

Legal risk and sound management judgement: can artificial intelligence make us better lawyers?

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Stuart Weinstein and Jelena Schidzig discuss models of legal risk management and how, without sacrificing qualitative methods, the profession can embrace technology for more efficient analysis of legal risk.

A sound general counsel function in a complex organisation must constantly be scanning the horizon to keep abreast of changes in regulation and law impacting the business and its customers, across the different, specific geographical locations where the businesses and its customers operate, its product lines and where they are distributed, its corporate structures and how they are managed and the impact of the regulatory footprint engendered by these activities and operations.¹ As such, it is essential that businesses employ technology to assist them in developing appropriate systems and structures to manage legal risk in all operations and strategic planning.

Addressing legal risk in a company or an organisation is no easy task, however. While it is true that ownership of the legal risk function typically resides in a legal or compliance department, it is a function that cuts across all lines often with different managers and teams having 'dotted line' responsibility for aspects of legal and/or compliance matters. Moreover, to top this off, it is the board of directors itself that has overall enterprise-wide responsibility for the same. For instance, when a fine is imposed by a regulator on a company for a compliance failure, it will more likely be the result of behavioural failures in an operating department rather than malfeasance in the legal department.

Geoffrey Miller² at NYU suggests that attorneys are, in fact, professional risk managers even if they do not think of themselves as such, suggesting they learn to work with enterprise risk management, analysis of inherent risk, controls and mitigation measures, residual risk and the use of quantitative tools such as value at risk. From Enron to Lehman Brothers and SOX 2002 to Dodd Frank in 2010, US regulation of securities law and corporate governance has moved from a period of hands-off retreat and consolidation pre-Enron to a compliance state model where companies face strict liability for risk failures and challenges from law enforcement, private litigators,

whistleblowers and gatekeepers and an even greater sanction in the form of reputation risk (eg, BP – Deepwater Horizon). The confluence of reputation risk and compliance can be found in the 21 July 2017 announcement that the US Department of the Treasury's Office of Foreign Assets Control assessed a \$2 million civil monetary penalty against ExxonMobil Corporation including some of its US subsidiaries for violations of Section 589.201 of the Ukraine-Related Sanctions Regulations, 31 CFR Part 589 – a strict liability standard compliance violation.³ In its proper context, it has been reported that financial institutions have paid more than \$150 billion in fines in the United States relating to the credit crisis, passing a significant milestone a decade after it became clear that American subprime woes had become a global problem.⁴

Having said this, we should first identify what we mean by legal risk. UCL's Richard Moorhead and Steven Vaughan⁵ suggest that corporate understandings of legal risk should encompass both the legal consequences of business risk and business risks with legal origins (such as uncertain law or an unsatisfactory legal work product). Along these lines, they argue that such understandings would ordinarily reflect the organisation of the business and the ability to best influence key drivers of risk. One might say that it is not appropriate that legal and/or compliance impose a 'top down' model of legal risk management but rather work with other teams to have a 'seat at the table' to troubleshoot on approaches to legal risk within and outside the company. Both legal and compliance must have the capacity, motivation and resources to be an important source of advice, support and monitoring of risks with legal origins or consequences.

Lawyers generally take the view that the problem with using one of the several commercially available data-driven tools that quantify case-law research into 'hard maths' (eg, offering win/loss rates, judge ruling

histories, litigation trends over time) is that such legal analysis lacks a necessary qualitative element (eg, weighing different cases in an evaluative manner, such that they can be utilised in the context of a courtroom battle). A common refrain from lawyers is that they can never be replaced by computers because computers cannot 'paint a picture' for a jury to understand or draw appropriate inferences from different case outcomes to be able to predict future trends in judge-made law.

Richard Susskind, President of the Society for Computers and Law, has warned the legal profession that artificial intelligence will move forward at such a pace in the coming years that systems will be able to diagnose and respond to clients' legal problems.⁶ The legal profession over the next couple of years will transform itself from using 'gut instinct' or 'seat of the pants' thinking to advise on entity-threatening legal risk questions by employing technologies – systems, processes and solutions – that will change the way lawyers advise on matters. So how will lawyers move from being face-to-face advisers to becoming code-savvy problem solvers adept at using technology and artificial intelligence to keep them at the forefront of the businesses they advise? Best practice in the legal profession will evolve to incorporate legal operations at the heart of every major decision that legal advisers will make (whether they are in-house team members or external law firms). These decisions will not only involve legal matters but will also take into account financial management, knowledge management and IT, systems, tools and internal process improvement and internal consulting.⁷

In recent years, the development of risk management standards at a global level such as ISO 31000:2009,⁸ a brief and high-level set of principles and guidelines on how to implement risk management, have inspired the legal profession to look to tools and techniques from enterprise risk management to offer a framework and process for managing risk. Closely aligned with the compliance and risk management functions, ISO 31000 can increase the likelihood of achieving objectives, improve the identification of opportunities and threats and effectively allocate and use resources for risk treatment. The ISO 31000:2009 standards came out of the work in enterprise risk management that arose in the United States to take a risk-based approach to managing an enterprise, integrating concepts of internal control, Sarbanes–Oxley Act of 2002 (SOX) compliance and strategic planning to address the needs of various stakeholders who wanted assurance that the broad spectrum of risks facing complex organisations were addressed in a comprehensive and thought-out manner that is appropriately managed.⁹ At the time of writing, ISO is now working on developing appropriate international

standards for enterprise legal risk management,¹⁰ a further evolving standard for use in analysing specific legal risk-related matters.

There are a wide variety of computer implemented inventions that incorporate dashboards to collect, process and display data thereby allowing for identification of issues such as complaint resolution processes, corporate reporting, cross-business trending, litigation (either against a business or against other competitors in the area) or other sources of information regarding compliance issues.¹¹ They can be a useful tool in the process of managing data in order to raise issues or offer a benchmark to measure against in compliance management to ensure that compliance requirements and issues are being appropriately addressed. However, there are limitations to dashboard products in that while they alert and record potential risk exposure, they do not mitigate or remediate the risk factors they monitor.

Moreover, dashboard mechanisms suffer from an inherent confirmation bias in that they only monitor that which they are programmed to monitor. As such, they are ill-equipped to address the 'totally wicked problems' that characterise the behavioural problems that elude dashboard programme developers (eg, the Société Générale 2008 US \$7 billion trading loss).¹²

Human factors and existing technology can inhibit the ability of companies to manage their legal risk portfolio. The issue boils down to the ability of legal counsel and managers to look inside and behind the risk they face – trustworthiness and trustfulness come to the fore. Moreover, the technology is only as good as the people who programme it.¹³ In this regard, the divide between lawyers and those who write code for applications that lawyers rely upon to engage in legal risk analysis is not helpful. Neither the lawyers nor the engineers should inhabit separate spheres but they usually do. A collaborative and creative environment between the legal, mathematics and technology driven sciences will produce a much more useful tool than one that is developed by a 'top-down' hierarchical product development strategy or a static approach (eg, the lawyers commission a programming company to develop a product in accord with 'black and white' concrete parameters).

The oversimplification of risk parameters and their approximation by using a static approach to the 'system' problematic may leave estimated risk 'probability' without credible scientific evidence resulting in financial loss. Thus, there is the significant possibility that decision-making processes end up relying upon 'facts' based upon non-objective and non-dynamical valuation (predictability) of risks approach.¹⁴ In short, the applied static patterns do not allow for appropriate risk analysis at the operational and *portfolio specific* levels and fail to account for ongoing changes in the entity and operating environment.

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This sort of 'risk myopia' underestimates the synergies between legal risk and associated risk categories of an entity's organisational and administrative procedures. This may lead to a distortion not just among the associated risk categories but could be transformative on a causal basis inside the singular legal risk category itself.

Legal risk is not static by nature and logically other risk categories cannot be assumed and treated as static either. This undermines the 'horizon scanning' capacity of the compliance function of a risk management system to provide an offsetting 'minimalising' mechanism to assist in the making of necessary management actions in a timely manner so that reserves set by management are not exceeded.

The categorisation and valuation of legal risks by default ('the similar portfolio' – mythos)¹⁵ makes the assessment of legal risk management nigh impossible leaving us with an approximated overview rather than a precise management tool.

The current ISO engagement to develop appropriate international enterprise risk management standards must incorporate state-of-the-art approaches to assessing and weighting the dynamic nature of legal risks. This suggests that a departure from a linear approach is necessary in order to effectively enhance legal risk management functions by providing a real-time monitoring capacity.

An artificial intelligence system should not replace lawyer expertise but provide them with a powerful tool which can 'paint the picture' realistically and not just qualitatively in a linear manner.

The accuracy of assembled qualitative information can be dubious due to gaps such as a lack of manpower resources, insufficient data obtained and internal data collection shortcomings. This will result in the inability to precisely quantify and evaluate certain legal risks so as to accurately define the financial and commercial aspects of the same, let alone provide real-time monitoring of these risks on a 'going forward' basis.

To highlight the need for quantification of legal qualitative information, consider the following example:

We know that the existing legal risk standards that categorise event probabilities can be divided into four groups as 'low', 'medium', 'high' and 'very high' risk categories. We also know at the outset that we face a 'human factors' and biases problem, since those linguistic variables (low, medium etc.) with their respective ambiguities and inaccuracies do not present

the precise information needed to determine attributed values and criterion levels properly to estimate precise business risks. Moreover, the estimated probabilities are not based on complex and multidimensional structures existing between the datasets in dynamic entity and environmental settings.

What this example shows is that there is a need to apply precise information¹⁶ data into legal risk valuation that is essential to appropriately control the system. For instance, to provide the precise datasets needed, we would need to be able to quantify the qualitative information we would input.

The attributes of 'fuzzy logic'¹⁷ are based on natural language, that is a base of human communication and legal qualitative information. The precise information determined by using fuzzy logic would map the elements of a set A (eg, medium risk) into the interval values [0,1]. The fuzzy function $\mu_A(x) = A \rightarrow [0,1]$ represents the element x affiliation to the respective fuzzy set A. In a classical bivalent logic, the $\mu_A(x)$ would just have two values 0 (wrong) or 1 (right) – 'black or white' – that is often the opposite to a common legal problematic.

In sum, it must be recognised that it is not possible to control or govern any system by using incomplete and inaccurate information, hence a case must be made for the generation of information as a fuzzy function in the sense that respective fuzzy sets are able to control the system.

By using fuzzy functions, the linguistic variables, qualitative legal information within the context of dynamical systems will not be assumed and given fixed values, but rather 'all shades of grey' [0,1] or interval values that we may determine by using fuzzy logic will provide a much more precise and objective valuation of a system condition that is scalable and appropriately granular so that they can be utilised by complex organisations. When lawyers 'paint a picture' by using insufficient and qualitative information setting, this implicates a bivalent logic approach in linear terms resulting in some 'slippery parameters' in decision-making processes.

Thinking in terms of internal and external risk categories, 'big data' and its impact and interaction on dynamic entity and environment, 'scrutinised' data valuation and structured datasets are crucial to provide the distinctive need of a beneficial legal risk valuation necessary for sound decision-making processes.

External legal risk evaluation expertise can also have a long-reaching impact on entities affording them the

opportunity to shift financial liability through freedom of contract to the service providers offering such evaluations. Nonetheless, the civil and criminal liability for incorrect and/or misleading signed statements presented to regulatory authorities will remain with the actual individuals who signed them (eg, SOX Section 302). As a result, in-house legal counsel may welcome the opportunity to ‘hang their hats’ (in part) on such external legal risk evaluations in much the same way as they rely on external legal advisers. While this may create a tension between those who are on-site (in-house counsel) and those who are off-site (the external consultants), an issue will remain as to whose job it is to evaluate and quantify legal risk and whose task it is to implement these evaluations on an operational basis in a dynamic organisation.

The legal community – law firms and in-house counsel – should recognise the potential that legal

tech may provide for a prosperous and efficient analysis of legal risk. They should embrace the new technologies and use them to make a more informed analysis of legal risk in the C-level suite and the boardroom. While some resistance to the use of fuzzy logic and other artificial intelligence techniques to assist the legal profession to perform their functions more efficiently and accurately is to be expected, a new mindset is needed to embrace the technology.

This, of course, must not come at the cost of traditional qualitative models of legal scrutiny and methodology. The aim to automate organisational processes is useful, so long as the evidence behind the output provided is trustworthy and reliable. This is essential – otherwise in a couple of years’ time we will need to address new problems resulting from an over-reliance on quantitative approaches to legal risk management.

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