LAW AND TECHNOLOGY IN SINGAPORE

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CHAPTER 6

Technology and the Legal Profession

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06.001 Technology is increasingly relied on in many areas of legal work and operations. This is a major driving force of change that has been extensively analysed and discussed elsewhere,[1] not least by our Chief Justice,[2] and in earlier chapters of this book. In this chapter, we explore certain professional and ethical issues raised by these trends. The first part[3] focuses on potential issues with applying *existing* professional conduct and ethical rules. Next, looking to the future, the second part[4] considers how far *new* rules may be necessary, particularly where emerging technologies such as legal analytics are concerned.

A. ISSUES SURROUNDING EXISTING RULES

1. Technological competence

06.002 In October 2020, the Singapore Ministry of Law published a Technology and Innovation Roadmap Report ("TIR Report") identifying a number of key technologies, such as document generators and legal cybersecurity solutions, as crucial to legal practice and highly sought after. Industry commentators have also pointed out that technologies like web-conferencing tools, cloud-based case or practice-

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1 See, *eg*, Amelia Chew *et al*, "Legal Technology in Singapore" *LawTech.Asia* (2nd Ed, September 2019).

2 See, *eg*, Sundaresh Menon, Chief Justice of Singapore, address at the Opening of the Legal Year 2020 (6 January 2020). See also Sundaresh Menon, Chief Justice of Singapore, "Deep Thinking: The Future of the Legal Profession in an Age of Technology", gala dinner address at the 29th Inter-Pacific Bar Association Annual Meeting and Conference (25 April 2019).

3 See paras 06.002–06.038.

4 See paras 06.039–06.058.

management systems, and digital signature software have become critical to continuing operations amidst the COVID-19 pandemic.[5] Indeed, many of these software tools had been already been identified as "baseline" technologies by the Singapore Academy of Law in 2015.[6] As legal technology continues to mature and gain adoption, more advanced applications, such as artificial intelligence ("AI")-powered document review systems offered by the likes of Luminance and Kira Systems, may be increasingly seen as forming part of this "baseline".

06.003 The legal profession's use of and reliance on technology is by now unquestionable and will likely only increase.[7] In light of these systemic changes, the American Bar Association's Model Rules of Professional Conduct was amended in 2012 to expressly impose on lawyers a duty of technological competence.[8] To what extent might a similar duty exist in Singapore? This may be unpacked into three sub-questions. Under the existing legal professional regulatory framework:

(a) To what extent are legal professionals expected to utilise technology in the course of their work?

(b) What are the standards by which legal professionals should be held to in the use of technology?

(c) To what extent are legal professionals expected to understand technology in the course of their work?

06.004 A principle of immediate relevance may be found in rule 5 of the Legal Profession (Professional Conduct) Rules 2015[9] ("LPPCR"). A quick perusal of rule 5 would show that the obligations under rules 5(2)(*c*) and 5(2)(*f*) would be of import: to act with reasonable

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5 Serena Lim & Brad Mixner, "Technology Innovation in a Time of Remote Working – From Coping to Thriving" *Law Gazette* (May 2020).

6 "Legal Technology Manual for Lawyers" *Singapore Academy of Law* <https://www.sal.org.sg/Resources-Tools/Legal-Technology-Vision/Legal-Technology-Manual> (accessed 28 January 2021).

7 A 2018 survey by the Ministry of Law and the Law Society on the perception of practitioners towards legal professionals showed that three in four decision-makers in law firms believed in the need to increase the level of technology adoption. See Ministry of Law & The Law Society of Singapore, "Legal Technology in Singapore: 2018 Survey of Legal Practitioners" (2018) <https://www.lpi.lawsociety.org.sg/wp-content/uploads/2019/03/LawSociety_LegalTech_Summary_Report_07-Mar.pdf> (accessed 31 January 2021).

8 "Rule 1.1 Competence – Comment" *American Bar Association* <https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_1_competence/comment_on_rule_1_1/> (accessed 28 January 2021). See also Jamie Baker, "Beyond the Information Age: The Duty of Technology Competence in the Algorithmic Society" (2018) 69 SC L Rev 557.

9 S 706/2015.

diligence and competence in the provision of services to the client and to use all legal means to advance the client's interests, to the extent that the legal practitioner may reasonably be expected to do so. As Jeffrey Pinsler noted in his commentary:[10]

> ... as a competent and diligent lawyer would use *all legal means to advance his client's interests (to the extent that he may reasonably be expected to do so)*, his failure to act reasonably in advancing his client's interests would constitute a breach of his duty to be competent and/or diligent. [emphasis added]

06.005 Also germane is guidance provided by the Law Society's Practice Directions and Guidance Notes 2018/2019 ("PDGN") and, in particular, Guidance Note 3.4.1 on cloud computing technologies.[11] A number of other legal rules are relevant as well. However, as this chapter does not seek to be a comprehensive treatise on Singapore's legal professional regulations,[12] we will not enumerate them here. We focus, instead, on addressing each of the sub-questions above in turn.

(a) Extent to which legal professionals expected to utilise technology

06.006 Given the myriad types of legal work, practice areas and the continued development of technology, among other factors, there is, in all likelihood, no bright line capable of defining an "acceptable" level of technology use.[13] Instead, the right approach to take is to see what is pragmatic, proportionate and reasonable in the circumstances. The LPPCR does not make any particular reference to the use of technology (save for stipulating that electronic advertising also falls within the publicity rules). If one sees the use of technology as an evolving variable to be applied realistically to clear principles,[14] greater clarity emerges. Some of these principles include the need to:

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10 Jeffrey Pinsler SC, *Legal Profession (Professional Conduct) Rules 2015: A Commentary* (Academy Publishing, 2016) at para 05.037.

11 Discussed further at paras 06.009–06.011.

12 Jeffrey Pinsler SC, *Legal Profession (Professional Conduct) Rules 2015: A Commentary* (Academy Publishing, 2016) at para 05.037.

13 This is echoed in *Lie Hendri Rusli v Wong Tan & Molly Lim* [2004] 4 SLR(R) 594 at [42], in which the court noted that "there is no magic formula that can reconcile the myriad of case law principles and any attempt to distil such principles much be tinged with pragmatism ... no single touchstone will suffice to illuminate or unravel the existence and extent of a duty in any given matrix".

14 See *Lie Hendri Rusli v Wong Tan & Molly Lim* [2004] 4 SLR(R) 594 at [43] and [44], in which the court noted that the "[e]xpectations of the profession must be tied to reality". The court also astutely noted that:

> The real issue, in any given case, is whether the court views the standards applied and skills discharged by the particular solicitor as consistent

(cont'd on the next page)

(a) "where practicable, promptly respond to the client's communications",[15] including telephone calls and electronic mediums such as e-mail and texting;
(b) provide "timely advice" to the client;[16] and
(c) maintain a reasonable level of communication with his or her client so that the latter is never left in the dark about any significant matter or development.

It follows that it may not be reasonable or practical, in most cases, to say that correspondence was not conducted in a timely manner merely due to the use of snail mail rather than e-mail, or worse still, not hold meetings with a client because of a lack of knowledge about using remote video-conferencing tools.[17]

06.007 Apart from such clear-cut situations, however, legal professionals must inevitably have some flexibility in how they are expected to render legal services *provided* that eventual standards of service do not fall below that prescribed in the LPPCR or the Legal Profession Act[18] ("LPA"). For instance, it is not *mandatory*, even if it would be helpful and efficient, to conduct *all* legal research online – there is always the time-honoured tradition of visiting the library. It would also not be *mandatory* to have a cloud-based case or practice management system if a lawyer could manage all attributes of a case through a file-and-paper system (as we understand, anecdotally, that many lawyers still do). It would, however, be against the spirit of the rules – and therefore unlikely a valid excuse – to say that one could not address court or client communications in a timely manner because one did not have the technology systems in place to manage one's workload.[19] Of further relevance here is that the Canadian courts have held that where significant cost savings may be

with the legal profession's presumed responsibilities and obligations to its clients. This is not a fossilised concept and standards periodically evolve as well as vary in different factual matrices.

15 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 5(2)(*f*).

16 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 5(2)(*h*).

17 See *Capic v Ford Motor Co of Australia Ltd* [2020] FCA 486, in which the Australian Federal Court of Appeal refused the application for an adjournment of trial in view of COVID-19, on the basis that virtual trial was an available option.

18 Cap 161, 2009 Rev Ed.

19 This is, in our view, an extension of an argument that one is too burdened by a heavy caseload – a point that has been dismissed by a disciplinary tribunal in *The Law Society of Singapore v Udeh Kumar s/o Sethuraju* [2014] SGDT 9.

reaped for the client or where large amounts of documents are to be reviewed, lawyers may be obliged to utilise technology.[20]

(b) *Standards by which legal professionals should be held to in the use of technology*

06.008 Assuming for now that the duty of reasonable diligence or competence in rule 5 of the LPPCR does encompass certain duties in relation to *technological* competence, the next logical question concerns the *standards* to which lawyers may be held. This question may be asked in three distinct (though related) contexts:[21]

(a) the standard of competence lawyers should have when *using* technology themselves, such as the level of knowledge and familiarity which the lawyer is expected to have with said technologies ("use standards");
(b) the standard of *supervision* they may be expected to exercise over legal technology vendors and operators who may not be authorised in the practice of law ("supervisory standards"); and
(c) standards in *informing* clients about how technology is used in handling their matters, as well as advising on relevant legal technologies which might be of service ("advice standards").

Before proceeding, we clarify that this is merely a *proposed* framework to consider possible duties that might be imposed on practitioners rather than plausible *interpretations* of rule 5 of the LPPCR as it presently applies.

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20 See, *eg*, the Canadian case of *Cass v 1410088 Ontario Inc* 2018 ONSC 6959, in which the court opined that counsel could and should have saved costs with the use of technologies, such as artificial intelligence tools. See also *Drummond v The Cadillac Fairview Corp Ltd* 2018 ONSC 5350, in which the court found that computer-assisted legal research "is a necessity for the contemporary practice of law"; thus, fees for its use were a recoverable disbursement. While such pronouncements have yet to be heard from our courts, this is an evolving space that is worth watching.

21 The present analysis builds on the framework suggested in the following article: Jennifer Lim Wei Zhen & Lee Ji En, "The Evolution of Legal Ethics with the Advent of Legal Technology" *LawTech.Asia* (23 December 2020). There, the commentators had argued that rr 5(1)(*b*) and 5(1)(*d*) of the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) ("LPPCR") may oblige lawyers to know of available legal technologies, and that rr 5(1)(*c*), 5(2)(*b*) and 5(2)(*j*) of the LPPCR may oblige lawyers to inform their clients of relevant technologies at the lawyers' disposal and advise them on how far they can and should be used to further the client's best interests. An (imperfect) analogy may also be drawn here to the three aspects of medical duties, being advice, diagnosis, and treatment. See *Hii Chii Kok v Ooi Peng Jin London Lucien* [2017] 2 SLR 492 at [95]–[98].

06.009 Use standards have in fact been discussed earlier in the context of the duty question. Here, another pertinent issue lies in the use of cloud computing services, which is defined by the PDGN as "IT services provided by a cloud service provider which users can access on demand through the Internet".[22] The PDGN further describes cloud computing as most commonly used for storing and transferring files across several devices, through common services like Microsoft Office 365, Google Drive, Dropbox and Amazon Web Services. These services would likely have seen increasing use as a means of collaboration in the midst of the COVID-19 crisis to support remote working arrangements.[23] However, we also expect that this Guidance Note would also apply in relation to cloud-based legal technology tools provided in a "software-as-a-service" format such as Clio, RocketMatter,[24] and ContractPodAI.[25]

06.010 To this end, while the PDGN notes that "the Law Society has no objection to the use of cloud services", this *is* subject to the need to "understand ... [relevant] issues ... and whether, as a result of these issues, there is a risk that your ethical and professional obligations may be compromised",[26] including obligations under the LPA, LPPCR, and Singapore personal data protection laws and regulations. The PDGN goes further to highlight several of these relevant issues. These are:

(a) ensuring adequate systems to maintain client confidentiality;[27]
(b) where data is stored in servers overseas, meeting obligations to protect personal data[28] and not to transfer personal data out of Singapore without ensuring a standard of protection comparable to that required under the Personal Data Protection Act 2012[29] ("PDPA");[30]

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22 Law Society of Singapore's Practice Directions and Guidance Notes 2018/2019 (hereinafter "PDGN") Guidance Note 3.4.1, para 2.
23 Josh Lee, "Out-of-office: Preparing Your Firm for a Remote-working Future" *LawTech.Asia* (13 February 2020).
24 Clio Team, "SaaS and Cloud Technology for Lawyers" *Clio* (December 2014) <https://www.clio.com/blog/saas-cloud-technology-for-lawyers/> (accessed 28 January 2021).
25 Amulya Dutta, "SaaS in Legal Technology: What Are My Options?" *ContractPodAI* <https://contractpodai.com/news/saas-in-legal-technology-options/> (accessed 28 January 2021).
26 PDGN Guidance Note 3.4.1, para 5.
27 See r 35(4) of the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015).
28 See s 24 of the Personal Data Protection Act 2012 (Act 26 of 2012).
29 Act 26 of 2012.
30 See s 26 of the Personal Data Protection Act 2012 (Act 26 of 2012) and reg 9 of the Personal Data Protection Regulations 2021 (S 63/2021).

(c) where the service provider has access to the legal professional's data or accesses his or her data to respond to a foreign authority's request, meeting the duty of confidentiality;[31]

(d) in respect of business continuity and access to documents, meeting the duty of competence and diligence[32] and duty to retain documents for prescribed periods of time;[33]

(e) meeting the obligation to protect personal data[34] and duty of confidentiality[35] in respect of security measures provided by a service provider; and

(f) in respect of whether a service provider can retain data after the end of a client's retainer, meeting the obligation to retain personal data only as long as necessary[36] and to return documents when the retainer ends.

06.011 Rather than reiterating the relevant section of the PDGN here, we note once more that this section is "prescriptive" and intended to serve only as a guide. It does not function as an endorsement for or prohibition from using any particular service provider. Nevertheless, these guiding points are likely to be useful guidance should a tribunal or court be called upon to decide on any issue of professional ethics regarding the use of cloud technologies in the future.

06.012 It has been observed that supervisory standards in particular may be a frequent issue because many legal technology tools like legal chatbots and automated document creation or document review tools provide the opportunity for legal or legal-related work to be commoditised and automated.[37] Rather than requiring lawyers to be "on standby", legal chatbots could automatically address common queries from clients, with more advanced queries for legal information directed to a trainee lawyer or paralegal, and with the most complex questions (especially those relating to legal advice) raised to the supervising lawyer if needed. For another example, paralegals or legal technologists could also be asked to help enter data into a contract generation platform to produce a draft contract for the lawyer to review.

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31 See r 6 of the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015).

32 See r 5 of the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015).

33 See, *eg*, s 70E of the Legal Profession Act (Cap 161, 2009 Rev Ed).

34 See s 24 of the Personal Data Protection Act 2012 (Act 26 of 2012).

35 See r 6 of the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015).

36 See s 25 of the Personal Data Protection Act 2012 (Act 26 of 2012).

37 Jennifer Lim Wei Zhen & Lee Ji En, "The Evolution of Legal Ethics with the Advent of Legal Technology" *LawTech.Asia* (23 December 2020).

06.013 How far should lawyers be expected to supervise these software tools and processes? On one hand, it is difficult to argue that legally trained human oversight is completely unnecessary. Whether these systems are programmed and used correctly could significantly affect the client's legal interests, and one of the lawyer's core duties is precisely these client's interests.[38] On the other hand, requiring too much oversight would defeat the very purpose of automation, which is to *reduce* legal costs and human effort. Further, lawyers may not be best placed to police the more technical aspects of the technology process. Asking lawyers to check if a legal machine learning system has been properly trained, tuned, or fit on the right dataset(s), for instance, would presumably put most in a predicament.

06.014 In this light, an important question is how far lawyers may *delegate* oversight of these technology tools to other more specialised persons in a firm. In principle, there should be room for lawyers to *reasonably* rely on other professionals in this area provided always that the applicable rules and guides continue to be abided by. In this regard, for lawyers, rule 32 of the LPPCR and the PDGN[39] continue to be applicable. Rule 32 of the LPPCR states that legal practitioners must, "regardless of the legal practitioner's designation in a law practice, exercise proper supervision over the staff working under the legal practitioner in the law practice". The PDGN gives colour to this rule by setting out the following (relevant) guidelines:

> (a) A legal practitioner shall ensure that he/she remains responsible for all professional actions of a paralegal and a paralegal performs his/her duties, at all times, under the constant supervision of the legal practitioner in relation to such paralegal's involvement in any legal matter.
>
> ...
>
> (d) Legal practitioners must ensure that paralegals refrain from engaging in any form of unsupervised conduct in litigation matters.
>
> ...
>
> (f) Section 77 of the LPA provides that no solicitor shall wilfully and knowingly undertake any action that may amount to enabling an unauthorised person to practise law in Singapore. Since a paralegal falls within the ambit of the term 'unauthorised person' under the said section any action contrary to Section 77 LPA may warrant a disciplinary proceeding against the solicitor.

06.015 While the authors of this chapter are not aware of any cases brought before the disciplinary tribunal or the courts regarding the flouting of rule 32 of the LPPCR or the PDGN in relation to the use of legal technology, it is clear that a practising lawyer should, at the very

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38 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 5(2)(*f*).

39 See Guidance Note 3.7.1 of the PDGN.

least, ensure substantive and continuous oversight over any eventual legal service provided to the client through the legal technology tool, such as the provision of legal *advice*, or the generation of a document with legal effect. Claiming that oversight was not given just because a matter appeared routine or simple is unlikely to pass muster. The exercise of final oversight over any legal service provided ensures that the service provided to a client continues to be held to standards set out in the LPA, LPPCR and relevant guides, thus maintaining the protective role these regulations play for recipients of legal services.[40]

06.016 Turning to advice duties, any obligation to inform clients on technology use should be sensitive to commercial realities. For instance, imposing a duty on legal professionals today to inform their clients that they are using LawNet instead of the hardcopy Law Reports would probably draw more than a few furrowed brows. Advice duties are more likely to be relevant when the technologies in question are more advanced or less widely adopted. For example, in using the output of an outcome simulator to shape a mediation settlement, it is quite likely that clients would appreciate being informed about the option of using such technology before a lawyer proceeds to use it. If anything, these paragraphs evince once more that there is no bright line, and that the eventual position depends on what is pragmatic, proportionate and reasonable in the circumstances.

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40 Another issue of note is the outsourcing of low-value work and, correspondingly, whether the duty of supervision should extend to third-party providers of legal technology tools used. While this would presently appear to fall outside the ambit of r 32 of the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) (given the wording "supervision over the staff working under the legal practitioner in the law practice"), it has been noted in Jennifer Lim Wei Zhen & Lee Ji En, "The Evolution of Legal Ethics with the Advent of Legal Technology" *LawTech. Asia* (23 December 2020) that consideration may want to be given to Rule 5.3 of the American Bar Association's Model Rules of Professional Conduct, which also imposes a duty on lawyers to supervise non-lawyers *outside* the firm, as long as these parties are involved in assisting the lawyers in the provision of legal services. This includes, for instance, a third-party vendor hired to handle document review in a complex litigation or document automation processes in a complex commercial deal. The authors of the article suggest that were this rule to be similarly adopted in Singapore, the scope of such duties should be set out clearly for better effective compliance, or such rules could negate cost efficiencies offered by legal process outsourcing. However, as this point deals with matters of policy, we do not propose to canvass it further here, save to raise it as a point of future consideration.

(c) Extent to which legal professionals expected to understand technology

06.017 A lawyer's understanding of technology can likewise be analysed along two dimensions – understanding the technology used in the practice of law itself, and understanding technology, where relevant, to the facts of a particular matter.

06.018 Again, the touchstone (for lawyers) for both dimensions can be found in rule 5(1)(*d*) of the LPPCR, which requires legal practitioners to ensure that they have the relevant knowledge, skills and attributes required for each matter undertaken on behalf of the client, and to apply the knowledge, skills and attributes in a manner appropriate to that matter. In respect of understanding technology relevant to the facts of a matter, it is well established that lawyers must have the requisite knowledge, experience and skill in the area of law which relates to the instructions and be prepared to exercise all efforts in achieving the client's objectives.[41]

06.019 As for the technology used in the practice of the law itself, we would posit that the concept of proportionality would play a key function: in using technologies that clients and/or the court may be more familiar with and thus trust, there may not be as deep a need to understand the underlying technology and risks; where using more advanced and nascent technologies, however, legal professionals should be more informed as to how the technology functions, its uses and risks in order to better explain it to the client (or court) when it is used. For example, while legal professionals may not need to explain the nuts and bolts of the Internet to clients, it may be prudent to do so for an AI-enabled document review tool and how it has been integrated in the legal professional's workflow. As an extension to these points, we note that there have been suggestions to introduce new obligations to exercise independent judgment in respect of the use of AI-powered legal technology tools.[42] This is considered in more detail below.[43]

06.020 In closing this subsection, we emphasise that the LPA and LPPCR both do not explicitly stipulate a duty of technological competence (unlike, for instance, the American Bar Association's Model Rules of

41 Jeffrey Pinsler SC, *Legal Profession (Professional Conduct) Rules 2015: A Commentary* (Academy Publishing, 2016) at para 05.039.

42 Gan Jhia Huei, "Professional Judgment as a Core Ethical Value", research paper presented at the Legal Research and Development Colloquium 2020 (19 May 2020) at pp 7–12.

43 See paras 06.039–06.058.

Professional Conduct).[44] As it stands, therefore, the above duties and standards would need to be read into rule 5 of the LPPCR. In the analysis above, we have attempted to shed light on the various permutations in which this issue may be approached. Whether or not these duties *should* be read into the LPPCR, whether as a matter of public or legal policy, however, is a separate question this chapter is not equipped to address. We next turn to a more self-contained but no less important issue.

2. Confidentiality

06.021 "Confidentiality lies at the heart of the relationship between the lawyer and his client."[45] Technological advancement and the use of technology, however, have placed the ability to comply with this duty at risk.[46] Overseas bar associations have written about the confidentiality risks of using technologies like online cloud services and e-mail. A 2020 survey by the American Bar Association found that confidentiality and security were lawyers' top concerns in using cloud platforms.[47] Closer to home, the Personal Data Protection Commission penalised a law firm in June 2019 for the unauthorised disclosure of its client's personal data – a first reported decision relating to a law practice.[48]

06.022 Technology could raise issues surrounding confidentiality in five ways:

(a) *The Internet.* The provision of legal services through the Internet increases the number of instances where the duty of confidentiality may be found to have arisen.

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44 Comment 8 to Rule 1.1 of the American Bar Association's Model Rules of Professional Conduct states:

> Maintaining Competence: To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.

45 Jeffrey Pinsler SC, *Legal Profession (Professional Conduct) Rules 2015: A Commentary* (Academy Publishing, 2016) at para 06.003.

46 Timothy J Toohey, "Beyond Technophobia: Lawyers' Ethical and Legal Obligations to Monitor Evolving Technology and Security Risks" (2015) 21(3) Rich J L & Tech 9 at 3. See also Chloe Widmaier, "The Impact of Modern Technology on the Duty of Confidentiality" *Justice and the Law Society* (29 August 2016).

47 Dennis Kennedy, "2020 Cloud Computing", *American Bar Association Tech Report 2020* (26 October 2020).

48 The Council of the Law Society, "Data Protection Advisory" (12 July 2019) <https://www.lawsociety.org.sg/wp-content/uploads/2020/02/Data-Protection-Advisory.pdf> (accessed 29 January 2021).

(b) *E-mail.* The ease of e-mail invites mistakes and accidents such as when e-mails are sent to the wrong recipient.

(c) *Electronic storage.* The ease with which documents may be stored electronically, and the fact that computers can now store large amounts of information, increases the propensity of computers becoming hacked, causing valuable information to be lost.

(d) *Metadata.* The use of electronic documents also generates metadata (that is, data about data) that, if mismanaged, can be used to gain confidential yet valuable information.

(e) *Cloud computing.* The provision of legal technology tools over the cloud, which requires client information to be sent to these cloud platforms, increases the risks of data being lost through cyberattacks, or for such data to be unknowingly used for secondary or tertiary purposes. For instance, where lawyers upload submissions to online research tools to search for case precedents or use online document generation platforms, the documents or information uploaded may contain sensitive data related to the case.[49]

06.023 The obligations of confidentiality which bind lawyers are set out in rule 6 of the LPPCR. Rule 6(1) clarifies that the duty of a lawyer to act in the best interests of his or her client includes a responsibility to maintain the confidentiality of any information that the lawyer acquires in the course of the lawyer's professional work. Rule 6(2) then states that a lawyer:

> ... must not knowingly disclose any information which –
> (*a*) is confidential to his or her client; and
> (*b*) is acquired by the legal practitioner ... in the course of the legal practitioner's engagement.

This rule is subject to rule 6(3), which sets out situations in which a lawyer may nevertheless disclose any information referred to in rule 6(2).

06.024 As seen in the different ways in which issues of confidentiality may arise, and as with the issue of technological competence, there are different dimensions at play here. In this part, we deal with three issues pertaining to confidentiality:

(a) confidentiality in relation to the use of cloud computing services;
(b) confidentiality and cybersecurity; and
(c) confidentiality and client consent.

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49 Jennifer Lim & Lee Ji En, "The Evolution of Legal Ethics with the Advent of Legal Technology" *LawTech.Asia* (23 December 2020).

(a) Confidentiality in relation to the use of cloud computing services

06.025 The PDGN highlights some of these key issues of confidentiality that arise regarding the use of legal technology tools, in particular for those provided as cloud-based services. Specifically, the PDGN clarifies that:

(a) As a general issue, the management of the law practice should take reasonable steps to ensure that the law practice has adequate systems, policies and controls in place to maintain client confidentiality, as part of the law practice's obligations under rule 35(4) of the LPPCR.[50]

(b) Where a cloud service provider has access to data held by a lawyer, or accesses the lawyer's data to respond to a foreign authority's request, the lawyer should ensure that the contractual terms state that the data would not be accessed for any secondary purpose (such as advertising), as part of the lawyer's obligation under rule 6 of the LPPCR.[51]

(c) In respect of the security measures provided by cloud service providers, lawyers should select a service provider with appropriate security measures in place (for example, accreditation or encryption technology that meets or exceeds international standards). The lawyer should also take reasonable steps to negotiate for contractual remedies if the cloud service provider is hacked, and ensure that his or her law practice has good internal security practices. This will help the lawyer in meeting his or her obligations under rule 6 of the LPPCR, as well as the law practice's obligations to protect personal data under section 24 of the PDPA.[52]

06.026 Far from discouraging the use of cloud technology, however, as mentioned above, the PDGN in fact explicitly notes that the Law Society does not object to the use of cloud services. Such a position is in line with many overseas bar associations. In the US, for instance, at least 19 state bodies have found cloud computing to be ethical – as long as reasonable steps (such as ensuring that service providers are bound by confidentiality obligations or having technologies to guard

50 PDGN Guidance Note 3.4.1, para 11.
51 PDGN Guidance Note 3.4.1, para 11.
52 PDGN Guidance Note 3.4.1, para 11.

against infiltration of data)[53] are taken to protect confidential data from unauthorised third-party access.[54]

06.027 We submit that the position in the PDGN is a practical one, considering the ubiquity of cloud service providers in everyday life and the need for legal practice to keep pace with everyday realities. Turning to legal practitioners, we submit that how much lawyers must do to protect client confidentiality under rule 6 of the LPPCR when utilising cloud technologies would depend on the ultimate touchstone of "reasonableness". In other words, lawyers and law practices must at least take reasonable precautions to maintain confidentiality.[55] To that end, in our view, the recommendations set out in the PDGN (as well as other related advisories from the Advisory Committee of the Law Society) would be illuminating if an issue is brought before the court as to the reasonable precautions that should be taken to preserve client confidentiality *viz* the use of cloud-based legal technology.

(b) Confidentiality and cybersecurity

06.028 As regards cybersecurity, a different rule comes into focus. Rules 35(4) to 35(6) of the LPPCR, which focus more broadly on law practices, require law practices to (in summary):

(a) Take reasonable steps to ensure that it has in place adequate systems, policies and controls for ensuring that the law practice and its lawyers comply with laws, practice directions, guidance notes and rulings (collectively shorthand for "legal requirements"), including legal requirements relating to client confidentiality.[56] This could include training all relevant employees on such legal requirements, and their responsibilities thereunder.[57]

(b) Assess and make changes where necessary so that the systems, policies and controls continue to ensure that the law practice and its legal practitioners continue to comply with the relevant legal requirements, including those in relation to client confidentiality.[58]

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53 Timothy J Toohey, "Beyond Technophobia: Lawyers' Ethical and Legal Obligations to Monitor Evolving Technology and Security Risks" (2015) 21(3) Rich J L & Tech 9 at 39.

54 Timothy J Toohey, "Beyond Technophobia: Lawyers' Ethical and Legal Obligations to Monitor Evolving Technology and Security Risks" (2015) 21(3) Rich J L & Tech 9 at 37–38.

55 Jeffrey Pinsler SC, *Legal Profession (Professional Conduct) Rules 2015: A Commentary* (Academy Publishing, 2016) at para 06.007.

56 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 35(4).

57 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 35(5).

58 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 35(6).

(c) Take appropriate cybersecurity measures. While not explicitly referred to in the LPPCR, the need to take appropriate cybersecurity measures would most likely also fall within the ambit of rules 35(4) to 35(6) of the LPPCR. This is not only practically evident – a cyber-attack on a law practice could expose sensitive client data, threatening the law practice's ability to comply with its obligations under the LPPCR – but also buttressed by statements made to that effect in the Law Society's Guide to Cybersecurity for Law Practices[59] ("the Cybersecurity Guide") and other commentators.[60]

06.029 A fairly recent and representative set of observations on the state of Singapore law firms' cybersecurity measures come from the Law Society of Singapore's COVID-19 Legal Profession Impact Survey published in June 2020. Focusing on the trend of working from home, the survey interestingly found that very few law firms implemented additional cybersecurity measures to ensure that the security of client data and intellectual property were not at risk as a result of remote working. This stance signals that either: (a) sufficient cybersecurity protections were already in place for many firms; or (b) a combination of factors (lack of awareness and budgetary constraints) may have resulted in the non-adoption of cybersecurity measures.

06.030 The natural question then arises as to the "appropriate" level of cybersecurity measures required. Rule 35(4) of the LPPCR sets the standard at taking "reasonable steps". While the content of this standard would be a fact-specific inquiry, indirect guidance could be drawn from *Harsha Rajkumar Mirpuri (Mrs) née Subita Shewakram Samtani v Shanti Shewakram Samtani Mrs Shanti Haresh Chugani*[61] ("*Harsha*"). *Harsha* concerned the impregnability of the information barriers (that is, "Chinese walls") for the purposes of preventing the leakage of a former client's confidential information. It was held that the burden is on the law firm to produce "clear and convincing evidence that 'effective' measures have been taken to ensure that no disclosure will occur".[62] The High Court's guidance was:[63]

> ... whether the measures taken to protect against disclosure are effective or ineffective must depend, in each case, on a range of factors, including the nature of the work done for the former client, the timing of the creation of the information barrier, the size of the law firm, the physical locations of

59 Cybersecurity and Data Protection Committee 2019–2020, Law Society of Singapore, *Guide to Cybersecurity for Law Practices* (30 March 2020) at p 26.

60 Irene Ng, "Cybersecurity" *Singapore Academy of Law* (24 September 2018).

61 [2018] 5 SLR 894.

62 *Harsha Rajkumar Mirpuri (Mrs) née Subita Shewakram Samtani v Shanti Shewakram Samtani Mrs Shanti Haresh Chugani* [2018] 5 SLR 894 at [67].

63 *Harsha Rajkumar Mirpuri (Mrs) née Subita Shewakram Samtani v Shanti Shewakram Samtani Mrs Shanti Haresh Chugani* [2018] 5 SLR 894 at [68].

departments within the firm, the number and seniority of tainted lawyers, and so on.

06.031 While *Harsha* revolved primarily around *informational* security, obvious links might be drawn to the context of *cybersecurity*. Computers, after all, are but instances of *information* technology, and cyberspace in essence comprises information stored on computers. Thus, cybersecurity breaches are often reduced to lapses in informational security: a divulged password, for instance, or a data leak. Principles relevant to the latter should therefore be readily applicable to the former. In this light, we propose further relevant factors to be taken into consideration: (a) the relevant domain that saw a cybersecurity intrusion (for example, e-mail, database, computer equipment, website); and (b) the criticality of the cybersecurity vulnerability (for example, whether the vulnerability was a single-point vulnerability that would have caused a data leak if breached, or if there were back-up security features to address such vulnerabilities). To this end, we also find the Cybersecurity Guide helpful in setting out the key cybersecurity domains that a law practice should pay attention to.[64]

(c) *Confidentiality and client consent*

06.032 Law practices may find it worthwhile to inform their clients about how their data may be used, such as how it may be shared with external service providers, as well as to explain relevant cybersecurity risks involved.[65] It may also be prudent to obtain the client's consent prior to using legal technology tools, which could be included in a letter of engagement. While such practices would not necessarily free lawyers of their confidentiality obligations, they would be helpful to ensure that clients understand how their data would be accessed and used, and reduce the risk of allegations that the lawyer's use of legal technology tools is in breach of the lawyer's duty of confidentiality.

3. Professional ethics in an age of teleconferencing

06.033 Zoom hearings, a function of pragmatic necessity in a COVID-19 environment, present unique and unusual challenges: a boon in aiding access to justice yet a bane to litigants perceiving that they will be prejudiced by being deprived of a right to be heard *in person*. Although

64 Cybersecurity and Data Protection Committee 2019–2020, Law Society of Singapore, *Guide to Cybersecurity for Law Practices* (30 March 2020).

65 Jennifer Lim Wei Zhen & Lee Ji En, "The Evolution of Legal Ethics with the Advent of Legal Technology" *LawTech.Asia* (23 December 2020).

legal challenges have been filed in the US courts,[66] the due process point has yet to be tested in Singapore.

06.034 Practically speaking, most Singapore court lawyers have adapted to, and are fast becoming adept in, advocating in Zoom hearings. There are considerable savings in travel time and related costs and expenses as lawyers "zoom" in and out of a hearing. These practical advantages in turn translate to cost savings for a client.

06.035 From an advocacy perspective, remote hearings of this nature require nuanced persuasion due to the limited attention span of participants and possible Zoom fatigue.[67] However, advocates zooming in to focus on key issues, core documents and principal arguments ultimately end up as more focused and more persuasive. As the Judiciary pivots on online court hearings, two legitimate concerns from an administration of justice perspective need to be tackled: (a) securing open justice; and (b) impact on quality of justice.[68]

06.036 Witness evidence entails evidential, technological and ethical safeguards. In an unreported decision of Lee Seiu Kin J,[69] the High Court, in an enlightened view recognising the COVID-19 constraints, allowed evidence of foreign witnesses (both factual and expert) to be given via video-linked testimony. The legislative touchstone is either that there is no unfair prejudice[70] or, in the context of COVID-19 legislation, that it is in the interests of justice.[71] Ethical parameters for

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66 See *John W Vazquez Diaz v Commonwealth* SJC-13009, reported in Shira Schoenberg, "Defendant Demands In-person, Not Virtual, Day in Court" *HLS Clinical and Pro Bono Programs* (8 December 2020) considering questions about how to balance health and safety concerns with a defendant's right to a fair court process. For the online case citation, see <https://www.ma-appellatecourts.org/docket/SJC-13009> (accessed March 2021). For the decision below *sub nom Commonwealth v John W Vazquez Diaz* SJ-2020-0601, see <https://www.ma-appellatecourts.org/docket/SJ-2020-0601> (accessed March 2021). The only reported decision traced online is at <https://www.mass.gov/doc/john-w-vazquez-diaz-v-commonwealth-sjc-13009/download> (accessed March 2021). In hearing the petition challenging the findings and orders in the court below, Budd J decided that the case raised important and novel legal issues and reserved the same to the full court (presumably, the Commonwealth of Massachusetts Supreme Judicial Court) for argument.

67 Part of the issue involves the brain going on hyperdrive to process non-verbal cues like facial expressions, tone and pitch of voice and body language: see, *eg*, Manyu Jiang, "The Reason Zoom Calls Drain Your Energy" *BBC* (23 April 2020).

68 Aaron Yoong, "Zooming into a New Age of Court Proceedings – Perspectives from the Court, Counsel and Witnesses" [2020] SAL Prac 19.

69 HC/S 331/2018, HC/SUM 1931/2020 (10 June 2020) (unreported).

70 Evidence Act (Cap 97, 1997 Rev Ed) s 62A.

71 COVID-19 (Temporary Measures) Act 2020 (Act 14 of 2020) s 28(2)(*c*)(ii).

witnesses include: (a) no cheat sheet or annotated copy of Affidavits of Evidence-in-Chief or Affidavits;[72] (b) no communication with a third party (including lawyers) via any means while giving evidence; and (c) no one else present during the taking of such evidence.[73] An agreed protocol between counsel needs to be developed.[74] In tandem with that, transnationally, evidence taking of this nature needs careful navigating to avoid colliding into the iceberg of the Convention of 18 March 1970 on the Taking of Evidence Abroad in Civil or Commercial Matters.[75] State sovereignty lies at the heart of that boundary and needs to be honoured. Practically speaking, judges hearing virtual trials seeking to elicit oral evidence from a factual or expert witness resident abroad will require a written opinion confirming that such video-linked evidence taken by the Singapore courts will not run afoul of the relevant foreign law.[76] Cases meriting findings on witness credibility and demeanour are likely inappropriate for Zoom court hearings. Technology is still suboptimal in illuminating the truth on disputed versions of events requiring an assessment of competing oral testimony.

06.037 Importantly, the dignity and decorum of the courtroom must be honoured at all times. While replicating that sense of majesty and mystique is a tall order, lawyers need to intentionally remind themselves that the virtual setting is still fundamentally a courtroom replicate. As a useful illustration of this point, the Family Justice Courts have issued guidelines for the use of video or telephone conferencing. Paragraphs 8 and 9 of the incorporated Guidelines and Procedures for Hearings by "Zoom" Video Conferencing Application emphasise practical pointers on observing proper court decorum during Zoom hearings.[77]

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72 See, *eg*, the Court of Appeal's observations in *Ernest Ferdinand Perez De La Sala v Compañia De Navegación Palomar, SA* [2018] 1 SLR 894 and the first instance decision of Quentin Loh J in *Compañia De Navegación Palomar, SA v Ernest Ferdinand Perez De La Sala* [2017] SGHC 14.

73 Transgressing all or any of these boundaries could result in contamination of the evidence before the court potentially resulting in zero or *de minimis* weight being placed on such oral testimony.

74 "The Bar will explore the feasibility of developing agreed protocols between Counsel for Zoom hearings going forward including on ethical safeguards": Gregory Vijayendran SC, President, Law Society of Singapore, speech at the Opening of the Legal Year 2021 (11 January 2021) at para 15.

75 Convention on the Taking of Evidence Abroad in Civil or Commercial Matters (18 March 1970), 847 UNTS 231 (entry into force 7 October 1972).

76 See the suggestion that a list of greenlighted jurisdictions be curated and updated from time to time to reflect changes in the State's stance on video-linked testimony from last opinion date in Gregory Vijayendran SC, President, Law Society of Singapore, speech at the Opening of the Legal Year 2021 (11 January 2021).

77 Paragraph 8 of the Guidelines and Procedures for Hearings by "Zoom" Video Conferencing Application ("the Guidelines") touch on attire and

(cont'd on the next page)

06.038 Having covered three key present-day issues in the form of competence, confidentiality, and tele-conferencing, this chapter turns next to look at *future* professional ethics issues that may arise in relation to lawyers' use of technology.

B. FUTURE ISSUES

06.039 While familiar use cases such as e-discovery and due diligence may be covered by existing regulations, particularly if broadly and/or purposively interpreted, radically new use cases made possible by emerging technologies may not.[78] In particular, the use of descriptive and predictive legal analytics does not appear to fall within the direct contemplation of the LPPCR. Such analytics include judge analytics, lawyer analytics, and outcome prediction. Each may be used by lawyers, clients, and judges alike. We consider issues raised by each technology in turn.

1. Judge analytics

06.040 Existing judge analytics systems typically provide statistical information on a judge's ruling history. The software may, for instance, report that Judge X has granted 70% of all previous applications they had heard. It may also be possible to condition the data by additional factors such as the time and type of application, parties involved in the case, *etc.* More advanced judge analytics purport to mine the text of judicial opinions to uncover the ideological inclinations of judges.[79]

06.041 It is easy to see how these systems may be useful, particularly if used by judges themselves to identify (personalised) trends and predispositions. Suppose a lower court judge is found to consistently

addressing the court "as if physically in Court" and should "not depart from or exit the hearing without the leave of Court". Paragraphs 9(a)–9(c) of the Guidelines concern, *inter alia*, introduction and identity disclosure of all parties present at the hearing, and state that "[c]ounsel/parties are to ensure that the Zoom hearing proceeds uninterrupted in a private room within their office/home". See "Guidelines for Use of Video or Telephone Conferencing for Hearings (Practice Directions Paragraph 161)" available at <https://www.familyjusticecourts.gov.sg/docs/default-source/resources/reports-and-publications/brochures/guidelines-for-pd-161.pdf> (accessed April 2021).

78 See ch 7 for possible future developments in this regard.

79 On the history and current state of legal analytics, see Mark K Osbeck, "Lawyer as Soothsayer: Exploring the Important Role of Outcome Prediction in the Practice of Law" (2018) 123 Penn State L Rev 41 at 87–101.

award sentences significantly higher than the court average.[80] Presumably both the superior court and the judge themselves would appreciate knowing this. Of course, the important question left unanswered by these aggregate statistics is the causal explanation of *why* this arose. That the judge is unusually strict is not the inevitable answer; it is possible that they have been assigned only cases deserving the harshest sentences. Even so, this may show cause for reviewing the court's case assignment procedures.

06.042 The situation where *lawyers* use judge analytics to formulate litigation strategy may, however, be more controversial. At its most extreme, a lawyer might raise interlocutories or make other tactical moves to attempt to have their case heard by a "friendlier" judge. A less extreme scenario is when analytics is exploited to optimise submissions for judicial preferences.

06.043 In this light, it is worth asking how and to what extent judge analytics should be (professionally) regulated. Concerns over potential forum and judge shopping, amongst other reasons, prompted an outright ban on judge analytics in France.[81] This was criticised by the legal technology community as draconian, self-serving and protectionist.[82] Important arguments exist on both sides of this debate. On one hand, analysing judicial preferences is not new, and has been a staple of both academia and practice.[83] It is presumably not unusual for senior lawyers to advise trainees "Judge X prefers things this way, but do not do the same before Judge Y", hence the adage that "a good lawyer knows the law but a great lawyer knows the judge". In so far as judge analytics merely imbues these existing practices with statistical rigour, it should arguably be encouraged, not outlawed. Further, to ban the analysis of judicial opinions, albeit statistically, seems to conflict with the fundamental values of transparency and openness in the law.

06.044 This argument, however, rests on the assumption that judge analytics indeed promotes analytical rigour and transparency. Two

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80 For a recent academic study on this very subject, see Kevin Kwok-yin Cheng, Sayaka Ri & Natasha Pushkarna, "Judicial Disparity, Deviation, and Departures from Sentencing Guidelines: The Case of Hong Kong" (2020) 17(3) *Journal of Empirical Legal Studies* 580.

81 Justice Reform Act (No 71 of 2019) (France) Art 33. For an analysis of judge analytics and the ban, see Jena McGill & Amy Salyzyn, "Judging by Numbers: How Will Judicial Analytics Impact the Justice System and Its Stakeholders?" (2021) 44(1) Dalhousie LJ (forthcoming).

82 Artificiallawyer, "France Bans Judge Analytics, 5 Years in Prison for Rule Breakers", *Artificial Lawyer* (4 June 2019).

83 For examples, see Jena McGill & Amy Salyzyn, "Judging by Numbers: How Will Judge Analytics Impact the Justice System and Its Stakeholders?" (2021) 44(1) Dal LJ (forthcoming) at fn 32.

concerns may be stated here. First, the statistics may not be *computed* correctly, owing to errors or omissions in the data as well as the algorithms used to calculate them. For instance, if a judge's name is entered or spelt in error, the outcome would wrongly add to or subtract from their ruling rates unless the algorithm is sufficiently robust to attribute the decision to the correct judge. In other words, the analytics provider needs to ensure the mathematical correctness of the numbers. But such quality assurances are costly and providers may not do so on their own accord, particularly if lawyers do not demand them.

06.045 This leads to the second concern. Even if the numbers are computed correctly, they may be *interpreted* wrongly. Lawyers, who are not usually trained in statistical interpretation, may mistakenly believe that the statistics (which show only *correlations* between judge identities and successful applications) suffice to imply *causation* between choosing that judge and a successful application.[84] For the lay public, which lacks *both* legal and statistical training, the risk of judicial statistics spreading misperceptions about the justice system may be even higher.

06.046 In this light, specific rules or guidelines on the use of judge analytics by lawyers may warrant consideration. Compared to federated legal systems like Malaysia or the US, there is less scope in Singapore for within-jurisdiction forum shopping. A France-style total ban may be somewhat extreme, but so too does leaving regulation entirely to the (uninformed) market. Potential middle-ground solutions include requiring analytics providers to explain how their statistics are computed, providing estimated margins of error, and qualifying how lawyers should interpret these statistics.

2. Lawyer analytics

06.047 Parallel to judge analytics is *lawyer* analytics, wherein similar aggregate statistics are reported for lawyers. A preliminary clarification here is that analytics based on win rates and other metrics relating to legal *outcomes* differ from conventional law firm rankings that tend to be computed using surveys conducted amongst law firms and clients. The key difference is that these surveys focus on peer *input* rather than each lawyer's *output*.[85] For instance, in 2020, *The Straits Times*, in collaboration with market researcher firm Statista, produced a ranking of "Singapore's

84 These are altogether different questions requiring altogether different statistical evidence, as Pearl's three levels of causality makes clear: See Judea Pearl & Dana Mackenzie, *The Book of Why* (Basic Books, 2018) at p 28.

85 Though in principle the two should be positively correlated.

best law firms", based on "10,000 recommendations from over 4,000 lawyers, clients and colleagues".[86] Such rankings are neither new nor controversial. Here we focus on outcome-based analytics primarily. As with judge analytics, these are likely least objectionable when used as self-reflection or internal management tools. However, purveyors of lawyer analytics may see law firm *clients* as their target market. One analytics firm, for instance, purports to give users "a very very unfair advantage" because "[t]he vital factor in Litigation is your Counsel's win rate before your judge".[87]

06.048 The inescapable question is how far such analyses may be accurately computed as well as interpreted. Even if prospective users are likely to be in-house counsel with legal training, there is the risk of "win rates" being taken as causation rather than correlation. Indeed, these problems may be more acute where lawyer analytics are concerned. It is arguable that the need to avoid conflating causation and correlation in judicial decision-making is more critical than in choosing a lawyer, given the implications that court judgments can carry. Nonetheless, defining a lawyer "win" is significantly more complex than deciding whether an application was granted or otherwise.[88] Factors such as the original strength of the case, the available evidence and the war chest the lawyer has access to all have a bearing on the matter.[89]

06.049 These concerns explain why rule 43(1)(*b*)(ii) of the LPPCR expressly prohibits legal practitioners from making any "direct or indirect mention of [their or their firm's] success rate" in publicity materials.[90] Notably, however, success rates *may* be used to justify claims to expertise or specialisation.[91] Thus it appears that the concern is less about whether success rates correctly indicate legal skill than it is about the effect that *publicising* them may have on the public whom, as mentioned above, lack the legal training necessary for a nuanced interpretation of what success rates (do not) mean.

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86 "Singapore's Best Law Firms in 2021" *The Straits Times* (16 November 2020).

87 "Legal Analytics" *Premonition* <https://premonition.ai/legal_analytics/> (accessed 31 January 2021).

88 For an academic treatment of what "winning" a case entails in the context of empirical analysis, see Simon Chesterman, "Do Better Lawyers Win More Often? Measures of Advocate Quality and Their Impact in Singapore's Supreme Court" (2020) 15 Asian J Comp Law 250.

89 Simon Chesterman, "Do Better Lawyers Win More Often? Measures of Advocate Quality and Their Impact in Singapore's Supreme Court" (2020) 15 Asian J Comp Law 250 at 262.

90 *Contra* how this UK family law firm proudly markets its success rate: "Why Us?" *Austin Kemp* <https://austinkemp.co.uk/why-us-divorce-lawyer-family-solicitor/90-success-rate/> (accessed 31 January 2021).

91 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 43(2)(*d*).

06.050 Although the LPPCR makes clear that lawyers may not publicise their own success rates, whether entities not regulated by the LPPCR may publicise the same is worth examining because analytics firms are likely to be the nominal publishers of these statistics.[92] Rule 42(1) of the LPPCR requires lawyers to "ensure" that any publicity "by the legal practitioner or by any other person on the legal practitioner's behalf" complies with the LPPCR. Rule 42(2) of the LPPCR further obliges the lawyer to take "best endeavours" to correct any "impropriety in any publicity relating to" them. Logically, then, lawyers may not circumvent the LPPCR by engaging an analytics firm to put out success rates on their behalf.

06.051 This leaves open the possibility for analytics firms to unilaterally publish law firm success rates, as has been done in the UK.[93] To the extent that such publicity may "relate to" the law firms named (even if not publicised "on their behalf"), this may (perhaps problematically) trigger obligations under rule 42(2) of the LPPCR on such law firms to ensure the propriety of the published material. It is unclear what this would entail. Ensuring that the reported statistics are computed or interpreted correctly may be particularly onerous for law firms.

06.052 Thus, as with judge analytics, the permissible scope of lawyer analytics in Singapore warrants further consideration. While there presently do not appear to be any Singapore-focused lawyer analytics publications, several international firms with operations in Singapore could already have had their win rates computed or possibly published by foreign analytics companies.

3. Outcome analytics

06.053 Outcome analytics involves predicting legal outcomes (such as court decisions or the likelihood of recidivism), as well as the factors influencing them, with data mining and machine learning.[94] A user may enter a set of case facts into the system and obtain a prediction (for example, 75% chance of the appeal succeeding), along with a confidence

92 Academics are also "spared such restrictions". See Simon Chesterman, "Do Better Lawyers Win More Often? Measures of Advocate Quality and Their Impact in Singapore's Supreme Court" (2020) 15 Asian J Comp Law 250 at 251.

93 "Premonition Releases Top 10 Win Rate Rankings for UK Lawyers" *Premonition* (8 August 2017).

94 See generally Mark K Osbeck, "Lawyer as Soothsayer: Exploring the Important Role of Outcome Prediction in the Practice of Law" (2018) 123 Penn State L Rev 41.

level (for example, plus or minus 5 percentage points).[95] When used by judges, outcome analytics may play the role of decision *support* systems, as is the case with the now-infamous Correctional Offender Management Profiling for Alternative Sanctions ("COMPAS") recidivism scores.[96] More controversially, these statistical predictions may substitute judicial determinations.[97] Outcome analytics may also be used by lawyers and clients to triage cases.[98] In the hands of actuarial experts or litigation financiers, it may even be possible for these numerical predictions to be used for valuing litigation.[99]

06.054 We focus here on the professional issues that outcome analytics raises, leaving aside the (albeit important) debates surrounding the feasibility or desirability of computer judges or lawyers.[100] Two issues warrant scrutiny. The first is the possibility for outcome analytics to perpetuate societal biases. For instance, COMPAS scores were found to be more likely to misclassify minority races as having high recidivism risks, while also misclassifying white offenders as low recidivism risks.[101] Thus, even if used merely to *inform* judicial bail decisions (as intended), these scores could influence judges to become less likely to grant bail to minority groups relative to white offenders. There is also the worry of misuse, particularly if judges overly relied on the predicted scores or put the scores to other unintended uses.[102]

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95 Such an approach had been described as early as in 1964. See Stuart S Nagel, "Applying Correlation Analysis to Case Prediction" (1963–1964) 42 Tex L Rev 1006.

96 For details on the Correctional Offender Management Profiling for Alternative Sanctions debacle and a legal challenge to its use, see *Loomis v Wisconsin* 881 N W 2d 749 (Wis, 2016), *certiorari* denied, 137 S Ct 2290 (2017). For a legal analysis, see Deborah Hellman, "Measuring Algorithmic Fairness" (2020) 106(4) Va L Rev 811 (forthcoming).

97 See Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press, 2019) at p 286.

98 See The Right Honourable The Lord Burnett of Maldon, "The Age of Reform", speech at the Sir Henry Brooke Annual Lecture 2018 (7 June 2018) at para 43, where Lord Burnett acknowledged the many possible applications of outcome analytics.

99 Michael Cross, "Insurance Firm Signs up Academics to Predict Case Outcomes" *The Law Society Gazette* (13 February 2018).

100 On this, see Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press, 2019) at pp 277–292.

101 See Deborah Hellman, "Measuring Algorithmic Fairness" (2020) 106(4) Va L Rev 811 (forthcoming).

102 Scientific research points to "automation biases", wherein human decision-making deteriorates in the presence of automated aids. See Linda J Skitka, Kathleen L Mosier & Mark Burdick, "Does Automation Bias Decision-Making?" (1999) 51(5) *International Journal of Human-Computer Studies* 991. Separately, there are also other unintentional biases such as "machine bias". For instance, a ProPublica study found that, under

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06.055 As with judge and lawyer analytics, the crux of the issue here is that biases (in the statistical, systematic and sociological senses) may exist in the computation as well as interpretation of these algorithmic predictions. Datasets used to train the algorithms may be selectively skewed in favour of certain races. Judges are, however, unlikely to be in a position to critically probe the algorithm for bias without external specialist guidance.

06.056 There presently appears to be nothing in the professional ethics rules expressly requiring legal practitioners to take precautions against biases in the algorithms they rely on.[103] More generally, Singapore law does not have a comprehensive anti-discrimination act in the fashion of the UK's Equality Act 2010[104] or the US's Title IX.[105] It is also unclear whether algorithmic bias claims may be brought under Article 12 of the Singapore Constitution.[106]

06.057 The second issue relates to the provision of outcome analytics tools to the public as online "self-assessment" tools. Technology firms who do this alone risk offending unlicensed practice of law regulations, particularly if one takes Wendell Holmes' view that predicting court decisions is the essence of law.[107] It is also worth asking whether additional safeguards are required before law firms may be allowed to develop and market such tools (whether alone or in partnership with technology firms). There are important public protection concerns. Even the most sophisticated and well-trained algorithms cannot make correct predictions from inaccurate or biased input. Members of the public, if asked to state the facts of their complaint, may well omit, overstate or understate certain aspects of their case.

06.058 Further, should providing outcome predictions using software count as "legal advice", law firms providing the same must ensure

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the COMPAS algorithm, black defendants were more likely to be pegged as at higher risk of committing a future violent crime and also more likely to be predicted to commit a future crime of any kind. See Jeff Larson *et al*, "Machine Bias" *ProPublica* (23 May 2016) <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> (accessed April 2021).

103 The closest the Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) comes to requiring this is ostensibly in r 4 Principle (*f*), which states that "[a] legal practitioner must be fair and courteous towards every person in respect of the legal practitioner's professional conduct".

104 c 15.

105 Education 20 USC (US) §§ 1681–1688.

106 1999 Reprint.

107 Oliver Wendell Holmes Jr, "The Path of the Law" (1897) 10 *Harvard Law Review* 457.

compliance with the applicable rules on publicity[108] as well as the provision of free legal advice.[109] Lawyers would also need to consider if these circumstances may give rise to an implied retainer or a situation where the lawyer could not have reasonably believed that no implied retainer would arise.[110] Non-lawyers providing such predictive analytic tools who trespass beyond the law awareness zone into legal advice territory will court the risk of criminal prosecution.[111] The time-honoured distinction between creating legal awareness and giving legal advice (implicitly recognised in section 33 of the LPA) serves to shield the public from substandard legal advice and unethical conduct. The question of when outcome analytics may be provided to the public, as well as the safeguards required, may benefit from legislative or regulatory clarification. This could also be the subject of a pilot regulatory sandbox[112] that would allow us to study the potential costs and benefits of the technology within a controlled environment.

Further reading

Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press, 2019)

Kevin D Ashley, *Artificial Intelligence and Legal Analytics* (Cambridge University Press, 2017)

Law Society of Singapore, Practice Directions and Guidance Notes 2018/2019 Guidance Note 3.4.1

The Right Honourable The Lord Burnett of Maldon, "The Age of Reform", speech at the Sir Henry Brooke Annual Lecture 2018 (7 June 2018)

108 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) Pt 5.
109 Legal Profession (Professional Conduct) Rules 2015 (S 706/2015) r 47.
110 *Law Society of Singapore v Lee Suet Fern* [2020] 5 SLR 1151 at [127].
111 Legal Profession Act (Cap 161, 2009 Rev Ed) s 33.
112 See, for context, the Fintech sandbox administered by the Monetary Authority of Singapore. See "Overview of Regulatory Sandbox" *Monetary Authority of Singapore* <https://www.mas.gov.sg/development/fintech/regulatory-sandbox> (accessed 31 January 2021).