
Book review essay: Design thinking and data science for legal innovation

Book review

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(1) Legal Design: Integrating Business, Design and Legal Thinking with Technology

Edited by Marcelo Corrales Compagnucci, Helena Haapio, Margaret Hagan and Michael Doherty

Edward Elgar Publishing

2021

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(2) Legal Data and Information in Practice: How Data and the Law Interact

Edited by Sutherland Sarah A.

Sutherland, Routledge

2022

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Introduction

Design thinking and data science have the potential to transform the legal scholarship landscape, according to the two books that are the subject matter of this essay. *Legal Data and Information in Practice*, by Sarah Sutherland, tracks the entire lifecycle of legal data from collection, analysis and interpretation, right up to challenges and possible futures. In doing so, this book sensitises legal scholars towards how they can upskill their data skills. *Legal Design* (2021) on the contrary, represents a philosophical approach to solving legal problems with a new mindset that is evidence-based and goal-oriented. Legal designers are especially conscious about making the law accessible to the widest possible audience, not just to lawyers. This second book edited by four accomplished academicians and practitioners, namely, Compagnucci, Haapio, Hagan and Doherty, is a well-rounded collection with 11 essays. There are two motivations behind writing this synthesis of books.



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First is that there are several complementarities and overlaps between a design consciousness and a data consciousness; the raw material for both types of thinking are data. It is critical to understand what forms this data takes and how it may be modified or manipulated to give us usable results. A second motivation is the illustrative biographies of the authors and editors involved. Sarah Sutherland has been writing about primary law- or case law-related data and legal technology for over a decade now and some of her interesting posts on legal algorithms may be found at *Slaw* which is a premier online legal magazine in Canada. The four editors of the second book are law professors, located in Finland, USA, Denmark and the UK. Interested readers may also consider exploring the highly engaging examples of legal design at the Stanford Legal Design Lab website, which is directed by Margaret Hagan (www.legaltechdesign.com/).

Data matters

Legal data effectually is mostly a mass of unstructured, messy data and grey literatures. This makes it all the more important for legal scholars to understand the type (case law, dockets and others), format (e.g. HTML, JSON, XML, software code), sources (courts, law firms, parliamentary bodies, legal publishers and data providers) and credibility value of the data that they are interested in. Out of a total of nine, Sutherland devotes the first three chapters to describing legal data, in all its variants. I found the author's comments regarding how to use billing and Web log related information in law forms so as to mine client information, especially interesting. Chapter 6 is probably the best-written chapter in Sutherland's book (2021) with its exposition on case law data. The author mentions that this is probably the most robust and therefore widely used data, more so than legislations or other forms because of logistical reasons.

As more computational power becomes available at a reduced cost, the scope for introducing digital products in the legal space has increased manifold. Because legal documents are text-heavy, natural language processing-based text mining and text analysis software have yielded some interesting results. Sutherland quickly recapitulates all of the basic concepts in the analysis and interpretation of data from regression to decision trees and network analysis in Chapters 4 and 5; I did feel however that this section had been written in a hurry without expending time on examples. The author goes on to outline the risks embedded in legal data, pointing out that algorithmic bias, overfitting of data to distributions and restrictive patents with regard to software algorithms, all contribute toward the apprehensions of legal scholars in engaging with these methods.

Design matters

Hagan (2021, Chapter 2, 2021) argues that unlike most forms of lawyering which is reactive, ex-post and geared toward finding a solution when a legal problem arises; "pro-active lawyering" is aimed at finding an ex-ante solution to an anticipated problem. Design thinking aligns with this latter and more empathetic form of lawyering. Technically, legal design incorporates principles such as prototyping, collaboration, systems thinking, iterative improvement, metaphorical conceptualisation and visualisation into the practice of law, thus making it more human-centred and oriented towards public benefit. Scholars point out that lawyers who aspire to become legal designers should master four specific cognitive styles, namely, "knowing", "analysing", "synthesising" and "creating (Fraser and Roberge, 2016).

Compagnucci *et al.* (2021) take a case-study-based approach to illustrate the many instances where design thinking has led to legal innovations in the public service space. According to Huovinen (2021, Chapter 9), one area where design thinking can immediately lead to major improvements is contract design. Traditional contract drafting, such as it is

practised today, relies all too much on providing safeguard clauses driven by a risk management temperament on the part of the lawyer. So much is this focus, that often the real reason the contract came into existence, that of setting up a fruitful transaction between two parties, recedes into the background. A legal design orientation will go a long way in amending this situation by bringing the “business” back into the transaction while increasing the user-friendliness of the entire process. In other words, commercial contracts need to go back to being about business stakeholders rather than legal stakeholders. [Niinikoski and Toivonen \(2021, Chapter 11\)](#) inform us that a small minority of legal education institutions are rising up to the challenge of making their pedagogies more design thinking oriented. Specifically, a school in Finland has recently incorporated poetry, storytelling and co-creation methods to teach students about intellectual property rights laws. If used creatively, legal design has a huge potential for doing common good, by impacting areas such as promoting legal literacy and increasing access to justice ([Haapio et al., 2021, Chapter 4](#)).

Where design and data intersect?

Digital tools and legal analytics are where data and design intersect. In fact, design innovation comes from disciplined data consciousness; this assertion is especially relevant to the legal space. The term “legal information design” captures these synergies by subsuming within it the three disciplines of legal discourse, information technology and design thinking. [Treni and Clement \(2021\)](#) note that to build digital tools that truly help the most vulnerable sections of society, designers should take a participatory approach to tool development. Constituents such as legal aid attorneys and community organisers are some people who can be valuable informants during the requirement gathering phase. It is also important to realise that small fixes may often go a long way in making people’s lives easy than grand schemes. An example is a website called “Whoownswhat” by JustFix which is a non-profit organisation working in the housing justice space in New York City. The organisation realised that tenants were often not in possession of simplistic and vital information such as who owns their building, which delayed the filing of their notices creating survival issues. They thus collated a list of 200,000 building registration documents, overlaid it with a proprietary algorithm to make the ownership linkages and hosted all of this interlinked information on the website for the public to use. In a similar vein, Chapter 7 ([Vanderstichele, 2021](#)) profiles a new informative tool referred to as the “legal knowledge graph” which can use case law data to map criminal descriptions to charges filed and then predict expected judgements based on the legal arguments presented. By scaling up projects such as these, legal scholars may be able to build a substantial knowledge base around judicial decrees. Eventually, various digital tools such as these may be helpful to courts in reducing case backlogs and thereby positively impact the justice system’s efficiency.

Embedded challenges

Legal data has several embedded challenges which does not lend itself easily to analysis. For example, it is often incomplete (court proceedings which do not include decisions), unstandardised (each court or legal firm has a different format), lengthy and lacks quantitative information (no scope for machine learning). In essence, a data-based thinking faces structural and process-related barriers. Antiquated processes end up either obstructing the availability of data or generating data that is unhelpful to the analysis stage. Sutherland (2022, Chapter 8) ably translates how politics and processes in various legal establishments make this so. For instance, in the USA and many other countries,

government apathy towards the publication and distribution of case law documents has hindered the wider dissemination of legal intelligence for public benefit. In other scenarios, there are barriers such as the privacy laws of Europe, which govern the availability of legal data.

It is clear from the two texts that for both legal design and legal data science, the most important barrier to wider adoption is “culture”. Complex statistical models and visualisation-based methodologies have unfortunately not caught up to the legal imagination. Most legal firms, courts, agencies, etc. have deeply ingrained and resistant professional cultures (Doherty, 2021, Chapter 3). “It is unclear if legal cultures that value logical decision making and review will change to accept the outputs of black boxes, or if machine learning applications will be developed that are more amenable to oversight” (p. 96, Sutherland, 2022). Legal innovators have a rather uphill task in this scenario. If digitisation is to be accelerated, there are other interventions that can be made, such as involving legal experts during the software development stage itself (Sutherland, 2022). This will make the software, both more human-centred and discipline-specific, which will in turn encourage wider adoption in the legal community. Both the reviewed books converge on this aspect of future adoption of legal technology.

The most important impediment in the adoption of both design and data approaches is however the human-interest element. Legal education, in its present form, largely, does not provide exposure to law students in either of these areas. Self-motivated uptake among legal professionals has also been slow; and yet if trends and developments in intellectual property law are to be believed, statistical and design competencies may soon become a critical lawyering skill in the practical world (Katz, 2013).

Concluding thoughts

It bears remembering that “Legal Data and Information in Practice” (2022) is introductory in scope. It is beneficial for law students who have yet to receive a formal introduction to data science, and for data scientists who may be interested in the nitty-gritties of how legal data looks like. It will also be interesting to lawyers, legal software developers, legal management consultants and corporate law department staff members. For advanced insights on manipulating this data, however, readers may wish to look at Ed Walters’ (2018) excellent book titled *Data-Driven Law*. Walters provides extensive examples of statistical problems involving legal questions and explains the argumentation behind the inferences, which is very helpful. The urgency of developing the technological competencies of lawyers, including in machine learning, cannot be over-stated (Lehr and Ohm, 2017). The second volume under review, Compagnucci *et al.*’s (2021) collection, is more advanced in conceptual scope, and will likely be appreciated by mature, practising lawyers. Other scholars have converged with the inferences in this collection such as in the long-term implications of design for legal activism and advocacy (Perry-Kessaris, 2019; Ursel, 2017). As the line dividing pro-active lawyering and public policymaking increasingly gets blurred, legal designers may find that they are in the right position to bring about significant, positive changes to society through their social justice-oriented efforts.

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Further reading

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