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| Abstract | This chapter examines lawyers' perceptions on the use of artificial intelligence (AI) in their legal work. A meta-synthesis of published large-scale surveys of the legal profession completed in 2019 and 2020 in several leading jurisdictions, e.g., the UK, US, and EU, reveals some dissonance between hype and reality. While some lawyers see the potential contribution that AI and machine-learning (ML) driven legal tech innovation can make to transform aspects of legal practice, others have little awareness of the existence of the same. While there appears to be first mover advantage for some legal practitioners to incorporate innovative AI and ML based legal tech tools into their developing business model, there are few metrics that exist that can help legal teams evaluate whether such legal tech tools provide a sustainable competitive advantage to their legal work. A non-representative expert sampling of UK-based non-lawyer legal tech professionals whose work focuses on the utilisation of AI and ML based legal tech tools in different legal practice environments confirms the findings derived from the meta-synthesis. This expert sampling was also evaluated against published peer-reviewed research featuring semi-structured interviews of UK lawyer and non-lawyer legal tech professionals on the challenges and opportunities presented by AI and ML for the legal profession. Further research in the form of undertaking a qualitative survey of non-lawyer legal tech professionals with follow-on semi-structured interviews is proposed. |



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# Chapter 21
# Lawyers' Perceptions on the Use of AI

**Stuart Weinstein**



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**Abstract** This chapter examines lawyers' perceptions on the use of artificial intelligence (AI) in their legal work. A meta-synthesis of published large-scale surveys of the legal profession completed in 2019 and 2020 in several leading jurisdictions, e.g., the UK, US, and EU, reveals some dissonance between hype and reality. While some lawyers see the potential contribution that AI and machine-learning (ML) driven legal tech innovation can make to transform aspects of legal practice, others have little awareness of the existence of the same. While there appears to be first mover advantage for some legal practitioners to incorporate innovative AI and ML based legal tech tools into their developing business model, there are few metrics that exist that can help legal teams evaluate whether such legal tech tools provide a sustainable competitive advantage to their legal work. A non-representative expert sampling of UK-based non-lawyer legal tech professionals whose work focuses on the utilisation of AI and ML based legal tech tools in different legal practice environments confirms the findings derived from the meta-synthesis. This expert sampling was

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also evaluated against published peer-reviewed research featuring semi-structured interviews of UK lawyer and non-lawyer legal tech professionals on the challenges and opportunities presented by AI and ML for the legal profession. Further research in the form of undertaking a qualitative survey of non-lawyer legal tech professionals with follow-on semi-structured interviews is proposed.

**Keywords** Artificial Intelligence · Legal Tech · Machine Learning · Meta-synthesis · Sustainable Competitive Advantage · Expert Sampling

## 21.1 Introduction

This chapter examines lawyers' perceptions on the use of artificial intelligence (AI) in their legal work. Some lawyers see the potential contribution that AI and machine-learning (ML) driven legal tech innovation can make to transform aspects of legal practice, but others have little awareness of the existence of any of this. While general media articles appear apace with lurid headlines such as 'Will AI Replace Lawyers?',[1] '23-year-old British entrepreneur's 'robot lawyer' raises $12m from top Silicon Valley investors'[2] and 'The Robot Lawyers are here–and they're winning',[3] some legal scholars have been warning for some time that the technological acceleration in computational power "makes it the single most important phenomenon with which the legal profession will need to grapple in the coming decades."[4] A more nuanced view from academia is that "at the risk of oversimplifying….much of the current debate regarding legal technologies [is seen] as existing at the extremes."[5]

The research questions this chapter explores are the following:

- What is the awareness of lawyers of AI and machine learning (ML) based legal tech tools available to them?
- Do lawyers see new practice opportunities with AI and ML based legal tech tools that did not exist before?
- How can lawyers judge the effectiveness of these new tools when they may not fully understand how they work?
- Do lawyers believe that using these AI and ML based legal tech tools in legal practice can create competitive advantages that over time might become sustainable?

This chapter attempts to generate theory from data systematically obtained by quantitative survey evidence of the perceptions of lawyers on the usefulness of AI in

[1] Watkins and Mew 2019.

[2] Rudgard 2020.

[3] Cellan-Jones 2017.

[4] McGinnis and Pearce 2014, p. 3042.

[5] Remus and Levy 2017, p. 556

their own present legal work. It creates three results: (a) first, it frames an on-going tension point or challenge regarding the use of AI in current legal practice, (b) second, it highlights a few unifying themes that weave through the different surveys and the commentaries they have generated, and (c) it proposes follow-on work from theoretical research to practise-informed research by undertaking qualitative survey work with non-lawyer legal tech professionals to gain their perspectives on these findings.[6]

The research questions are answered on the basis of a meta-synthesis of published large-scale surveys of the legal profession completed in 2019 and 2020 in several leading jurisdictions, e.g., the UK, US, and EU, which reveals a striking polarity between hype and reality. Even if sustainable leadership in legal tech can create a first mover advantage[7] for some innovators, there are few metrics developed that can assist to evaluate whether the use of such AI and ML based legal tech tools can bring a lasting sustainable competitive advantage[8] to the legal teams that use them. The findings from the meta-synthesis were tested against a non-representative expert sampling of UK-based non-lawyer legal tech professionals whose work involves using AI and ML based legal tech tools in different legal practice environments. This expert sampling was also evaluated against published peer-reviewed research featuring semi-structured interviews of UK (lawyer and non-lawyer) legal tech professionals on the challenges and opportunities presented by AI and ML for the legal profession.

This chapter is structured as follows. Section 21.2 explores the relevant substantive literature that defines the critical concepts that form the scope of this enquiry. Section 21.3 sets out the meta-synthesis analysis detailing the key findings made. Section 21.4 makes use of a non-representative expert sampling to confirm the findings derived from the meta-synthesis. Section 21.5 draws conclusions and makes suggestions for further questions to be considered.

## 21.2 Review of the Substantive Literature

In this section, a review of selected elements of the substantive literature relevant to this inquiry is made. Section 21.2.1 explores the definition of legal tech, AI and ML. After this discussion, Section 21.2.2 examines the concept of achieving a sustainable competitive advantage which is seen as the driving force behind legal teams adapting legal tech which makes use of AI and/or ML elements.

[6] See Tannenbaum et al. 2012, p. 56, for guidance on defining research outputs.

[7] Lieberman and Montgomery 1988, pp. 41–42.

[8] Coyne 1986, p. 54.

### 21.2.1 *Defining Legal Tech, AI and ML*

The Stanford Law School CodeX Techindex hosts a curated list of 1742 legal tech (short for "legal technology") companies "changing the way legal is done."[9] Legal tech means digital systems that have been specifically designed to help lawyers carry out legal work, but it has developed in recent years to include applications that perform legal tasks, such as contract creation, negotiation, review and analysis.[10] Any discussion of legal tech must start with an acknowledgment that it has become 'all too common to use' ML and AI as catch-all phrases for an ever-changing family of things.[11] For starters, AI systems are software (and possibly also hardware) systems designed by humans that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal.[12]

A 2018 qualitative study of UK legal firms at different stages in their technology adoption journey involving a total of 15 in-depth semi-structured interviews with participants selected by purposive sampling (2018 UK Interviews) has shown that there is 'fuzziness' around what represents AI in the legal tech sphere.[13] One must differentiate between automation, which underpins the majority of new legal technologies and which in the view of participants in the 2018 UK Interviews should not be labelled as AI, and 'true AI' involving largely ML, natural-language processing (NLP), and vast amounts of data to perform more advanced 'cognitive' functions such as interpretation.[14] While AI may be able to automate a legal task where there is some underlying structure or pattern that it can harness, those lawyering tasks that involve abstract thinking, problem-solving, advocacy, counselling of clients, human emotional intelligence, policy analysis or 'big picture' strategy which cannot be so easily automated are not within the reach of available AI technology today.[15]

ML refers to an automated process of discovering correlations (sometimes alternatively referred to as relationships or patterns) between variables in a dataset, often to make predictions or estimates of some outcome.[16] NLP enables computers to effectively communicate in the same language as their users, advancing the ability of the machines to understand written and spoken human language and more closely

[9] Stanford Lwa School, CodeX Techindex.
[10] Practical Law Practice Note 2021.
[11] Lehr and Ohm 2017, p. 669.
[12] AI HLEG 2019, p. 8.
[13] Brooks et al. 2019, p. 142.
[14] Brooks et al. 2019, p. 142.
[15] Surden 2019, p. 1332
[16] Murphy 2012, p. 1.



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approximate human cognitive patterns.[17] ML can be applied to 'a plethora of legal services' including e-disclosure, predictive forensics, assessment of evidence, case law analysis, argumentation mining, analysis of applicable law and quantitative legal prediction.[18] These ML techniques perform NLP by seeking to develop statistically accurate relationships between an input (documents that are potentially relevant for evidence, case law, legal briefs or memos, doctrinal text, legislation and other types of regulation) and a desired output (relevant documents, relevant lines of argument, precedent, doctrine, applicable legislation or regulation).[19] A simplified example of ML in use in legal practice is document review where ML can be used to identify "like for like" documents alongside deviating documents derived from a standard setting original batch of documents identified in advance of the search. The very same search can also use ML to pull up equally useful "wild card" documents based on previously unknown anomalies or variables that were not envisioned before the ML search was done.

### *21.2.2 Sustainable Competitive Advantage*

Competitive advantage exists when a firm creates value for its buyers that exceeds the firm's cost of creating it; superior value stems from offering lower prices than competitors for equivalent benefits or providing unique benefits that more than offset a higher price.[20] The competitive advantage must also be sustainable so that rivals are unable to adopt the same strategy.[21] In a world where law touches every aspect of business operations and decision making, high quality legal resources such as AI and ML based legal tech tools when employed appropriately can help a legal team seize competitive advantage.[22]

Competitive advantage will be found working in the six areas where AI is currently used in the legal arena[23]; namely, (1) e-discovery (software that allows for large scale review of documents to be surveyed and identified through defined search criteria reducing the time necessary for human eyes to do the same, e.g., Disco or Everlaw); (2) expertise automation (allows users to create intelligent web-based applications that replicate the advice a subject matter expert would provide, e.g., Neota); (3) legal research (legal publishing companies offer software packages that enable lawyers to do online research with greater and speed than ever before, e.g., LexisNexis, Westlaw,

[17] Lewis 2019.
[18] Hildebrandt 2018, p. 27.
[19] Hildebrandt 2018, p. 27.
[20] Porter 1985, p. 3.
[21] Porter 1985, p. 11.
[22] Siedel and Haapio 2010, p. 643.
[23] Davis 2020 (Introduction).

etc.); (4) document management (law firms and legal departments make use of document management software to manage paperwork and create e-files to store internally and share externally, e.g., Clio); (5) contract and litigation document analytics and generation (these tools review contracts and other case materials extracting information, identifying problematic clauses and assisting in contract review and due diligence, e.g., Kira, Leverton or Luminance); and (6) predictive analytics (this is software that examines the case record of judges, opposing counsel and parties to predict litigation behaviour for strategic purposes, e.g., LexMachina).

Moving beyond simple competitive advantage to achieving truly sustainable competitive advantage will come from reinventing processes and procedures, externally, through the development of and delivery of complex AI solutions to clients' problems and, internally, in transforming the composition, structure, and economics of legal teams when these new AI-driven tools become pervasive in the delivery of legal services.[24] While some organisations may invest in AI and ML based legal tech tools to gain a first-mover status, first-mover status, in and of itself, may or may not produce a sustainable competitive advantage because of a multiplicity of controllable and uncontrollable forces.[25] One such factor is the ability of an organisation to attract and retain lawyers of an entrepreneurial mindset who can recognise and take advantage of opportunities in the law created by information inadequacies, inefficient allocation of resources, uneven technological capacity across the sector and a lack of transparent pricing structures.[26]

One of the problems with evaluating the value of legal tech is that the legal services industry lacks standard metrics to evaluate data and any applications developed with it. For instance, one of the surveys studied in this chapter reveals that only 7% of respondents have formal legal tech metrics in place in their organisation and that 21% report that they have not even informal methods of measuring the value of their legal tech either.[27] The importance of "the extraction of objective, measurable characteristics of legal work that helps facilitate automation, quality control, and continued improvement of the field" cannot be underestimated.[28] Future research from a technological viewpoint needs to be directed toward developing such metrics and then validating it through appropriate case studies.[29]

[24] Davis 2020 (Introduction).
[25] Kerin et al. 1992, p. 33.
[26] Evans and Gabel 2013, p. 406*et seq.*
[27] Palmer 2020a; Survey 4.
[28] Dolin 2017, p. 1.
[29] Ganguly et al. 2010, p. 43.



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## 21.3 Meta-Synthesis Analysis

The goal of this section is to explain the variables considered in completing the systemic review of the various large-scale surveys of the legal profession's attitude towards the use of AI. Section 21.3.1 details the meta-synthesis undertaken and the interpretative research. Section 21.3.2 explains the criteria used to search for relevant surveys. Section 21.3.3 evaluates the quality of the surveys examined. Section 21.3.4 delineates the analysis made and integrates the survey outcomes obtained. Section 21.3.5 relates the findings from the meta-synthesis.

### *21.3.1 Meta-Synthesis and Interpretative Research*

A meta-synthesis is an exploratory, inductive research designed to synthesise primary qualitative case studies for the purpose of making contributions beyond those achieved in the original studies.[30] Meta-synthesis occurs at the level at which the original researchers of the primary studies have constructed their insights in accordance with their own understanding and interpretation of the data and seeks to empirically consolidate primary studies to build refined, extended or even new theory.[31] Going beyond the findings of any one individual study to make the whole into something 'more than the parts alone imply' is at the heart of meta-synthesis.[32]

Interpretive research describes how different meanings held by different persons or groups produce and sustain a sense of truth, particularly in the face of competing definitions of reality.[33] Here we examine the views held by lawyers on the use of AI and ML based legal tech tools in their day-to-day practice gleaned from several jurisdiction-wide surveys incorporating different methodologies taken in 2019 and 2020 and draw universal values from such survey results. The goal is to uncover unknown linkages or dynamics across the survey results that cannot be obtained from a review of just one or two of the surveys involved to reveal unknown phenomena of a qualitative nature. When meta-synthesising qualitative surveys using different techniques and studying different groups attention must be paid to both analysing evidence across surveys to build theory as well as to ensuring sensitivity toward the contextual considerations of the primary surveys;[34] as such, a rigorous research design approach is needed "to avoid nonreconcilable islands of knowledge that do not contribute significantly to our full understanding of a phenomenon of interest."[35]

Working with the research questions defined in Section 21.1., the inclusion criteria is drawn to include recent professionally-formulated surveys employing a variety

[30] Hoon 2013, p. 527.
[31] Hoon 2013, p. 527.
[32] Knoblet and Hare 1988, p. 28.
[33] Gerhart 2004, p. 457.
[34] Holon 2014, p. 528.
[35] Hoon [illegible], p. 523.

of techniques ranging from online questionnaires, structured phone interviews and face-to-face focus groups. A clear preference is for surveys that record the views of a large cohort of participants, e.g., more than 300 individuals at a minimum, across one or more jurisdictions and soliciting responses from lawyers in a variety of professional settings, e.g., in-house, law firms and multi-disciplinary practice groups. All surveys used are evaluated for hallmarks of quality on two fronts: first, in how the survey was conducted and, second, in how the results were reported. Transparency of reporting results is as critical as survey methodology in evaluating the usefulness of a particular survey. Once the kernels from these surveys can be extracted and compared side-by-side, unifying themes emerge which constitute the synthesis offered here.

Our ontological approach[36] involves uncovering causal linkages and interpreting related strands to explain phenomena as existing in the legal tech sector and its use by legal practitioners. The epistemological approach[37] is designed to build a new theory from interpreting knowledge across different surveys to find a few unifying themes across the different jurisdictions. If the ontological and epistemological approaches suggest that further inquiry is needed into the personal experiences of lawyers with legal tech, a narrative approach directed at obtaining data through semi-structured interviews may be warranted. The research approach to be followed is post-positivist: it is broad rather than specialised. Moreover, we should not ignore the motivations that shape the research enquiry or fail to acknowledge that the end result produced here must be seen as more significant than whether the research we have undertaken demonstrated appropriate techniques of collecting and categorising information.[38]

### *21.3.2 Searching for Relevant Surveys*

Figure 21.1 sets forth the proposed large-scale surveys examined for purposes of this meta-synthesis. In excluding surveys published before 1 January 2019, the decision was made to ensure that the views examined were current.[39] Surveys published after 1 March 2021 were not included in the meta-analysis. Equally important is who had commissioned the survey. Either it had to be a leading representative body of the legal profession as in Surveys 1 and 8 below or a leading multinational provider of legal research solutions for the profession as in all the other surveys listed. While admittedly surveys in this latter category may have a self-serving element to them, it became evident upon closer examination that these recurring annual surveys are done

[36] Ontology is the study of the nature and properties of reality. Epstein 2018.

[37] Epistemology is a study of how people or systems of people know things and how they think they know things. Ryan 2006, p. 15.

[38] Ryan 2006, pp. 12–13.

[39] Such a randomised "cut-off" date might raise methodological issues in a quantitative meta-analysis; however, "qualitative research is characterised by flexibility, openness and responsivity to context, the steps of data collection and analysis are not as separate and consecutive as they tend to be in quantitative research." Busetto et al. 2020, p. 2.

| Survey | Author | Name of Survey | Published Date | Survey Dates | Number of Survey Participants |
|---|---|---|---|---|---|
| 1 | American Bar Ass'n (ABA) | 2020 Legal Technology Survey Report | 6 October 2020 | Unknown | Survey of over 50,000 US lawyers regarding the technology and software utilised and available in their firms. |
| 2 | Bloomberg Law | Legal Ops & Technology | 14 May 2019 | April 2019 | Features responses from nearly 500 US law practitioners representing a mix of law firms and corporate legal departments across the US |
| 3 | Bloomberg Law | Legal Operations Survey | 6 March 2020 | Online survey done during 1st quarter of 2020. | Bloomberg Law surveyed nearly 600 US legal and operations professionals (98 in-house and 490 law firms). Wide range of organisations surveyed in terms of size, revenue, number of employees and a good spread between in-house and law firms. |
| 4 | Bloomberg Law | Legal Technology Survey 2020 | 27 August 2020 | July 2020 | Bloomberg Law surveyed 331 US practicing lawyers (in house and law firms) about legal tech – including the use, adoption, and procurement of legal tech at their organization, as well as their thoughts on efficiencies, ethics, and spend. |
| 5 | Lexis Nexis | 2020 Legal Analytics Study Bringing Value Into Focus | 4 February 2020 | December 2019 | The study gathers insights from 163 large US law firm (50 or more attorneys) professionals parsed into two major categories: those whose firms offer/utilise legal analytics and those who do not. |
| 6 | Thomson Reuters Institute | Legal Department Operations Index, Fifth Edition | December 2020 | June 2020 | The report analyses the survey responses of more than 200 legal departments—more than 80 of which are in the Fortune 1000. This study incorporates responses gathered from more than 2,000 telephone interviews, each lasting approximately 30 minutes, including more than 600 in the US. It also assessed Legal Tracker benchmarking data comprised of more than $90 billion in legal spending from more than 1,450 legal departments. This is a fully global survey with those surveyed in all regions of the world. |
| 7 | Thomson Reuters Institute | 2021 State of Corporate Law Departments | February 2021 | Same as in .6 above. | Same survey done for .6 used again with additional qualitative focus on Covid-19 and its impact on corporate law departments. |
| 8 | Oxford University/ The Law Society of England & Wales | Lawtech Adoption and Training Findings - Survey of Solicitors | March 2020 | Online survey: November 2019 to January 2020 | Survey examines current usages of, training in, and attitudes towards, law tech by qualified solicitors in England and Wales. Survey yielded a total of 353 valid responses who are not representative. |
| 9 | Wolters Kluwer | The 2019 Future Ready Lawyer | 29 March 2019 | December 10, 2018 to January 13, 2019 | Quantitative interviews with 700 lawyers in law firms, legal departments and business services firms across the US and 10 European countries – UK, Germany, Netherlands, Italy, France, Spain, Poland, Belgium, Hungary and the Czech Republic – to examine how technology and other factors are affecting the future of law across core areas and how legal organisations are prepared to address these. |

**Fig. 21.1** Proposed large-scale surveys to be examined for purposes of this meta-synthesis *Source* The author[40]

[40] Survey 1 above is available only by purchase from ABA at a price of US $2000.

in a meticulous and dispassionate manner so as to manifest themselves as critical to review to ensure a (mostly) exhaustive list of relevant surveys to consider.

Except for Survey 1 where survey data remained behind a "paywall" and could not be examined, each of the remaining Surveys 2 to 10 offered a sound critical analysis of their respective results which was helpful for the meta-synthesis exercise. Surveys 2, 3, and 4 (Bloomberg Law) were introduced with journalistic analysis offered by Bloomberg Law's own data analysis team that gave insights across the three different surveys done over the past year and a half and offered some future trendspotting as well. Survey 8 (Oxford University-Law Society)[41] had excellent secondary coverage in the Law Society Gazette, the weekly magazine of the Law Society, with an eye-catching quote, namely, that the survey reveals that "despite much hype—and many millions of pounds in investments—AI has yet to take over even the most mundane of legal professionals' work." [42] All of the surveys except Survey 8 are done annually so previous years' surveys were used in each of them as a benchmark to measure progress or the lack of progress over time which was helpful.

### *21.3.3 Evaluating the Quality of Surveys*

The three Bloomberg Law Surveys [Surveys 2, 3, and 4] provided survey reports that would have benefited from greater coverage of survey design and an explanation as to whether those individuals who were successfully surveyed were representative either the US legal profession, Bloomberg Law clientele or neither. Sponsorship bias issues need further consideration[43] as Bloomberg Law offers a suite of AI based commercial products.[44]

The Lexis-Nexis survey [Survey 5] was exceptional in its granularity with an appendix reproducing the full survey results in whole. However, the survey was limited to professionals working at a diverse group of US law firms and did not cover individuals working in-house or in multi-disciplinary practices. Sponsorship bias needed further evaluation here as the survey was done by Lexis Nexis Legal & Professional and ALM Intelligence which offer data analytics products and consultancy.

Thomson Reuters Institute prepared survey data for use in the 2020 Legal Department Operations Index, 5th edition [Survey 6]. This survey data was also incorporated into Thomson Reuters Institute the 2021 State of Corporate Law Departments Survey [Survey 7] as well which did not have new survey work done in conjunction with this latter study but has a specific Covid-19 focus to it. Both Surveys 6 and 7 are extensive in their incorporation of a vast survey pool of in-house legal departments for which these surveys are the definitive resource. Moreover, the use of Legal Tracker

[41] Sako et al. 2020 [Survey 8].

[42] Cross 2020.

[43] See Reutlinger 2020 generally for a discussion of this theme.

[44] Bloomberg Law 2021 AI-Analytics Website.

benchmarking data which is identified as comprising of more than US $90B in legal spending from more than 1,450 legal departments adds a costing component to these surveys that the others lacked. The same sponsorship bias issues must be addressed here as identified in the other surveys.

Survey 8 [Oxford University—Law Society] because of its academic research focus "ticks the right boxes" in terms of explaining its research methodology, survey design and for being the only survey to explicitly identify how many potential survey respondents were solicited (more than 10,000 solicitors) to obtain 427 responses of which only 353 were usable. The research methodology section identifies with excellent detail the age and career intentions of respondents, e.g., that a significant minority (15%), were amenable to working for, or establishing either an alternative legal service provider or a law tech solutions provider.[45] The Law Society, the independent professional body for solicitors in England and Wales, does not offer commercial services in the legal tech sector so sponsorship bias concerns need not be considered here.[46]

### *21.3.4 Analysis and Integration of Survey Outcomes*

The Bloomberg Law 2019 Legal Operations & Technology Survey [Survey 2] revealed a surprising result in that although many lawyers probably use AI technology in their daily work, they are often not aware of this fact. This paradox is captured by the team lead for the three Bloomberg Law Surveys [Surveys 2, 3, and 4] who writes:

> "Are you using AI? Probably, but how knowledgeable are you about the AI that backs the technology you are using and how aware are you of the regulatory landscape and the potential ethical concerns? In our survey, 23% of law firm and in house counsel reported using legal technology with AI. However, does that mean the other 77% aren't? Maybe, but more likely, they're unaware that the natural language searches inherent in most legal technologies are powered by AI."[47]

This issue was highlighted again in the Bloomberg Legal Technology Survey 2020 [Survey 4] which was completed in July 2020. While in-house legal departments and law firms frequently use technologies that likely employ AI or ML driven legal tech tools such as legal research, e-discovery and document review, only one-third of respondents said they are aware of this fact with the other two-thirds being either unsure whether AI or ML is being used in the tools they are relying upon or believe that AI is not being used at all. This lack of awareness of where AI or ML driven legal tech can be found in daily work flows is confirmed by the response to a question asking how well is your understanding of the algorithms that underlie legal tech to

[45] Sako et al. 2020, p. 20 [Survey 8].

[46] Law Society Website 2021.

[47] Huie 2020.

which the response was mixed with 44%–somewhat or very well, 39%–not very well or not at all, and 17%–neutral.[48]

Oxford University-Law Society [Survey 8] noted a difference in who uses AI driven legal tools in law firms with an interesting age-gap emerging. In comparing responses of junior solicitors to those of senior solicitors in law firms, "e-discovery/e-disclosure/technology assisted review" was more likely to be used by assistants/associates (17%) than by partners (9%), while AI use cases in "regulatory compliance", "fee earner utilisation analytics", and "contract analytics" were more prevalent among partners than among assistants/associates.[49]

This observation was confirmed in the Wolters Kluwer 2019 Future Ready Lawyer Survey [Survey 9] which notes that a driving force for change is generational—for lawyers and their clients—as by 2025, 75% of the global workforce will be Millennials who see the impact technology transformation will have and understand better how these technologies apply to their work over the next three years.[50] In comparison with more longstanding law tech solutions, such as document/knowledge management and accounts/time recording, usage of AI-assisted law tech by respondents was typically lower. This technology was used most prevalently in relation to legal research" (27% of respondents), "due diligence" (16%), and "e-discovery/e-disclosure/technology assisted review" (13%).[51] One may surmise that the lack of familiarity on the part of solicitors at law firms may have some basis in the fact that these AI-driven tools may be used less in law firm practice in the UK than in the US.

While Oxford University-Law Society [Survey 8] confirms an AI-driven knowledge gap in law firms, the opposite is true in the case of solicitors who work in multi-disciplinary teams (MDTs) where solicitors work on a day-to-day basis with non-legal professionals in data science, project management, and other areas. Respondents working in MDTs were more likely to use AI-assisted law tech than those not working in MDTs and the adoption of AI-assisted law tech were most likely to be in the following use-cases: "legal research" (33.8% of MDT respondents compared to 27.2% of non-MDT respondents), "due diligence" (36.8% compared to 16.4%) and "contract analytics" (27.9% compared to 9.6%).[52]

The Lexis Nexis 2020 Legal Analytics Study [Survey 5] makes the best case for the use of AI and ML driven legal tech tools to achieve a sustainable competitive advantage when it comes to competing against other law firms for winning new business or cases. Legal analytics harnesses technologies, such as ML, AI, and searching, to clean up, structure, and analyse raw data from dockets and other legal documents.[53] The Lexis Nexis 2020 Legal Analytics [Survey 5] concludes that law firm lawyers find the greatest use of legal analytics in gathering strategic insights for legal matters, showcasing the value of their firm to existing clients and winning new

[48] Bloomberg Law 2020b Legal Technology, p. 4 [Survey 4].

[49] Sako et al. 2020, p. 5 [Survey 8].

[50] Wolters Kluwer 2019 Future Ready Lawyer, p. 11 [Survey 9].

[51] Sako et al. 2020, p. 5.

[52] Sako et al. 2020, p. 17.

[53] Cincinnati University Library Website 2021.

business; that value extends beyond the users themselves to clients who also recognise its importance: 98% of those surveyed said that legal analytics helps them to improve their firm's performance; 81% are encouraged by clients to use legal analytics; and 91% believe legal analytics is useful for the practice of law.[54] More than half of those surveyed agree that the adoption of legal analytics is driven by competitive pressures—the need to win (57%), but also by client expectation (56%).[55] The two Thomson Reuters Institute Studies [Surveys 6 and 7] confirm this trend identified in the Lexis Nexis 2020 Legal Analytics Study [Survey 5] that legal departments as well as law firm lawyers believe there is competitive advantage in acquiring new AI and ML based legal tech tools to help address a growing workload with 61%.[56]

The 2019 Wolters Kluwer Future Ready Lawyer [Survey 9] confirms that AI and ML tools when part of a well-designed and implemented legal tech strategy at a technology leading organisation may help such an organisation achieve a sustainable competitive advantage over competitors who are currently in the process of transitioning to such technology leading status or are currently trailing in their use of technology.[57] More than one-half of lawyers surveyed in Survey 9 expect to see some impact from transformational technologies (TT) already here today, such as AI, big data, predictive analytics and ML—but fewer than 24% say they understand them.[58] This confirms the point made in Bloomberg Legal Technology Survey 2020 [Survey 4].[59] When it comes to TT, adoption rates are still in the early stages although significant growth is expected with usage rates approximately doubling by 2022 when more than two-thirds of technology leading legal teams will be using AI and ML driven legal tech tools.[60]

The 2020 Wolters Kluwer Future Ready Lawyer [Survey 10] found that the increasing importance of legal tech is the top trend for 76% of respondents across Europe and the US, and across law firms, corporate legal departments and business services firms.[61] This same survey found performance blockers, however, and revealed a number of gaps in understanding, expectations, experience and capabilities—within, as well as between, law firms and corporate legal departments—that inhibit top performance; only 28% of respondents said they were very prepared to incorporate legal tech into practice and operations.[62] Legal departments, ranked both AI and ML at 58% as the most important TT that will have a significant impact over the next three years, although only 23% of respondents understand AI well at 23% with ML lagging behind AI at 17%.[63] The 2020 Wolters Kluwer Future Ready

[54] Lexis Nexis 2020 Legal Analytics Study, pp. 5–7 [Survey 5].
[55] Lexis Nexis 2020 Legal Analytics Study, pp. 5–7 [Survey 5].
[56] Thomson Reuters Institute 2020 LDO Index, pp. 21–22 [Survey 6].
[57] Wolters Kluwer 2019 Future Ready Lawyer, pp. 3–4 [Survey 9].
[58] Wolters Kluwer 2019 Future Ready Lawyer, pp. 10–12 [Survey 9].
[59] Bloomberg Law 2020a, b Legal Technology, p 4 [Survey 4].
[60] Wolters Kluwer 2019 Future Ready Lawyer, p. 12 [Survey 9].
[61] Wolters Kluwer 2020 Future Ready Lawyer, pp. 4–5 [Survey 10].
[62] Wolters Kluwer 2020 Future Ready Lawyer, pp. 4–5 [Survey 10].
[63] Wolters Kluwer 2020 Future Ready Lawyer, p. 14 [Survey 10].

Lawyer [Survey 10] pinpoints that 59% of law firms surveyed recognise AI as the most important TT that will have a significant impact over the next three years, although only 22% of respondents understand it very well; ML learning came in in the same question at 57% however, only 19% of law firms feel they understand ML very well.[64]

### *21.3.5 Findings from the Meta-Synthesis*

Our meta-synthesis reveals some answers to the questions we posed at the beginning of the chapter. While there is some awareness on the part of lawyers as to the AI and ML based legal tech tools available to them, this awareness is not universal. Knowledge of these tools depends upon various factors such as age, technical competency, practice area and the size and complexity of the organisation in which the lawyer works. Lawyers involved in MDTs tend to have more affinity with these AI and ML based legal tech tools by dint of their work with other individuals with a specialism in technology. While lawyers see new practice opportunities with AI and ML based legal tech tools that did not exist before, this is not an overwhelming view and there are clear problems in distinguishing the added value component that AI and ML bring to the mix as opposed to legal technology tools generally.

One area, however, that appears to have had a breakthrough is the field of legal analytics. This may owe to a fear on the part of some lawyers in the US that if they do not engage with such products, they will be at a competitive disadvantage in complex commercial and intellectual property litigation. If AI and ML based legal tech tools are to fully reach their potential to transform legal practice, there will be a need for the development of appropriate metrics that will enable lawyers to assess the capabilities and dynamics of different products and services that are available on the market in a transparent and cross-platform capability. This would help tech evangelists to make a better business case in their respective organisations. The hesitancy to embrace AI and ML legal tech tools in some organisations also has to do with the barriers to adaption of such new technology. These range from those common to all organisations, such as network capacity and a willingness to invest staff resources in training new ML systems, to those unique to law practice, such as the predominance of the billable hour or the compensation structure at law firms.

While lawyers believe that using AI and ML based legal tech tools in legal practice can create competitive advantages that over time might become sustainable, they must recognize that this requires building essential commercial value for their stakeholders for using these tools; real solutions must be offered as opposed to the attraction of a novelty or a new gadget. Legal teams investing in AI and ML based legal tech tools must be careful not to place too much value in the durability of first mover advantage as a substitute for well-thought product acquisition, staff upskilling costs, sound business case development and realistic management of internal expectations

[64] Wolters Kluwer 2020 Future Ready Lawyer, p. 17 [Survey 10].

to develop long term value in legal teams for the use of such AI and ML based legal tech tools.

## 21.4 Expert Sampling

A non-representative expert sampling of UK-based non-lawyer legal tech professionals whose work focuses on the utilisation of AI and ML based legal tech tools in different legal practice environments confirms the findings derived from the meta-synthesis. The 2019 report Lawtech Adoption Research–In-depth Interviews[65] contains a series of in-depth interviews of 47 senior representatives of Lawtech vendors, legal services providers and thought leaders in the legal tech sector. The views expressed confirm the findings from the meta-synthesis. For instance, one business development director at a law tech start-up expressed the view that the hype has moved far away from reality: "I feel the media is doing a disservice to the industry and making it sound much more advanced than it is which filters through to other parts of the ecosystem ... we are getting asked by law firms … Where is your AI? … There needs to be greater focus on engagement and getting adoption of existing tools…"[66] Another Lawtech CEO observed: "It is very hard to find a partner within a firm that is willing to be the first to deploy ML or NLP on a live client project for the first time in a law firm… they just see the risk of it going wrong, losing the client and damaging the law firm's reputation. This is the fundamental difference."[67]

AI has had a win in the US in the use of data analytics to predict case outcomes.[68] Here a strategy director at one London law firm confirms the findings of the Lexis Nexis 2020 Legal Analytics Study [Survey 5]: "The panacea is using AI and ML driven tools that can accurately predict legal outcomes."[69] Finally, another Lawtech founder commented on first mover advantage: "The most successful early adopters were the big law firms with the war chests—they could sacrifice the human labour and free up expensive lawyers to focus on other things and take a mid to longer term view. These firms have had the opportunity to work with legal tech and get the most out of it."[70]

The 2018 UK Interviews[71] also employed a purposive sampling focused on interviewing representatives from top UK legal services firms leading on AI adoption as well as those considering adoption to provide an in-depth understanding of how AI is expected to impact firms in the sector.[72] While these interviewees were law firms

[65] Law Society 2019, p. 10.
[66] Law Society 2019, p. 19.
[67] Law Society 2019, p. 26.
[68] Law Society 2019, p. 28.
[69] Law Society 2019, p. 28.
[70] Law Society 2019, p. 34.
[71] Brooks et al. 2019.
[72] Brooks et al. 2019, p. 140.

leaders who were in the market to buy legal tech applications (as opposed to those who develop them or consult on the integration of these systems with existing legal tech platforms), their views are instructive. "One of the things that worries me at the minute is that everything is badged AI, because it is a way of selling it, but most of the technology is not AI" said one interviewee, while another stated "you do need to reserve the AI label for things that typically a human being would do with some sort of cognitive task around it, like interpretation or judgment."[73]

One interviewee placed AI based legal work within a hierarchy of the sort of work law firms do which was helpful to see how law firms see it fitting into the overall value chain that law firms offer their clients:

> "Think of legal work as a pyramid. At the top, you have the 'rocket science work'. That's where someone's got a great reputation in the field for a very sophisticated type of legal work. I don't see that being touched by AI in any meaningful way for potentially decades. In the middle, you've got the business-as-usual contract work, and that's where AI tools will be used to make our jobs quicker. At the bottom, you've got the really commoditised work. I see that's where AI solutions are going to take that bread-and-butter work."[74]

Our sampling of non-lawyer legal tech professionals consists of three individuals: one who is an associate partner at an MDT [Expert 1], another who is a legal tech management consultant with one of the Big Four accounting firms [Expert 2] and, finally, the third individual who is a senior commercial manager with leading an IT services provider with expert focus on providing digital legal services [Expert 3]. All three were asked open-ended qualitative survey questions that focus on the use of AI and ML in legal tech solutions for law practice.

Expert 1 expressed the viewpoint that AI tools are a way to give access to legal output and analysis to non-lawyers pointing to specific examples such as contract analytics which enables non-lawyers to contribute to review and analysis or reasoning engines that distil complex legal rules into simple "yes/no" outcome statements for specific use-cases.[75]

Expert 2 pointed out that the poor design of some of these AI products hurt their value proposition. They suggest that some of the legal tech tools currently in their first wave of rollout "can be quite clunky in their design" while others have not been designed with legal professionals in mind but are products given a "legal skin" to market them to the legal sector.[76] Expert 2 states that this presents an issue of underdevelopment in that such legal tech products may not fully align with the day-to-day activities that lawyers engage in which is a hindrance to the creation of a sustainable value chain.[77]

Expert 3 felt that AI tools can be an excellent resource in sophisticated legal practice environments, but that for them to work one had to be aware of the set-up constraints, learning requirements and organisational support needed to make for

[73] Brooks et al. 2019, p. 142.

[74] Brooks et al. 2019, p. 144.

[75] Expert 1 Purposive Survey Questionnaire Response—5 March 2021.

[76] Expert 2 Purposive Survey Questionnaire Response—15 February 2021.

[77] Expert 2 Purposive Survey Questionnaire Response—15 February 2021.



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successful implementation.[78] For instance, the tools need to be taught to develop ML, so sufficient practice and use time must be provided after initial parameters are set before deployment through pilots start.[79] Digital tool training has to be provided and the resources need to be digital savvy and embrace a digital transformation culture that supports change and reaches across the organisation through the value chain.

## 21.5 Conclusions and Further Research

This chapter describes a theoretical meta-synthesis of data systematically obtained by quantitative survey evidence of the perceptions of lawyers on the usefulness of AI in their own present legal work. Starting with the tension between hype and reality, the chapter highlights some unifying themes that weave through the different surveys with respect to lawyer knowledge of AI and ML tools, barriers to their effective use in practice and how legal teams using such tools effectively can generate sustainable competitive advantage. The research questions posed at the outset of this chapter can now be answered.

There is some awareness on the part of lawyers of AI and ML based legal tech tools available to them although this awareness is not across the board and it will vary depending on the type of organisation that an individual lawyer works in. While some lawyers see new practice opportunities in AI and ML based legal tech tools that did not exist previously, the value proposition for the use of these tools to create a sustainable competitive advantage is hard to gauge due to the lack of industry-wide accepted metrics to measure performance, efficiency and cost-effectiveness. This problem is compounded by the fact that many lawyers do not fully understand how AI and ML based legal tech tools work. While one might argue that a lawyer does not need to know how the Internet works to use emails or store their documents in a cloud server, this argument has less credibility when one takes into account the highly competitive nature of entrepreneurial legal practice that characterises the competitive market for legal services.

Most notably, we see that AI and ML based legal tech tools tend to be a value-added component for legal work done at high-end law firms, sophisticated MDTs and large corporate legal departments who can incorporate such new technologies in a scalable manner in their operating models. However, this does not imply that AI and ML based legal tech tools do not play a role in more workaday legal environments as computer-assisted legal research services, billing and timesheet applications and cloud-based legal document management systems are now the norm in most legal practice settings. Further research in the form of a qualitative survey of non-lawyer legal tech professionals with follow-on semi-structured interviews is needed to offset the confirmation bias posed by the surveys studied in the meta-synthesis

[78] Expert 3 Purposive Survey Questionnaire Response—8 February 2021.

[79] Expert 3 Purposive Survey Questionnaire Response—8 February 2021.

that presumes that lawyers as opposed to legal tech professionals are best able to assess the sustainable competitive advantage that these innovative tools may offer legal practice going forward.

AQ2

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# Author Queries

**Chapter 21**

| Query Refs. | Details Required | Author's response |
|---|---|---|
| AQ1 | Please note that the footnote 40 has been set in the figure 1 caption, as footnotes are not allowed in artwork. | |
| AQ2 | References 'Agee (2009), Alarie et al. (2018), (2020) American Bar Association (2020), Butina (2015), Cooper (2010), Denscombe (2014), Elo et al. (2014), Etikan et al. (2016), Finfgeld (2003), Glaser and Strauss (1999), Glattfelder (2019), Marshall (1996), Noblit and Hare (1988), Palmer (2020b), Rossman and Wilson (1985), Schreiber et al. (1997), Stanford Law School (2021), Thomson Reuters Institute (2021), Timulak (2013), Venkatesh et al. (2013).' are given in list but not cited in text. Please cite in text or delete them from list. | |