality: effect on legal effect

- Two core issues may affect legal effect:
 - Predatory extraction of added value (impact of global political economy)
 - Positivist understanding of law in terms of logic and/or causality
 - Illusions of *immateriality of the law* (logic, mathematical purity)
 - Thinking in terms of *perlocutionary effect* (causality, influencing, nudge policy)

CRCCL Conviviality: effect on legal effect

- Legal protection depends on legal effect:
 - i.e. the *performative effect* of written and unwritten speech acts
 - (‘doing things with words’, constitutive effect)
 - Embedded in a system of *institutional checks and balances*
 - Deeplinked with the *monopoly of violence*

CRCCL Conviviality: effect on legal effect

- We need **legal expertise**, trained in positive law
 - Case law, statutory law, constitutional law, doctrine
 - Fundamental principles and custom: force of unwritten law

CRCCL Conviviality: effect on legal effect

- We need **computer science expertise**, ML and programming
 - Internal critiques, awareness of limits of computation

CRCCL Conviviality: effect on legal effect

- We need expertise in **political science, legal theory, legal philosophy, political economy**
 - But not based on a positivist POV, rational choice or new behaviourism

WHEN YOU HEAR THIS:



Both code- and
Data-driven 'law'
Will always and necessarily
Be out of date, lagging behind
Real world developments

We need to savour the
Adaptiveness of natural language
In law



The adaptive nature of text-driven law

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 PDF

Keywords: technology-driven normativity, text-driven law, ambiguity, open texture, legal certainty, adaptiveness of positive law

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ABSTRACT

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This article introduces the concept of ‘technology-driven normativities’, marking the difference between norms, at the generic level, as legitimate expectations that coordinate human interaction, and subsets of norms at specific levels, such

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