THE LAW'S NEW LANGUAGE?

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This Post is the fourth in a new Frontiers series that critically explores the connection between international law and emerging technology, featuring the writing of scholars from a variety of disciplines affiliated with the Institute for Global Law and Policy (IGLP) at Harvard Law School.

The relationship between law and language has always been one born of necessity. Language is often conceived as the vehicle in which legal norms could embed itself; the house but not the home. Consequently, language is important to the law, but only as a tool through which the law is realized. In confrontation with legal automation, technologies that harness algorithms to perform banal tasks translate "legalese" from common standards into code. Effectively, machines are interpreting the language of legal processes into its own understandable terms. This begs the question: how does the "code-ification" of legal language differ from existing legal practice? More importantly, does this change the inherent character of the law? This paper proceeds by first giving a technological background and continues by exploring how code may shape the law.

I. TECHNOLOGICAL BACKGROUND

I begin first with a drawing of the technological landscape. In *The Age of Surveillance Capitalism*, Shoshana Zuboff describes the "mandate of the prediction imperative,"[1] a pursuit

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[1] SHOSHANA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER, 399 (2019).

of certainty that regards complete and total information as ideal. Machine intelligence becomes the restoration of "humankind to the Garden of Eden."[2] The result: a utopia of certainty.

Equally, the model of "legal singularity" presents striking similarities.[3] Legal singularity associates the law as precise, predictable, and certain in its function.[4] Precision has often been described as an essential component of legal language. Nevertheless, new factual circumstances create room for interpretation. Consequently, legal indeterminacy is perceived as a threat, a tell that the law's current state is one of incompleteness.[5]

The rise of artificial intelligence ("AI") suggests that legal singularity could be achievable. Anthony Casey and Anthony Niblett argue that existing legal forms will become irrelevant as machines enable the development of a new type of law: the micro-directive. The micro-directive is perceivably a new linguistic form, offering "clear instruction to a citizen on how to comply with the law."[6] In this futuristic construct, lawmakers would only be required to set general policy objectives. Machines would then examine its application in all possible contexts, creating a depository of legal rules that best achieve this objective. The legal rules generated would be converted into micro-directives that, subsequently, regulate how actors should comply with the law.

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[2] *Id.* at 401.

[3] Benjamin Alarie, *The Path of the Law: Towards Legal Singularity*, 66 U. TORONTO L.J. 443, 445 (2016).

[4] *See* MICHAEL FREEMAN, LLOYD'S INTRODUCTION TO JURISPRUDENCE (9th ed. 2014) (discussing stare decisis as the "life-blood of legal systems," requiring precision in addition to stability and certainty).

[5] *See* Katharina Pistor and Chenggang Xu, *Incomplete Law*, 35 N.Y.U. J. INT'L L. & POL. 931, 932 (2003).

[6] Anthony J. Casey and Anthony Niblett, *The Death of Rules and Standards*, 92 IND. L.J. 1401 (2017).

Imagining the legal order as a system of micro-directives, the law finds itself drawn to a linguistic structuralist framework, carrying forth the jurisprudential work of Hans Kelsen and the pure "science of law."[7] Just as a norm expresses not what is, but what *ought* to be, the micro-directive draws attention to the semiotics of legal argument. Like Kelsen's norms, the micro-directive rests on the principle of effectiveness. The legal order relies on the assumption of being efficacious, such that its citizens conduct themselves in pure conformity with it.[8] Seated within the technological authority of AI,[9] the micro-directive distorts the realities of legal reasoning by removing value judgments from the adjudication process. The presumption that machines are able to generate neutral sets of information, then translate such information into perfectly comprehensible instruction, is evidently misinformed. It stands on the premise that translation operates without interpretation. More importantly, it strategically excludes the actors involved in the translation; inadvertently, conferring the rule of law to code. The process of transforming a general standard to a micro-directive is, therefore, a process of subverting politics in its linguistic casing.

Language games are employed to fix meaning, remove connotation, and delineate value. The use of standards complements the language games played: having the appearance of removing subjectivity, opting for "mechanical solidarity,"[10] and capturing "reality unmediated by human intervention."[11] Arguably, code satisfies the conditions of standards *and* with increased precision. Nevertheless, we return to the problem

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[7] HANS KELSEN, PURE THEORY OF LAW 1 (1967).

[8] *See* HANS KELSEN, WHAT IS JUSTICE? 290 (1971).

[9] Algorithms are seen as providing a "convenient" source of authority, and humans thus trust tasks to be controlled by technology and delegate responsibility. *See* HANNAH FRY, HELLO WORLD: BEING HUMAN IN THE AGE OF ALGORITHMS 16 (2018).

[10] SERGIO SISMONDO, AN INTRODUCTION TO SCIENCE AND TECHNOLOGY STUDIES 138 (2d ed. 2010).

[11] Sheila Jasanoff, *Science and the Statistical Victim: Modernizing Knowledge in Breast Implant Litigation,* 32 SOC. STUD. SCI. 37, 51 (2002).

of translation. The law hinges on complicated sociopolitical relationships; metaphors that require latent understanding of temporal societal constructs.[12] Consequently, as articulated by legal scholarship,[13] AI could work complementary to, rather than substitutive of, legal systems.

II. HOW CODE COULD SHAPE THE LAW

So, how then could code shape the law? The most obvious example is speed regulation. Traffic lights "communicate the content of a law to drivers at little cost and with great effect."[14] The traffic light is regarded as translating legal complexity to a simple command. The content of the law is produced by code, effectively reimagined as a comprehensive list of instructions communicated to the citizens. Just as green means go, and red means stop, these simple commands are passively understood as progress towards increased efficiency and utility in the law.[15] It extends beyond law as fact; establishing, instead, that code is an indisputable truth. The purpose of the micro-directive then is a purification of language, a shift away from discourse. The boundaries of law governed by language are removed. Words not only would lose their meaning; they would have no meaning. Code becomes the sole bearer of value and semiotic vessel in which the law embeds itself.

The underlying assumption is that law and its language exist in a state of universality and is logically reducible. Most fascinating, though, is the belief that description is distinct from interpretation; that in describing the law, the language is seen as quantitative and objectifiable. But, is descriptive

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[12] *See* Neil M. Richards and William D. Smart, *How Should the Law Think About Robots?*, *in* RYAN CALO ET AL., ROBOT LAW 16–18 (2016).

[13] *See, e.g.*, Frank Pasquale, *A Rule of Persons, Not Machines: The Limits of Legal Automation*, 87 GEO. WASH. L. REV. 1, 6 (2019); *see also* Alarie, *supra* note 3.

[14] Casey and Niblett, *supra* note 6, at 1416; *see also* SHEILA JASANOFF, THE ETHICS OF INVENTION: TECHNOLOGY AND THE HUMAN FUTURE (2016).

[15] This includes, for example, the interpretation of micro-directives as improving on inefficient and costly legal rules. *See* Casey and Niblett, *supra* note 6, at 1410–12.

formal language purely dissociative? Or, could we challenge the premise that linguistic form is in fact integral to the formation of legal knowledge?

Ferdinand de Saussure, the father of modern linguistics, viewed language as a system; an institution of the present, but also a product of the past.[16] Saussure spoke of linguistic evolution—or rather, changes in interpretation. Linguistic changes are signaled by the emergence of analogical forms.[17] Analogy replaces the "old, irregular formations by new ones of greater regularity."[18] Though not itself a process of change, analogy is a product of it.

Ludwig Wittgenstein regarded language as a form of life,[19] and linguistic expression as constructive of its being. Conceivably, language could be no more than a list of orders and classifications. In abiding by the rules of association—or, to play the game—is to accept the inherent authority of its practice. Meaning is found in the performance of the word, and not in the understanding of it. Geoffrey Samuel states that the "true meaning of a legal text is hidden within the language employed."[20] That is, should language be employed in a new space, the meaning will naturally differ. Relative to AI, how could a technological artifact perform as a legal language?

Computable contracts are a helpful start. Harry Surden argues that contracts may be represented as computer data; that ordinary language is merely assumed as the dominant

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[16] *See* FERDINAND DE SAUSSURE, COURSE IN GENERAL LINGUISTICS 64–65 (Bloomsbury Revelations ed. 2013).

[17] An analogical form, as defined by Saussure, is a form made in the image of one or more other forms according to a fixed rule. *See id.* at 190, 201.

[18] *Id.* at 202.

[19] *See* LUDWIG WITTGENSTEIN, PHILOSOPHICAL INVESTIGATIONS 11 (2d ed. 1953).

[20] Geoffrey Samuel, *Is Legal Reasoning Like Medical Reasoning?*, 35 LEGAL STUD. 323, 334 (2015).

form of legal expression.[21] The "contract as data" approach, as he articulates, expresses contractual obligations as structured and precisely defined information that is "machine-readable."[22] Contract terms are made "understandable" through a process of translation: from descriptive language to consonant computer instructions. Conditions of agreements are not explained but listed as structured data records. Equally, these records are given semantic content to substantiate meaning to its terms.[23] Surden contends that contracting parties are able to delineate intentions within the "strictures of computer constraints."[24] Parties encode contract terms in a pre-defined fashion,[25] allowing a computer to reliably extract information for later processing. As a result, conformance testing in contracts could be rendered automatic. There remains, however, an existing gap. Despite the capacity to express contracts in an alternative computable form, there is no means for interpretation. Rather, the interpretation of contractual obligations is perceived as irrelevant. Surden concedes importantly that the use and purpose of data-oriented contracts is communication, and not interpretation nor understanding.

Nevertheless, what Surden reveals is an ancestry of code as a legal language. Surden's discussion on the translatability of contracts, from descriptive language to structured data, is indicative of a broader history on the "code-ification" of law. Surden attempts to demonstrate that a seamless translation

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[21] *See* Harry Surden, *Computable Contracts,* 46 U.C. DAVIS L. REV. 629, 632–33 (2012).

[22] *Id.* at 647.

[23] For example, inputs of key contract phrases such as "the parties hereby agree" are heuristic patterns that a computer is able to identify. *See id.* at 641, 644.

[24] Contracts expressed as "this contract giving the right, but not the obligation to purchase, shall no longer be valid after the 18th of January in the year 2015" would have the data-oriented approach: <Option_Expiration_Date:01/18/2015>. *See id.* at 647–49.

[25] Surden includes other examples of contract terms, such as price and quantity that are defined ahead of time (i.e. <Exercise_Price: $400>). *See id*.

exists between law and code, and particularly, one that reduces transaction costs by eliminating uncertainty and communicating precisely. A deeper epistemological struggle surfaces: is the aim of the law merely to signpost?

Duncan Kennedy considered the import of structural linguistics in law. He conceived argument as systematically formulaic, "a product of the logic of operations."[26] That is, legal argument can be broken into components and manipulated through operations. Operations diagnose and assume the circumstances, or relationships, in which the component is to be "deployed."[27] The conundrum is whether the process of reducing legal argument to a system of operations sufficiently describes the function of the law. One thing is certain; as Kennedy writes, "language seems to be 'speaking the subject,' rather than the reverse."[28]

The reimagination of legal language as code, or even law as an inventory of structured data records, tests the aforementioned conundrum. Interestingly, Jacques Derrida questioned natural language and the medium of writing as the accepted form of communication. Derrida considers how writing is perceived as the original form of technology; that "[t]he history of writing will conform to a law of mechanical economy."[29] Independent of structure or meaning, writing was a means to conserve time and space by way of "convenient abbreviation."[30] Is legal writing then not merely a method of notation? Would this suggest that the use of code advances the notion of convenience, communicating in a manner that further conserves time and space?

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[26] Duncan Kennedy, *A Semiotics of Legal Argument,* 3 COLLECTED COURSES OF THE ACADEMY OF EUROPEAN LAW 309, 343 (1994).

[27] Kennedy describes relating argument-bites (components) to one another by operations to confront legal problems. *See id*. at 351.

[28] *Id.* at 350.

[29] JACQUES DERRIDA, LIMITED INC. 4 (1988).

[30] *Id*.

Pairing speech-act theory with the mathematical theory of information, Mireille Hildebrandt investigates the performativity of the law and legal judgments when applied to computing systems. In her analytical synthesis of these theories, she dwells on meaning. "Meaning," she states, "…depends on the curious entanglement of self-reflection, rational discourse and emotional awareness that hinges on the opacity of our dynamic and large inaccessible unconscious. Data, code…do not attribute meaning."[31]

Consequently, the inability of computing systems to process meaning raises challenges for legal practitioners and scholars. Hildebrandt suggests that the shift to computation would necessitate a shift from reason to statistics.[32] Learning to "speak the language" of statistics would become important in the reasoning of biases inherent in AI-driven legal technologies.[33] Hildebrandt addresses precisely the anxiety and evolutionary pressures imposed by the onset of AI in law. These tensions indicate a fundamentally linguistic shift that bears the epistemic flavors of both legal formalism and realism.

Reflecting back to Zuboff, the notion of formal indifference strikes a chord. Zuboff describes a "form of observation without witness," interpreting the intangible as measurable.[34] A dichotomous process occurs where impenetrable complexity is met with simplicity: a "robotized veil of abstraction."[35] Connecting then initial observations towards the "code-ification" of law, the migration from descriptive language allows the legal actor to be "removed from responsibility for the worldly

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[31] Mireille Hildebrandt, *Law* as *Computation in the Era of Artificial Intelligence: Speaking Law to the Power of Statistics*, 68 U. TORONTO L.J. 12, 26 (Supp. 1 2019).
[32] *See id.* at 28.
[33] *Id.* at 30.
[34] ZUBOFF, *supra* note 1, at 377.
[35] Zuboff describes a form of power derived from a way of knowing that dehumanizes qualitative means of evaluation and produces instead "equivalence without equality." She sees "objectification [as] the moral milieu in which our lives unfold." *See id.*

consequences of his actions."[36] Surden's machine-readable contracts, as an alternative form of legal writing, is already challenging the use of descriptive language as *the* legal language.

The recent interdisciplinary paper, "Coin-Operated Capitalism,"[37] teases this premise by investigating the translation of contracts to code. While the study is focused on its failures to fully reflect contractual promises, the investigation further demonstrates that an analogical form of the legal language not only has emerged but is thriving. Its existence and presence are indicative of a desire for legal singularity and a turn towards the science of law. The legal language then is at the cusp of evolution; one where statistics and code would find its place.

III. Conclusion

Saussure conceived of linguistic evolution through analogy; specifically, the appearance of analogous forms as a signal of change. Code as a legal language would in theory resolve legal indeterminacy, producing incontestable truths as algorithms and code provide answers without questions. However, algorithmic governmentality runs the risk of increasing opacity by falsely interpreting abstraction as verity. Moreover, it exposes a technocratic shift that necessarily warrants further analysis of its potential implications. Nonetheless, its emergence is perhaps revealing of a larger battlefield, that the path of law is being shaped by its linguistic trajectory. Should linguistic signs leave epistemic traces, artificial legal intelligence becomes ripe for realizing the legal dream.

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[36] Pierre Schlag, *The Aesthetics of American Law*, 115 Harv. L. Rev. 1047, 1060 (2002).
[37] Shaanan Cohney et al., *Coin-Operated Capitalism*, 119 Colum. L. Rev. 591 (2019).