THE LEGAL TECHNOLOGIST

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FEATURES

ARTICLE

Contracting Smarter

Sabina Horgan from Thread.Legal gives some insight into what lawyers need to know about Smart Contracts.

INTERVIEW

Autto Mate

We interview Max Cole, the co-founder of Autto, about his latest legal tech application and what law firms should be doing to adopt legal tech.

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Insight into the future of law

The Legal Technologist

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A note from the editor

We have a bumper selection of articles in store for you this issue. It is more than double the size of our previous issues with plenty of good quality content about legal tech or the impact technology has on law.

We have quite a diverse selection of articles covering an interview with the co-founder of Autto, two sides to the lawyers learn to code debate, a view on legal bias and AI, and a look at the competitive advantage of big data. As well as a look at smart contracts, which is in keeping with our theme this year of considering how the latest technologies are affecting the legal profession (in this case distributed ledger technology).

I'm grateful for all the people that have contributed to this issue, and I hope you all enjoy the read.

Marc May

AUTTO MATE

Interview with Max Cole, co-founder of Autto

You've recently launched Autto, an online automation platform, could you tell me a little about it?

It's a workflow automation platform aimed primarily at law firms and regulated businesses. We've tried to make the automation easy by having a building block style interface where you can connect each workflow component together. It's well priced compared to other automation providers so the aim is to make it accessible to all.

Could you give me one or two practical examples of how it would those in law firms or in-house teams?

I'd say we are 'process agnostic' at Autto. We don't say "here is a process and this is a way of making it more efficient". Law firms have a huge amount of processes and each firm does a particular process differently. So it is better to give some examples of things we have worked on. We have worked with a New York law firm to implement a workflow for issuing a particular type of debt claim, from data entry to filing. For in-house we created a HR advice workflow, which directs users to the appropriate HR documents based on their input.

I believe this is your second lawtech platform – how did you get involved with building platforms?

That's right. I had an idea for a lawtech business about seven or eight years ago and while I was testing the water to see if it was viable I met Ian [Gosling]. We created a platform that allowed people to create a Will online. While doing that platform, the feedback we received was that people wanted the same interface but with different outputs (e.g. documents, emails, etc). So that's how Autto came to be.

You've been both a solicitor and barrister over the last twenty years – how well do you think the legal profession is doing at adopting technology?

There has certainly been a convergence of two things which push firms to adopt technology. The first is demand from clients to do things less expensively and on a fixed price. The second is the that Cloud-based technologies are now more readily available but some firms are still doing things the old-fashioned way. There are now plenty of law firms with an appetite for innovation looking at new products. We've definitely seen a lot of interest for our product.

Apart from using your platform, what else should law firms be doing to deliver value to their clients?

They should be looking at legal design or service design to make their services more human-centred and satisfying to use. Law firms should review what they do and understand what processes they have. They should then look at technology to make them more efficient, provided they follow the "people-process-technology" cycle.

How do you think the next generation of lawyers should approach using tech in their careers?

I think the next generation of lawyers should be open to technology adoption, curious, be an evangelist for tech if it can do their job better, and should continue to have an awareness of what tech is available.

Last but not least, what do you think the lawyer of the future will look like?

In the next 10 – 20 years lawyers won't be doing the same roles as they are today. It may be that there will be three types of lawyer in future. The first will be those that give legal advice, the second will specialise in designing and implementing legal processes and the third type will integrate tech into those processes.

Thanks for your time Max.

AUTTO.

LAWYER OF THE FUTURE #6

Every issue of The Legal Technologist will now include quotes from people who have an opinion on either the future lawyer or the future direction of the legal profession. These opinions will be from a broad section of society and not just those that are actively involved with legal technology. In this issue we are lucky to have two quotes from Alice Namuli Blazevic and Eaindra Cho. These are designed to make you think first and foremost and consider how the profession may change in your lifetime.

"The Lawyer of the Future will know the law, understand new technology, use tech to deliver legal services and run his practice as a business . He will be called a LegalTech Preneur !"

Alice Namuli Blazevic
Partner
Ssempebwa & Co Advocates (Uganda)

Do you have questions about legal tech?

ASK THE EXPERT.

Just visit legaltechnologist.co.uk to send your question. If we don't know the answer we will find someone that does!

Wanted: Contributors

We are always on the look out for article contributors interested in legal technology or the future of law.

If you would like to feature in the next edition of The Legal Technologist please don't hesitate to contact marc@legaltechnologist.co.uk.

SMART CONTRACTS

What lawyers really need to know

By Sabina Horgan

As the interest around smart contracts grows, the debate around it grows too. Some say that smart contracts are the technology of the future that will dramatically reduce the need for lawyers – others say that this is a fledgling technology that will take many years to become workable within a legal setting.

What is a Smart Contract?

Smart contracts and blockchain are complex and if you want a full length technical explanation there are plenty of articles available including this one.

From a lawyer's perspective, here are the key things you need to understand:

1 Smart contracts are auto-executable contracts built on a distributed ledger, or blockchain.

2 'IF – THEN' logic is used to make the contracts auto-executable based on key milestones. For example, IF a housing contract is signed by both parties THEN a deposit is automatically taken from the renter's account.

3 The distributed ledger element means that information is available to all parties and cannot be overwritten. In terms of smart contracts, this means that once contractual agreement has been reached the smart contract execution cannot be changed or stopped.
Currently, all payments within a smart contract would have to be made in cryptocurrency as this is the only current available for automatic payments on a blockchain.

4 The final point to note is that the term 'smart contract' is potentially misleading as it is often assumed to mean a legally binding contract. Contract here means a transactional agreement but not necessarily a legal one. For example, supply chain management is seen as a key potential area for smart contracts, with all of the suppliers on one blockchain and parts being automatically requested as they are used. This could theoretically be legally agreed via an offline (standard) contract and then delivered via a smart contract system.

Why Do Technologists Think This Will be So Revolutionary?

Blockchain enthusiasts see this as an opportunity to remove middlemen such as lawyers, brokers and bankers in transactions. Legal tech companies would develop template contracts that individuals could purchase, fill in and execute themselves – theoretically with no other parties involved.

It's also claimed that it should remove the need for disputes or litigation around failure to fulfil a contract. As long as the contract is set up correctly it will be automatically fulfilled as milestones are reached.

Another perceived advantage is that the explicitness required by a smart contract leads to a greater accuracy, transparency and theoretically trust. For example, smart contracts will auto-execute a payment on a specific number of days post-milestone – eliminating waiting for and chasing for payments. This auto-execution is also supposed to give a greater trust as both parties know that the contract will be executed regardless of outside factors.

What Do Lawyers See as the Pitfalls?

One of the first disadvantages is that all payments must currently be made via cryptocurrency. As cryptocurrencies are notoriously volatile, it is unlikely that many individuals would be happy to complete significant or long-term financial contracts using it. Without auto-executed payments, smart contracts lose many of their suggested benefits and until banks are willing to execute smart contracts using national currencies, this will hamper smart contract adoption.

Lawyers in Australia have noted that contractual principles such as frustration, duress, undue influence, unconscionable dealings or force majeure could mean that a contract is not legally valid but would continually to be automatically executed by a smart contract system. There are likely to be similar issues in other jurisdictions.

Another issue is that there is no way for a smart contract to know if offline conditions do not match online conditions. For example, an individual could sign a 6-month rental contract and then arrive at the house the next day to find they have been scammed by a fake landlord. As the contract has been signed it will continue to auto-execute for the 6-month term with full payments taken. If the payments are being made in cryptocurrency they may be impossible to trace or recover.

Finally, if a mistake has been made either by the contractual parties or by the developers it is impossible to fix once the contract has been executed. This raises complications for real-life contracts – for example if a contract proves more difficult to deliver than expected and both parties agree to waive a late delivery financial penalty. If the smart contract was not created with this option, then they will need to go outside of the original contract to do this. Equally, vulnerability in the code can lead to financial losses that contractual parties are unable to protect themselves from.

What’s the Future for Smart Contracts?

In order to deal with coming changes, some US States in particular have already begun to put legislation around smart contracts. However, both technologists and lawyers have argued that these laws are dangerously vague and “a recipe for confusion down the road”.

Despite the hype, in realistic terms this is a technology that is at the pilot stage for the legal industry. It will take some time before appropriate legislation has been placed around it and it becomes commercially or legally viable.

By Sabina Horgan

Sabina is VP of Market Development at Thread Legal, a case management system built with Office 365 technology.

SHOULD LAWYERS [CODE]?

```
If (lawyers == code) {
articleone.show;
In this issue we have two articles on
this topical issue written by Dan
Marcus and Jermaine Smith. These
articles present differing opinions on
whether lawyers should code which
may be of interest to those considering
whether they should code or not.
elseif (lawyers != code) {
articletwo.show;
} else {
terminate()
}
```

THE ARGUMENT AGAINST..

BY DAN MARCUS

As a lawyer that learnt to code (and worked professionally as a software engineer for a short time), a common question that I get asked by other lawyers is whether they should also learn to code. This is also a debate that buzzes to life on the twittersphere at semi-regular intervals, although (contrarian that I am) I have chosen a moment when there is no such debate raging to commit my thoughts on the topic to paper. You never know, this article might spark a new round of debate...

My Short Answer

I strongly believe that most lawyers will not need to (nor benefit professionally from) learning to code. That said:

- broader technological literacy will become more important for **all** lawyers in the near future;
- project management, design thinking, process improvement and other skills pioneered (or advanced) in the tech industry will give lawyers that learn them a competitive edge; and
- there will be an increasing number of roles that will either require or massively benefit from skills in both legal practice and coding.

Why most lawyers won't benefit professionally from learning to code

There is a simple answer to this: coding in a clean, maintainable, re-usable, scalable and bug free way is hard. It is a career in and of itself. Any attempt to learn to do it part-time (especially while fitting it around a demanding job) is destined to fail.

Yet this is precisely the type of coding that will be required to deliver better and more efficient legal services to our clients, whether in-house or in private practice. We cannot take risks that our code includes bugs. The solutions we need will inevitably be complex, so the code needs to be clean and maintainable so that more than one person can work on it. And if it provides value to our clients, we will want to be able to re-use it and scale it so that it can be used by all of them.

But what about the other skills you learn while coding?

Let's look at some of the skills you may learn while learning to code that could be helpful in a lawyers professional capacity:

- An understanding of control flow, meaning the breaking down of larger tasks into smaller bits of logic - This includes learning about if...else... statements and loops. Such skills are going to be very useful as automation tools become more widely available and more powerful in the legal context (see e.g. Neota Logic and Autto). Is learning to code the best way to gain expertise in the use of these tools? Sure, learning and experimenting with basic Python will do the trick. But so will experimenting with workflow apps on your phone (see e.g. Shortcuts or IFTTT) or playing around with Scratch. The same benefit with more fun and less effort - seems like a no-brainer to me.

- The ability to work with and understand data better, including in the training and use of AI - This could be a real advantage as law firms and legal departments are working out how to better use their data and are experimenting with training and using AI powered tools. However, learning to code of itself doesn't provide much experience in these areas. Instead, learning to code is a common pre-requisite to doing university level courses on data analytics and AI. Again, it's sensible to ask whether this is the best way to learn an undeniably valuable skill. I would argue that it's not - you can learn a lot about the handling and understanding of data with courses that look at the use of drag and drop Business Intelligence (BI) tools (see e.g. courses on using Tableau, MS Power BI and Qlik). Equally, understanding the best practices in training and using AI does not require you to be able to implement gradient descent from scratch.

- A better understanding of security risks, leading to better data security practices- As you learn to code you often also learn about servers, how the internet works, encryption and much more. This can lead to better security practices as you understand the vulnerabilities of connecting to Wi-Fi or sending emails. However, law firms have software and policies in place that provide a good level of security by default. Additional understanding of why these restrictions are there can improve relationships between IT and lawyers, but isn't strictly necessary from a client value perspective. As with the other skills above, there are also easier ways to learn about these things (I'm a particular fan of Computerphile videos for this purpose).

What learning to code doesn't teach you

In my journey of learning to code and working as a software engineer, the most valuable skills I gained were in project management, process improvement and an understanding of UX. These are incredibly important skills that remain largely untaught in law schools and in practice.

When did I learn these skills? After I had finished formally learning to code and had started to work on real software projects professionally. I am yet to see a "learn to code" course that touches on these topics, there are too many other things to learn as you are trying to get to grips with syntax and the standard technology stacks. If a lawyer were to ask me whether they would benefit more from taking a coding course or a project management course, my answer would be project management (almost) every time.

The exceptions that prove the rule

I cannot categorically say that I wouldn't recommend a lawyer learns to code because, as with all things in life, there are a few exceptions:

- If you are a lawyer that is extremely interested in learning to code, go ahead! As stated above, it will have some benefits to your practice of law. More importantly, the process of learning something new is really fulfilling so, if you want to learn to code, don't let anyone else stop you!
- There are an increasing number of roles in the legal industry where knowing how to code is an advantage (if not a prerequisite). These roles include legal engineering, legal innovation/operations, knowledge management and a variety of roles within legal technology companies themselves. If you are a lawyer that is interested in any of these roles, code away!

Do these exceptions change my general position? Not at all. Most lawyers will be far better-off learning project management or design theory over coding.

About the Author

Dan Marcus is a qualified solicitor, professional software engineer and the founder of **Prokopé Consulting**. Prokopé Consulting's mission is to help legal teams deliver ever better legal services. We offer a variety of services to support and benchmark your legal innovation efforts, including workshops, customer interviews, data maturity audits and more.

THE ARGUMENT FOR..

BY JERMAINE SMITH

There is a lot of anticipation and excitement about the inevitable transformation of legal services. You've read all the hype, promises of AI and Blockchain and might be growing impatient.
You may, like me, want to be part of the process and "ride the wave" rather than be hit by it and drown. I'm a lawyer and I use my free time to explore technology and get my hands dirty by teaching myself—through community learning—to code. Huge thanks to freeCodeCamp!

Pandora's box has been opened. I can carry out complex financial transactions on my phone, allow an enormous amount of data to be collected on my every action, summon transportation with my thumb, yet I'm still obliged to email pdfs, print-sign-scan, and use spreadsheets through a closed content management system—all of which requires manual data entry.

Lawyers have a very particular set of skills [insert Liam Neeson meme]. I've been dismayed at some "thought leaders" views that lawyers won't need to code as they can deploy these services using a GUI (pronounced goo-ey and stands for Graphical User Interface). **I firmly disagree.**

Law firms are notoriously risk averse. This has led to many law firms using similar resources (Practical Law, LexisNexis and other precedent libraries) which makes it difficult to distinguish between service offerings. There are plenty of excellent law firms and lawyers out there but, like Blockbuster or Toys-R-Us, law firms will need to innovate—or die (there's a nice boolean for you).

I want to convince you that lawyers will make great developers. I am confident that the term "legal developer" much like "app developer" or "web developer" will become ubiquitous in the near future. Neither of the latter terms existing 30 and 10 years ago and change is coming, fast.

So lets begin.

1. Lawyers understand the importance of syntax and structure

When most people think of the day to day work a lawyer might do, it usually revolves around drafting documents. We actually spend a lot more time emailing but this is usually in an effort to execute or submit a document, which is usually followed by a bill for services rendered.

Drafting documents is both science and art. There is a very specific syntax for each legal discipline. Words are our tools and the enforceability of a contract can be prejudiced by a typo, omission or incorrect choice of word(s).

This is similar to coding. There are 100s of programming languages, each with their own syntax. The difference is the speed at which feedback is given. Contracts are tested in a dispute or when the parties don't adhere to the terms, whereas code is tested (almost) immediately when it is deployed; it either works or you have a bug to fix!

2. Legal agreements are comprised of definitions and provisions.

These are akin to variables and libraries in coding.
What is really exciting about coding is that it lends itself to open source frameworks. In the same way the bodies like the Law Society or STEP provides us with provisions which can be incorporated to contracts (e.g. Standard Conditions of Sale or Administrative Provisions for trusts / wills), developers will build a solution for a specific problem, which can then be incorporated into your project using, say, a CDN (Content Delivery Network) or Node.js package. We're getting technical here—but it's easier than you think!

3. Lawyers are APIs

API stands for Application Programming Interface. Think of it like the messenger that sends your request (in the right format) to a server (where the answer or action is stored) and then delivers the response back to you in a way you can interpret.

This is how most lawyers feel—every... single... day. We take a request from a client, do some research or analysis, liaise with relevant parties and return a response in the form of advice or a document.

4. Lawyers hate repeating themselves

In coding, the mantra DRY is used extensively: DON'T REPEAT YOURSELF.

In coding, the mantra DRY is used extensively: DON'T REPEAT YOURSELF.

Pointless, isn't it.

But there is substance behind this. It means writing code efficiently, which makes it easier to maintain an scale over time. Codebases are complex and need maintaining as they are used repeatedly by multiple users across many devices.

Lawyers pride themselves on efficient use of language.

5. Lawyers use libraries

I'm not referring to a collection of physical books. Rather a library in the programming sense.

Why re-invent the wheel when you can simply turn it? That's a rhetorical question of course. Lawyers love precedents and looking at "what we did last time". Lawyers hate typing things from scratch where they have a template which will do most of the heavy lifting for them. This is similar to using a "library" (or framework!) in coding—you get to stand on the shoulders of giants to turn work around quickly and efficiently.

Libraries / frameworks such as jQuery (an oldie-but-a-goodie and really changed web development), React.js (perhaps the best thing to come out of Facebook), Vue.js (my personal favourite) and Axios (super helpful) are merely the tip of an enormous iceberg of expertise and solutions available to a developer—almost always for free!

6. Lawyers crave a sense of agency

Removing expertise from the equation, lawyers have built successful practices around relationships. Your likelihood of becoming a partner is directly correlated to your ability to influence a key demographic who will become clients.

This favoured extroverts and those with well established networks. It can be difficult to establish new networks and nepotism is, in my opinion, simply the way the world “works”. I’ve used that to my advantage and am, to some extent, grateful for it. This used to give ambitious lawyers a clear path to success. I’m not convinced the same methods work today.

However, the disruption technology brings will allow lawyers who embrace new methods to become the next generation of leaders. Some of the “legal developers” may go on to become partners but hold a role similar to the of a DevOp or, at higher levels, Chief Technical Officer. And that’s where I want to be.

About the Author

Jermaine Smith (FCILEX) is a lawyer specialising in private client matters, with a keen interest in coding and software development. He is interested in connecting with other lawyers interested in coding, so please do get in touch with him on LinkedIn.

BIG DATA

and competition

by Edmund Harris and
Alexandros Bakos

In recent times data, and in particular big data, has been subject to much hyperbole regarding its anti-competitive effects. This article considers whether big data is by its nature anti-competitive.

Anti-competitive effects occur when two or more companies decide to collude on a certain market in order to distort the normal effects of competition (the setting of prices according to the mechanisms of supply and demand and other impersonal market forces), or when a company with high enough market power - in EU competition law terms, a company which enjoys a dominant position (not necessarily identical to market power, though) - abuses that power.

So how does data fare when tested against the issue of barriers to entry? Proponents of the “data is bad” school of thought have likened data to oil by arguing it serves as a prohibitive barrier to entry and constitutes an essential facility. This scaremongering has spread into policy circles with Victor Mayer-Schönberger’s proposed “data for all” law being recommended by the Bundesministerium für Wirtschaft und Energie in their November report on ‘Modernising the law on abuse of market power'. However, the concern that data provides a barrier to entry is lacking on a theoretical and practical basis. There are a plethora of perspicuous examples not only illuminating the lack of empirical foundation but in some cases demonstrating how data, in fact, facilitates entry.

There are two schools of thought for entry barriers, which have been developed by Bain and Stigler respectively. Bain was the first to theorise on the subject and suggested that "*a barrier to entry is an advantage of established sellers in an industry over potential entrant sellers, is reflected in the extent to which established sellers can persistently raise their prices above competitive levels without attracting new firms to enter the industry*". A decade later Stigler countered this by arguing that the notion of entry barriers should be limited to production costs which are borne "*by a firm which seeks to enter the industry but not by firms already in the industry*". Bain's theory is fundamentally flawed as by its definition all efficiencies and everything done by an incumbent to improve its products constitutes a barrier to entry – this simply does not make sense (although para 339 of the Google Shopping judgment seems to use Bain's approach). For this reason, big data needs to be understood through a Stiglerian lens.

Barriers are low in data driven markets

It has been suggested by authors such as Stucke and Grunes that "*a firm in possession of so much user data is likely to have the ability to use this data against competitors, who may wish to challenge its market power*". However, in light of empirical evidence it seems that the authors greatly overestimate the competitive significance of mere accumulation of data. Instead, it is argued that barriers are low in data driven markets. There are numerous examples which justify this claim. New firms (e.g. Uber, Facebook, Google and Spotify) have emerged in the market and have been able to displace established firms that have not only benefited from greater data resources, but have also benefited from network effects. Perhaps the most illustrative example of this is the dating app, Tinder. Tinder was launched in 2012 into a saturated market without any user data and yet became a market leader. This rise to supremacy was driven by differentiation and not data related assets. It demonstrates that very little user data is required as a starting point and new entrants are not at a competitive disadvantage in terms of data collection.

Big data is ubiquitous. Yahoo proved unable to profit from having a higher volume of data than Google and ultimately was supplanted as the market leader of search engines. Microsoft and Yahoo then bundled their resources and data and still failed to match Google's performance. In 2009 Myspace was the largest social media platform in the world yet has been surpassed by a platform created in a Harvard University dormitory, Facebook, despite beginning with significantly more data and benefitting from network effects.

If we look at competition law, a valid comparison can be made between online and offline markets. For example, if an individual set up a new retail showroom that is smaller than an established competitor but with a longer list of customers and a greater awareness of local consumer preferences (i.e. has collected data), there is no way this would be viewed as a prohibitive barrier to entry.

Furthermore, innovative exploits along with efforts to collect the incumbent's data may even facilitate entry by rivals. This is demonstrated by the U.S Microsoft case regarding “applications barrier to entry”. Although the new entrants may have encountered difficulties attracting developers away from Microsoft’s platform, which Microsoft patently did not, they did benefit in numerous ways at Microsoft’s expense. The established PC developer ecosystem, the viability of the app developer profession, as well as the consumer facility with the demand for modular operating systems are all examples of benefits enjoyed by entrants (at Microsoft’s expense) which the incumbent itself did not enjoy. In this regard it is arguable that the new entrants enjoyed a net surplus on the basis of this dynamic.

Data is everywhere

The “data is the new oil” analogy is a weak and flawed analogy. Far from being a finite resource data is everywhere and widely available in the digital world. Tucker argues data is ubiquitous, inexpensive and easy to collect whilst Mane and Sperry explain “*to say data is like oil is a complete misnomer, oil cannot be duplicated like data can*".

If Exxon drills and extracts oil from the ground that oil is no longer available to BP. Conversely, Google knowing somebody’s birthday in no way limits Facebook’s ability to know the birthday.

The amount of data produced every day is truly mind-blowing. There are 2.5 quintillion bytes of data created each day at the current pace, with that pace only accelerating with the growth of the Internet of Things. Ninety percent of the data in the world was generated over the last two years alone. This demonstrates not only the wide availability of data and its implied substitutivity, but the fleeting nature of the usefulness of data and therefore the limitations of its ability to confer advantage.

Moreover, the tools to analyse and store data are available from a multitude of third-party sources and are widely accessible as a result of the falling cost of software. Data has zero marginal cost of production and distribution thus its value should not be overstated. This argument is reinforced by the observation that data is both non-exclusive and non-rivalrous. In other words, a firm can collect data without denying others from collecting the exact same piece of data.

This is supported by the “multi-homing” phenomenon where a user can use and therefore share data with multiple platforms – no single provider has exclusivity over all user data. For example Facebook and Twitter can both know an individual’s birthday. The European Commission applied a similar logic in Facebook/WhatsApp merger.

Data is short lived

In a similar way to Schumpeterian competition “*any competitive advantage that data provides is fleeting, and entrants are unlikely to be significantly disadvantaged relative to incumbents in terms of data collection and analysis*”. This is supported by research demonstrating that 70 percent of unstructured data is stale after 90 days. This reflects a constant need for new and differentiated data so even if a company holds a large amount of data, this does not confer a great advantage.

Even in the case of incumbents owning masses of valuable data this is not a guarantee of success. Again, the example of Tinder illustrates this point. Tinder’s success was built upon the strength of it's underlying solution, it's innovative and user-friendly interface and it's understanding of consumer needs. Additionally, it was the idea, the “double-opt in” mechanism, that instigated Tinder’s rise over its data superior rivals; Match.com, eHarmony and OkCupid. Further demonstrating that the advantage is not conferred by data but simply by better ideas.

Additionally, Google processes 3.5 billion searches per day. However, importantly only 15% of these are new searches that the engine has not seen before. Given the dynamic nature of data driven markets the volume of data already existing is of practically little value – the value of data comes from the ability to ascertain the current preferences of consumers, the preferences of the past are of little value and therefore confer little to no competitive advantage.

Big data fails, regularly

If data were a significant barrier to entry, it would follow that older firms would possess the amounts of data that makes entry for new firms difficult. However, management surveys consistently attest to the problems associated with significant amounts of data. Young new companies are actually better able to integrate new tech because unlike older firms they have not become stuck in their practices. This is confirmed by the OECD who state, "o*n the global productivity frontier… (firms) are on average younger consistent with the idea that young firms possess a comparative advantage in commercialising radical innovations*".

Allied to this, big data projects are prone to failure, which suggests its competitive advantage is limited. Gartner analytics suggest that 85% of big data projects fail. Notable examples of these failures include Google's 'Deep Mind' and Facebook's chat project, 'M'.

Data as an essential facility

One of the most radical and controversial suggestions has been that data constitutes an essential facility. The EU primary case law demonstrating the 'essential facilities' test is arguably set out in Magill, Oscar Bronner, IMS and Microsoft. This test sets out the following requirements: dominant position on the part of the incumbent; indispensability of the service/product; refusal by the incumbent to grant access to the service/product; no objective justification for the refusal to supply.

And while it is hard in most cases, to argue against the first and last two conditions, data hardly satisfies the second condition: firstly, the refusal by the incumbent to grant access to the service/product can be easily substituted by accessing other types of data. Essentially, the specific data owned by the incumbent is not indispensable. Secondly, the same type of data can be obtained in other ways (e.g. by providing an innovative service which attracts a large number of customers who offer their data to the new entrant).

What about deep learning and algorithms?

One particular area where it has been suggested that data is a clear barrier to entry is in the development of algorithms and deep learning. The principle targets of these arguments are search engines and Google in particular.

It is argued that deep learning and algorithms require huge amounts of data to develop, with some research suggesting a large catalogue of data (i.e. historical search results) improves search results up to 31%. In effect arguing that deep learning algorithms cannot attain high-quality results without significant amounts of historical data.

Yet, a multitude of examples fly in the face of this assertion. Google Translate undoubtedly benefits from the troves of data accessible to Google and has been successfully integrated into its chrome browser and app resulting in the keyword "Google translate" being searched 45,500,000 times a month while the DeepL translation application remains in its infancy.

Nevertheless, in the BLUE (Bilingual Evaluation Understudy) test DeepL outperforms Google translate by a ratio of three to one. The basis of DeepL's success is the use of high-quality sources such as the European Parliament and UNESCO. This not only demonstrates the wide availability of ubiquitous data but once again, as in the examples of Tinder, Facebook and Spotify, prove that what is done with the data and having superior concept is of far more significance than troves of data.

Conclusion

Just as competition theorists rejected the simplistic 'big is bad' notion in the 1980s, the critics of Big Tech, particularly those from the left, must move swiftly on from the crude idea that 'big data is bad'. Clearly a more nuanced understanding of digital markets is required. The overestimation of data and the simple network effects theory fails to acknowledge that there are numerous examples of start-ups overcoming data rich rivals and the simple network effects also applies in reverse. The non-rivalrous nature of data, its abundance and the regular failure of big data projects speaks volumes about the limits of data as a competitive advantage. It is clear the focus on volume of data is unwarranted. The value of the data comes from the way in which it is processed and, as in the analogue world, the advantage is not in the data but in the idea itself.

This article was drafted by Edmund Harris and Alexandros Bakos, who are both currently studying their LLM with a focus on competition law at the University of Utrecht in the Netherlands.

LAWYER OF THE FUTURE #7

"The lawyer of the future will certainly need to be highly flexible to adapt well to the rapidly changing legal landscape. With disruptive legal tech, the nature of legal work will also change. So, this will demand for more creative analytical skills from lawyers in order to add value and remain competitive."

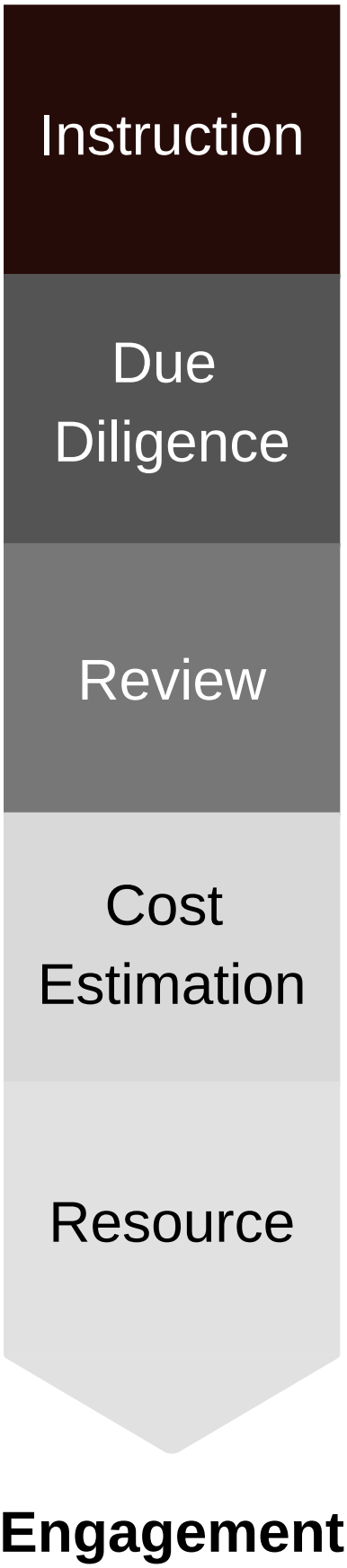
Eaindra Cho
Postgraduate law student
BPP University

Legal Deconstruction

One of the themes for the magazine this year is the deconstruction of legal matters. We believe that one of the skills for future lawyer will be legal project management. As managers they should have the ability to deconstruct the various components of a legal matter and be able to continually make the process as efficient as it can be. In this issue we look at the first of six elements that are common to nearly all legal matters.

The first and arguably most important element is instruction. This is a new or existing client's ability to provide work to a lawyer. For lawyers who deal primarily with larger businesses, the instructions are likely to come via email as governed by a service level agreement. It may be the case that a lawyer working on a large client matter may never see the client at all. For those lawyers working on the high street, it is likely to be the opposite purely by the nature of being located closer to the people they serve, as well as the personal services they provide.

While the legal sector is economically healthy there are still a significant number of businesses and consumers who do not seek legal advice from lawyers, despite it being advisable to do so.



Some key reasons surround cost and lack of knowledge about how to instruct lawyers. Making the process of instruction easier with a clear indication of how much it is likely to cost will allow greater growth in the sector, especially for small business and personal legal services.

Technology is clearly a great way of improving these two issues. Instructions can now be taken from remotest of places, and at any time of the day. We now live in a world where access to information is at the touch of a button and it is important that law firms are able to keep up with consumer demand. For those law firms providing personal legal services, it may be worth considering chatbots to allow clients to ask questions (and more importantly get answers!) at any time of the day. It can also be used to book appointments without human interaction.

With fixed fees becoming more and more common, and the Law Society crying out for price transparency, now is the time to create automated questionnaires which can provide clients with an estimate of how much their legal work will cost, as well as showing the assumptions that is based on. Undoubtedly some work will be particularly complex and will require further discussion and that should be factored into the questionnaire, but for everything else it should be automated.

Following on from that, if the result of their questionnaire is that they are happy with the quote and they would like to instruct then why not get all the information required at that stage. That information can feed directly into all the relevant internal systems and even get the ball rolling on drafting the document from the outset.

All in all, I hope this gives a bit of a summary about what tools are available at this stage of a legal matter and how they could be used. Making it easy for clients to instruct a law firm, as well as providing quotes, with little human interaction is clearly of benefit to law firms. There are undoubtedly other ways and I hope they form the topic of more extensive articles during this year.

By Marc May
(@doublemarc)

Bias affects how non-lawyers view AI

by Agnes Foy

AI gets bad press for the jobs it might eliminate. Judicial jobs are not presently poised to disappear. But AI is definitely reshaping things. In part this is happening because non-lawyers are moving into the law business. The adversarial and coercive role of lawyers has lost its 'fit for purpose' gloss. This is a strong contributory factor too. Young, aspiring advocates are well aware that they need to learn and develop more a useful legal mind-set. Their role models won't only be senior lawyers. This development is healthy.

Perceptions about how judges add value to the justice system are changing. Anthony Peters has worked in the City for 35 years, as a market strategist. The entry of private equity firms into the realm of litigation funding interests him, because it gives non-lawyers a stronger voice. He deems the erratic elements in financial services litigation intolerable. In his view, "AI can generate significant predictability in litigation because AI can reduce myopia." Money driven minds are, however, myopic too.

In theory, a judge is tasked to bring objectivity to a court case. In practise, murky layers of subjectivity and bias prevail. Bias explodes objectivity. So anything that reduces judicial bias is highly attractive to non-lawyers.

Luis Pirandello

Few of us feel we have difficulties knowing what is real, even though most of us live silo existences. Luis Pirandello won the Nobel Prize for Literature in 1934. His work humorously showcases how truth is negotiable, identity merely performed. Even in our era of 'fake news' his talent for turning psychological analysis into great theatre that is full of personally instructive surprises. His first play, Così è (Se Vi Pare), meaning Absolutely (Perhaps), is especially good. It's a energetic comedy about the elusive nature of reality.

To date, lawyers have been heavily incentivized to develop a myopic version of reality. Our personal prejudices and ignorance easily elude us. But AI is a game changer. It will put courtroom interaction and dynamics into a very different reality frame.

Injustice

Evidence of racist, gender, and anti-egalitarian judicial bias is not shock news. The fundamental legal principle for combatting this ideological bias is that an individual may not be a judge in his/her own cause. But what can constitute ‘own cause’ is fickle. Judicial odes to selflessness never emerge from scrutiny looking universal.

There is no dastardly plot in play. Bias happens because the lives of others effortlessly become a film script that we watch and adjudicate upon with the detachment of an absurdist commentator. Very few judges calculatingly set out to do an injustice. But lack of self-awareness about one’s own obliviousness is common in judges, not least because judges so very strongly incline to believe their own subjective value judgments are the very personification of public interest.

Sausage machine lives

In 2015, a senior English male judge cautioned against rushing to put more women into senior judicial positions, on the basis that “such a move could put off talented male candidates and destroy the delicate balance of the legal system.” This quip engaged all sides, because it overlooked such fundamental legal principles. The judge was lambasted as an intellectual lightweight. But his expression of judicial concern for the legal system can be assessed more compassionately. Left to our own devices, none of us believes we an abuser of other men - or of women.

Left to his own devises, no elderly sausage openly acknowledges that his club colleagues are not as deferential to his authority and to his assiduously nurtured self-identity props as he wishes them to be. It's a particularly feeble excuse, however, because of the injustices the selfishness generates.

Traditionally, the first loyalty of most senior legal practitioners has been to abstract institutions, not fellow human beings. They have been professionally incentivised, throughout their educational life, and careers, to feel this way. The cult of 'organisation man' pervaded strongly in management circles since the 1960s. It is discredited now, because the loyalty dynamics of organisations and institutions have altered so dramatically.

It's discredited because abstractions don't care, They don't care because they can't care. Individuals who conduct passionate love affairs with organisational and institutional abstractions are of the human product type that E.M. Forster describes as "incapable of any meaningful self-reflection". Forster credits this brand of worker as having "fairly developed minds and underdeveloped hearts". Organisational psychologists and behavioural economists have, since the 2000s, been zealously focusing on the issue of workers and their self-identity props. A heartfelt belief that the British justice system (an abstraction) is "a terribly delicate organism" sounds commendably caring. The judge does care. But who, and what, he cares most about is key. AI can – and does - assess this.

Bias

In the U.S., white federal judges have been found to dismiss discrimination cases four times more often than their black peers. The palpable explanation is that those who have experienced discrimination themselves can recognise complex and subtle forms of racial harassment.

In the UK, Lord Hope set out the current ‘apparent bias’ rule for all adjudicators, in the 2001 House of Lords case of Porter v Magill. Essentially, the question is whether a fair-minded and informed observer, having considered the facts, would conclude that there was a real possibility that the judge was biased.

This Hope rule clearly didn’t register in any meaningful way in the context of judicial appointments in England and Wales during 2002 - 2016. A comparative study of judicial systems demonstrates that fewer than one in ten English judges come from ethnic minorities. Only a quarter went to state school. The report shows that the judicial systems with the lowest percentage of women among professional judges were Azerbaijan (11 per cent), Armenia (23 per cent), Northern Ireland (23 per cent), Scotland (23 per cent), England & Wales (30 per cent) and Ireland (33 per cent). The Europe-wide average was 51 per cent.

Human rights lawyers and civil servants are focusing on these statistics. But entrepreneurs are now assessing the law game too. They are registering the value potential in these statistics. They are not examining the operational models through a ‘lawyer realities’ lens.

Snowflakes

‘Compete with compassion’ is a loud and prevalent mantra, these days. The legal industry is certainly smitten by it. Is the mantra just a platitude, a veneer of civility that amounts only to a load of old codswallop in a world of ‘business as usual’ capitalism?

Accusations of the discriminatory sort are easily tolerated when the accuser poses no real existential threat to the target. The maxim ‘equal, but different’ takes on a very different hue when the feeling of being discriminated against is experienced first-hand. Legal trainees – and aspirant trainees - understand this reality well.

Perhaps the quirkiest thing about the organisational dynamics of domination and submission is that those who can be classified as male, pale, stale and tightly encased in an organisational hierarchy tend to be most ideologically submissive, cowering, and narrow-minded category of all worker categories. This is so largely because within legal spheres a belief still prevails about the ‘normality’ that workers, at all levels in all occupations, will always and invariably be psychologically bullied by an organisational abstraction. This belief is nothing short of extraordinary.

The snowflake generation can - and do - see the world differently. Snowflake lawyers know that abstractions don’t care because abstractions can’t care.

Most senior lawyers openly admit that there is no relationship at all between law and justice. Most senior lawyers opt to ignore the fact that their own mercenary acceptance of this reality is precisely what makes that bitter divorce between law and justice the norm.

Logically ludicrous concern for the “delicate balance of the justice system” is meritoriously relegated to its true intellectual ranking when compared to the systemic understanding expressed by Helena Kennedy QC. “True justice is about more than refereeing between two sides. It is about breathing life into the rules so that no side is at a disadvantage because of sex or race or any of the other impediments which deny justice.” The snowflake generation get this.

by Agnes Foy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