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EDITORIAL

Guest Editorial: Tech and the transformation of legal imagination

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This special section on 'Tech and the Transformation of Legal Imagination' is an attempt at creatively exploring the law of the tech era. We believe that emerging lines of continuity and discontinuity in the current moment of tech-induced legal transformation are insufficiently investigated. Together with the authors of this special section, we therefore set out in an effort to recover and reimagine the histories of the law/tech nexus, to critically examine the imaginaries operative in the ongoing transformation but also to imagine the future of law. In so doing, we cover two different constellations: one in which the law is imagined, and another in which the law imagines. As this structure is one that operates in other disciplines, too—computer science is imagined as much as it imagines—we believe it will be a useful entry point for readers beyond the discipline of law to explore the relation between tech, law and imagination. In all, we make a move from the general theme of tech, legal transformation and imagination to the more specific one of tech and the transformation of legal imagination.

Today, a growing and multidimensional body of research is taking stock of the impact of digitalisation, datafication and AI on the law (law is imagined). This literature notes the spatial and temporal displacement of legally and politically defined concepts and categories such as borders and border crossing (Molnar and Gill 2018) as well as war and enemy targets (Mignot-Mahdavi 2023; Parsa forthcoming 2023–4). It also looks at the unprecedented regulatory discretion of platform providers to define the substantial scope of human rights (Dias Oliva 2020) and to introduce new areas of labour precarity and exacerbate existing ones (Lewchuk 2018). Another area of research investigates how digitalization and automation of public administration affects street level bureaucrats (Raso 2017; Young et al. 2019). The current uptake of so-called legal tech has also raised concerns regarding the future of the legal profession (Caserta and Madsen 2019) as well as the organizational structure of the legal firm (Caserta 2020). The reliance of data-driven technologies upon statistical (dis)aggregation and correlation has led to a renewed examination of risk as a mode of governance where algorithmic association maintains, exacerbates and reconfigures long-standing legally sustained or produced inequalities (Van Den Meerssche 2022). As the workings of tech are legally protected as trade secrets, its introduction to legal decision-making threatens transparency and contestability of legal decisions while shifting traditional legal reasoning and argumentation towards the statistical logic of approximation and risk analysis (Hildebrandt 2018; Amoore 2020). This literature has also addressed how digital conflict resolution enabled a large-scale privatization of legal enforcement mechanisms, changing the ground for the legitimation of law (Koulu 2019). In all, there is nothing strange or unusual about tech-induced legal change over time. However, as is evident even from the short and selective overview above, what is being transformed by tech at this moment in history is not just a range of substantive legal issues but also the principles, concepts and tools common to the genre of law as well as its background assumptions.

In the exploration of what 'legal imagination' might be—let alone what impact technology may have on it—the function of images and imaginaries for legal thought turn out to be important. Imaginaries can be defined as collectively held visions of a community of purpose. In an often-cited passage, Jasanoff and Kim (2015, p. 5) defines sociotechnical imaginaries as 'collectively held, institutionally stabilized, and publicly performed visions of desirable futures,… attainable through, and supportive of, advances in science and technology.' Imaginaries in this sense are those political or strategic horizons against which any action, thought, or interpretation is shaped. This understanding of (legal) imagination is, for instance, present in Surabhi Ranganathan's (2019) account of how the ocean floor has come into

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the national and international legislative regime through an underlying imaginary characterized as extractivism. Legal imagination in this context engenders the active examination of how choices that a lawyer makes would eventually stand in relation to a particular strategic horizon. In this context, it is also important to bear in mind that technology has a formative impact on the socio-political visions which guide legal imagination.

Del Mar (2017, p. 174) understands legal imagination as 'an active and conscious mental process, exercised in a way that is independent of immediate sensory stimulus, and which involves four different (though combinable) abilities: supposing, relating, image-making and/or perspective-taking.' Koskenniemi (2021) takes imagination to go beyond the mental domain, attaining a material dimension. In his view, legal imagination is a mundane task of picking up what already exists as legal resources and reconfiguring them in new ways in order to achieve particular desired outcomes. Legal imagination then is limited and bound to what lies around as legal vocabulary and idiom and what correlation appears plausible to the lawyer in a given context. In this view, automation in finding, cross scanning and correlating massive amounts of legal data with unprecedented acceleration might appear as the automation, or annihilation, of legal imagination itself. Gerry Simpson (2019) takes imagination to be a quality that goes beyond the traditional tasks of lawyers, which always already involve the identification of valid law through description and interpretation. For Simpson (p. 413) an understanding of legal imagination that overtly relies on what has already been done, or constantly reverts to experience, 'over-embeds legal thought'. In his view, imagination is more of a literary practice of bringing into the world something that did not already exist. As such Simpson's understanding of imagination differs from both Koskenniemi and Jasanoff in that imagination is neither limited by past precedent nor is it pragmatically linked to a political agenda. It is a critical, momentarily liberating and experimental act. As he puts it, imagination: 'can be thought of not as a set of programmatic ideals towards a better world or the creation of already existing utopias against which current realities must inevitably fall short, but as an adoption of "the exterior glance" combined with a relentless process of resistance and questioning and estrangement—a literary project as much as a political one—of this pre-constituted experience and the institutional and political arrangements that concretize it' (p. 421).

How did this special section come about? In April 2022, we organized a two-day authors' workshop in Kåseberga, a fishing village at the southern tip of Sweden. This workshop resulted in nine articles (two of which were written by the four authors of this introduction). Five of them are published in the current special section of *AI & Society,* while another four are in a special Section of *Law & Critique* (3/2023).

While running in different journals, these two sets of articles remain linked by their initial objective (foregrounding legal imagination when confronting challenges posed by new technologies in their legal fields), by the raw energy of collegiate exchanges across the workshop group and by this joint introduction.

In their contribution entitled 'On Phantom Publics, Clusters and Collectives—Be(com)ing Subject in Algorithmic Times', Marie Petersmann and Dimitri Van Den Meerssche trace how governance by data splinters the human subject into a 'cluster' of pulsing patterns distilled from disaggregated data. They consider what this entails and what might be an appropriate countermove. In a three-step movement, Petersmann and Van Den Meersche first recapitulate how critical theory has conceptualized practices of subjectivation, to, second, use this conceptualization for an exploration of algorithmic governance and the crisis for the rule of law such governance entails. While they diagnose how a governance by data threatens the liberal subject, their project is not interested in its resurrection. In their third step, Petersmann and Van Den Meersche turn the indeterminacies of algorithmic calculation against algorithmic governance itself and show how its forks, thresholds, weights and apertures may provide openings toward different expressions of sociality and being-in-common. In the end, their article traces the contours of a 'legal imagination' that stays with the fugitive, opaque and experimental.

Quantum technology is perhaps the most evocative and quixotic sample of tech engendering reimaginations of the law. In 'Digital Sovereignty, Digital Infrastructures and Quantum Horizons', Geoff Gordon asks which imaginations of legal futures are expressed in government investments into digital sovereignty and digital infrastructures. Using a method he describes as situated observation, Gordon looks into three subfields of quantum technology (quantum computing, quantum sensing and quantum communications), showing that they plausibly support reproduction as well as disruption. While all these technologies are far from a state of practical application, and therefore liminal, he sees them already driving very real policy and material investments today. Pointing to quantum investments by the security state, Gordon concludes that the changes implied in these investments 'promise transformation but appear nonetheless to reproduce current distributions of power and resources'. While the quantum imaginary may lead to the demise of the classical legal subject, that does not imply that emancipatory transformation is on the horizon.

Two of the contributions to this special section deal with the imaginative dimension of safety and accountability regulation for AI-enhanced systems. Automated Decision-Making (ADM) and Maritime Autonomous Surface Ships (MASS) are the subjects of inquiry, and two different understandings of what legal imagination entails are enacted. In

'Safety by Simulation: Theorizing the Future of Robot Regulation', Mika Viljanen challenges the feasibility of the existing legal imaginaries of regulation of safety in the mobility robots, specifically of MASS. Viljanen approaches legal imagination as a practice that undoes the established spaces of politics and regulation. In a pedagogical elaboration, he unfolds why current legal frameworks will face problems beyond remedy in the regulation of safety in mobility robots. Ultimately, Viljanen argues, a simulation-based approach to safety might be the best fit, considering the complexity of such advanced machines and their environments of operation. Yet opting for this entails 'significant transformations in regulatory knowledge production patterns, temporalities, and types of knowledge on artifacts', Viljanen concludes.

Hanne Hirvonen deals with legal imagination as an act of reconfiguring the existing idioms of legality for the purpose of solving novel problems. In 'Just Accountability Structures—A Way to Promote the Safe Use of Automated Decision-making in the Public Sector', Hirvonen juxtaposes the traditional sanction-based methods of legal accountability, exemplified by the Finnish ADM legislation draft and the EU AI Act proposal, with a new imagination of accountability inspired by safety science and just culture—one that embraces accountability as practice of learning from mistakes and near misses and stress on sharing of knowledge and harm compensation.

The movement of data across borders is a constitutive issue for digital technology, business as much as statecraft. In 'Legal Imagination and the U.S. Project of Institutionalizing the Free Flow of Data', Leila Brännström, Markus Gunneflo, Gregor Noll and Amin Parsa ask how the flow of data is imagined in international lawmaking. Since the advent of the digital telecommunication industry in the 1960s, the US has sought to institutionalize the free movement of data across borders internationally, accepting only arguments on the right to privacy as a limit. As the authors show, it did so by a process of legal imagination characterized by bricolage—a process where known resources are tested in novel combinations, bridging the known with the unknown. Yet the U.S. is not the only bricoleur: states in the global south perform a counterimagination of data flows as subjected to data sovereignty. Two provisionally crafted baseline assumptions clash: that of trade without regulatory fetters, and that of full control by the territorial state. While the US model dominates, it has not really won the day, as the more recent reemergence of the global south's position in the Indian position and in OECD discourse evidences.

Another four articles written within this project are available in the eponymous twin to the current special section, published in *Law & Critique* (3/2023):

Vincent Goding and Kieran Tranter's 'The Robot and Human Futures: Visualizing Autonomy in Law and Science Fiction' shows how legal scholarship about digital automation takes place in a limiting human paradigm. The authors turn to science fiction to argue that legal scholarship about digital automation writes itself into the same tropes concerning human futures, embodiment and distinction and therefore encloses and limits itself.

In 'Digital Humanitarian Mapping and the Limits of Imagination in International Law', Fleur Johns shows that the contemporary transformation of map-making practices entails a shift from an analogue to a digital logic, which is indicative of transformations underway in how authoritative knowledge about the world is formed. In relation to legal scholarship, this transformation requires a reconsideration of analogue presumptions: critical agency is exercised by stepping outside shared positions and by "reimagining the world".

In 'International Law and Infrastructure: The Place of Communications Technology in the International Legal Imagination', Daniel Joyce draws attention to the longer and illuminating history behind the relationship between international law and infrastructure which can help us to understand both the problems and possibilities posed by technology's entanglement with contemporary forms of global governance. The article contributes a historical perspective and highlights infrastructure's ongoing connections to violence, exploitation and empire.

In 'Legal Tech, the Law Firm and the Imagination of the Right Legal Answer', Amin Parsa, Gregor Noll, Leila Brännström and Markus Gunneflo offer a more granular understanding of the impact of legal tech on the central role of lawyers at law firms in crafting an imagined 'right legal answer'. By turning to Duncan Kennedy's work on 'projective identification', we explore the effect of no-code systems—such as Bryter—on the role of lawyers at law firms in crafting an imagined 'right legal answer'.

Data availability Not applicable.

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